

# Recurring Billing

## Using the SCMP API

April 2017

**CyberSource<sup>®</sup>**  
**the power of payment**

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# Recent Revisions to This Document

Release	Changes.
April 2017	<p>Added the “Updating an eCheck Account Number” section. See <a href="#">page 42</a>.</p> <p>Added the “Updating an eCheck Account Number” example. See <a href="#">page 95</a>.</p>
February 2017	Updated the details for FDMS Nashville. See <a href="#">page 14</a> .
December 2016	Added the <b>merchant_descriptor_alternate</b> field. See <a href="#">page 69</a> .
June 2016	<ul style="list-style-type: none"> <li>■ Added OmniPay Direct as a supported processor. See <a href="#">page 14</a>.</li> <li>■ Renamed <i>Global Collect</i> to <i>Ingenico ePayments</i>. See <a href="#">page 14</a>.</li> <li>■ Updated the <b>recurring_number_of_payments</b> request field. See <a href="#">page 73</a>.</li> </ul>
March 2016	<ul style="list-style-type: none"> <li>■ Added information about setting the first payment to recurring. See <a href="#">page 59</a>.</li> <li>■ Updated the “Removing Card Expiration Dates” section. See <a href="#">page 38</a>.</li> <li>■ Updated the “Removing Card Expiration Dates” example. See <a href="#">page 94</a>.</li> </ul>

# About This Guide

## Audience and Purpose

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This guide is written for merchants who want to create customer payment subscriptions and eliminate payment data from their network to ensure that customers' sensitive personal information is not compromised during a security breach. A customer's sensitive information is replaced with a unique identifier, known as a *subscription ID*, which you store on your network.

The purpose of this guide is to help you create, update, retrieve, and delete customer subscriptions. It also describes how to process an on-demand transaction using a customer subscription and how to update a payment event.

## Conventions

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### Note, Important, and Warning Statements



**Note**

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

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**Important**

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

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**Warning**

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

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## Text and Command Conventions

Convention	Usage
<b>bold</b>	<ul style="list-style-type: none"> <li>Field and service names in text; for example: Include the <b>customer_firstname</b> field.</li> <li>Items that you are instructed to act upon; for example: Click <b>Save</b>.</li> </ul>
Screen text	<ul style="list-style-type: none"> <li>Code examples and samples.</li> </ul>

## Related Documents

Refer to the Support Center for complete CyberSource technical documentation:

[http://www.cybersource.com/support\\_center/support\\_documentation](http://www.cybersource.com/support_center/support_documentation)

**Table 1** Related Documents

Subject	Description
Account Updater	<i>Account Updater User Guide</i> ( <a href="#">PDF</a>   <a href="#">HTML</a> )—describes how to automatically incorporate changes made to a customer's payment card data.
Business Center	<i>Business Center Overview</i> ( <a href="#">PDF</a>   <a href="#">HTML</a> )—describes the features and options available within the Business Center.
Credit Card	<i>Credit Card Services Using the SCMP API</i> ( <a href="#">PDF</a>   <a href="#">HTML</a> )—describes how to integrate credit card processing into your order management system.
eCheck	<i>Electronic Check Services Using the SCMP API</i> ( <a href="#">PDF</a>   <a href="#">HTML</a> )—describes how to integrate eCheck processing into your order management system.
Offline Transaction Submission	<i>Offline Transaction File Submission Implementation Guide</i> ( <a href="#">PDF</a>   <a href="#">HTML</a> ).
Payment Tokenization	<i>Payment Tokenization Using the SCMP API</i> ( <a href="#">PDF</a>   <a href="#">HTML</a> )—describes how to create customer profiles and process on-demand payments.
Payment Network Tokenization	<i>Payment Network Tokenization Using the SCMP API</i> ( <a href="#">PDF</a>   <a href="#">HTML</a> )—describes how to add payment network tokenization to an order management system that already uses CyberSource credit card services.
PINless Debit	<i>PINless Debit Card Services Using the SCMP API</i> ( <a href="#">PDF</a>   <a href="#">HTML</a> )—describes how to integrate PINless debit processing using the SCMP API into your order management system.
Payment Tokenization	<i>Payment Tokenization Using the Business Center</i> ( <a href="#">PDF</a>   <a href="#">HTML</a> )—describes how to create customer subscriptions and process installment or recurring payments.

**Table 1 Related Documents (Continued)**

Subject	Description
Reporting	<i>Reporting Developer Guide</i> ( <a href="#">PDF</a>   <a href="#">HTML</a> )—describes how to view and configure Business Center reports.
SCMP API	<ul style="list-style-type: none"> <li data-bbox="722 396 1374 485">■ <i>Getting Started with CyberSource Advanced for the SCMP API</i> (<a href="#">PDF</a>   <a href="#">HTML</a>)—describes how to get started using the SCMP API.</li> <li data-bbox="722 506 1270 531">■ <a href="#">SCMP API Documentation and Downloads page</a>.</li> </ul>
Secure Acceptance Silent Order POST	<i>Secure Acceptance Silent Order POST Development Guide</i> ( <a href="#">PDF</a>   <a href="#">HTML</a> )—describes how to create a Secure Acceptance profile and integrate seamlessly with Secure Acceptance Silent Order POST.
Secure Acceptance Web Mobile	<i>Secure Acceptance Web/Mobile Configuration Guide</i> ( <a href="#">PDF</a>   <a href="#">HTML</a> )—describes how to create a Secure Acceptance profile and integrate seamlessly with Secure Acceptance Web/Mobile.

## Customer Support

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

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

# Introduction

## Terminology

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### Recurring Billing

Recurring Billing subscriptions support installment payments (see [page 13](#)) and recurring payments (see [page 13](#)). For information about on-demand payments see [Payment Tokenization Using the SCMP API](#).

A *subscription ID*, also known as a *payment token* (see "Secure Acceptance," [page 12](#)), which you can store on your server, is a unique identifier that cannot be reverse-engineered. It is generated to replace sensitive card and billing information.

Recurring Billing protects sensitive cardholder information in order to comply with industry standards and government regulations and can prevent the theft of card information in storage. The recurring billing solution is compatible with the Visa and Mastercard Account Updater service. All payment information stored with CyberSource is automatically updated by participating banks, thereby reducing payment failures. See the *Account Updater User Guide* ([PDF](#) | [HTML](#)) for more information.

### Payment Network Token

**Important**

CyberSource payment tokenization and payment network tokenization are different features:

- The CyberSource token (the subscription ID) is created by CyberSource and can be used only with CyberSource payment services.
- The payment network token is created by a token service provider and can be used throughout the financial network.

The payment network token replaces the primary account number (PAN) that is stored in a customer subscription. You can create a customer subscription and include the payment network token (see [page 32](#)), update the payment network token details (see [page 40](#)), and replace a payment network token with updated card details (see [page 41](#)).

## Subscription ID



**Important**

Contact CyberSource Customer Support to have your account configured for a 16-digit subscription ID, or to update from a 22-digit subscription ID to a 16-digit subscription ID.

There are three types of subscription IDs:

- 22 digit—the default subscription ID.
- 16 digit—displays the final 4 digits of the primary account number (PAN) and passes Luhn mod-10 checks. This subscription ID is for card customer subscriptions.
- 16 digit—displays 99 as the two leading digits and passes Luhn mod-10 checks. If your business rules prohibit using 99 as the leading digits, you must modify your system to accept the other 16-digit subscription ID.

## Secure Acceptance

### Payment Token

If you are using Secure Acceptance to process transactions, the payment token is the customer subscription ID (see [page 12](#)). The payment token identifies the card and retrieves the associated billing, shipping, and card information.

## Customer Subscriptions



**Important**

For information about processing on-demand payments for a customer profile, see [Payment Tokenization Using the SCMP API](#).

There are two types of subscriptions: installment subscriptions and recurring subscriptions. A customer subscription contains specific information about a customer that you store in the CyberSource database for future billing. You can also view the customer subscription in the CyberSource Business Center.

A customer subscription includes:

- Customer contact information, such as billing and shipping information.
- Customer payment information, such as card type, masked account number, and expiration date.

- Customer order information, such as the transaction reference number and merchant defined data fields.

## Installment Subscription

An installment subscription allows you to charge a customer's preferred payment method on a fixed number of scheduled payments. You must specify the number of payments, the amount and frequency of each payment, and the start date for processing the payments. CyberSource creates a schedule based on this information and automatically bills the customer according to the schedule. For example, you can offer a product for 75.00 and let the customer pay in three installments of 25.00. See "[Creating an Installment Subscription](#)," [page 25](#).

## Recurring Subscription

A recurring subscription allows you to charge a customer's preferred payment method on a recurring payment basis with no specific end date. You must specify the amount and frequency of each payment and the start date for processing the payments. CyberSource creates a schedule based on this information and automatically bills the customer according to the schedule. For example, you can offer an online service to which the customer subscribes and can charge a monthly fee. See "[Creating a Recurring Subscription](#)," [page 31](#).

Once you have created a customer subscription, the following tasks are available to you:

- Update customer subscription information (see [page 37](#)).
- Change the payment method of a customer subscription (see [page 44](#)).
- Process an on-demand transaction using the customer subscription details. You can process an authorization, credit, PINless debit validate, PINless debit, eCheck credit, and an eCheck debit (see [page 45](#)).
- Update subscription payment events (see [page 44](#)).
- Retrieve customer subscription information (see [page 36](#)).
- Cancel a customer subscription (see [page 48](#)).
- Delete a customer subscription (see [page 49](#)).
- Share customer subscriptions (see [page 56](#)).

## On-Demand Customer Profile

For information about processing on-demand payments for a customer profile, see [Payment Tokenization Using the SCMP API](#).

## Supported Processors and Payment Methods

Each customer subscription has an associated payment method: credit card, eCheck, PINless debit, or other.



### Note

The *other* payment method enables you to store data securely in a customer subscription. This payment method is useful if you do not intend to use the customer subscription for payment transactions. See



### Important

All the processors listed in the table below support automatic preauthorizations and manual preauthorizations. Unless stated otherwise, each processor in the table below supports 1.00 preauthorizations using all credit card types.

**Table 2 Supported Processors and Payment Methods**

Processor	Payment Method
AIBMS	Credit card.
American Express Brighton	Credit card. <b>Important</b> Only American Express card types are supported. <b>Important</b> Does not support automatic preauthorization reversals.
American Express Direct	Debit card and pre-paid card—supports partial authorizations. <b>Important</b> Only American Express card types are supported.
Asia-Mideast Processing	Credit card.
Barclays	Credit card—supports 0.00 preauthorizations for Visa and Mastercard cards.
CCS (CAFIS)	Credit card.
Chase Paymentech Solutions	<ul style="list-style-type: none"> <li>■ Credit card—supports 0.00 preauthorizations for Visa and Mastercard cards.</li> <li>■ Debit card and pre-paid card—supports partial authorizations for Visa, Mastercard, American Express, Discover, and Diners Club cards.</li> <li>■ Electronic check.</li> <li>■ Replacement expiry dates are supported for Visa and Mastercard cards. See <a href="#">"Replacement Expiration Dates," page 56.</a></li> <li>■ Visa Bill Payments—see <a href="#">page 55.</a></li> </ul>
Citibank	Credit card—supports 0.00 preauthorizations for Visa and Mastercard cards.

**Table 2 Supported Processors and Payment Methods (Continued)**

<b>Processor</b>	<b>Payment Method</b>
CyberSource ACH Service	Electronic check.
CyberSource through VisaNet	<ul style="list-style-type: none"> <li>■ Credit card—supports 0.00 preauthorizations for Visa and Mastercard cards.</li> <li>■ Credit card—supports 1.00 preauthorizations for American Express, Discover, Diners Club, and JCB card types.</li> <li>■ Debit card and pre-paid card—supports partial authorizations for Visa, Mastercard, American Express, Diners Club, JCB, and Discover cards.</li> <li>■ Replacement expiry dates are supported for Visa and Mastercard cards. See <a href="#">"Replacement Expiration Dates," page 56.</a></li> </ul>
FDC Compass	<ul style="list-style-type: none"> <li>■ Credit card—supports 0.00 preauthorizations for Visa and Mastercard cards.</li> <li>■ Debit card and pre-paid card—supports partial authorizations for Visa, Mastercard, American Express, and Discover cards.</li> <li>■ Replacement expiry dates are supported for Visa and Mastercard cards. See <a href="#">"Replacement Expiration Dates," page 56.</a></li> <li>■ Visa Bill Payments—see <a href="#">page 55.</a></li> </ul>
FDC Nashville Global	<ul style="list-style-type: none"> <li>■ Credit card—supports 0.00 preauthorizations for Visa and Mastercard cards.</li> <li>■ Debit card and pre-paid card—supports partial authorizations for Visa, Mastercard, American Express, Discover, Diners Club, and JCB (US Domestic) cards.</li> <li>■ Visa Bill Payments—see <a href="#">page 55.</a></li> </ul>
FDMS Nashville	<ul style="list-style-type: none"> <li>■ Credit card—supports 0.00 preauthorizations for Visa cards.</li> <li>■ Debit card and pre-paid card—supports partial authorizations for Visa, Mastercard, American Express, Discover, Diners Club, and JCB (US Domestic) cards.</li> <li>■ Visa Bill Payments—see <a href="#">page 55.</a></li> </ul>
FDMS South	<ul style="list-style-type: none"> <li>■ Credit card—supports 0.00 preauthorizations for Visa and Mastercard cards.</li> <li>■ Debit card and pre-paid card—supports partial authorizations for Visa, Mastercard, American Express, Discover, and JCB (US Domestic) cards.</li> <li>■ Replacement expiry dates are supported for Visa and Mastercard cards. See <a href="#">"Replacement Expiration Dates," page 56.</a></li> </ul>
Ingenico ePayments	Credit card.

**Table 2 Supported Processors and Payment Methods (Continued)**

Processor	Payment Method
GPN	<ul style="list-style-type: none"> <li>■ Credit card—supports 0.00 preauthorizations for Visa and Mastercard cards.</li> <li>■ Debit card and pre-paid card—supports partial authorizations for Visa, Mastercard, American Express, Discover, Diners Club, and JCB cards.</li> <li>■ PINless debit.</li> <li>■ Visa Bill Payments—see <a href="#">page 55</a>.</li> </ul>
HSBC	<p>Credit card—supports 0.00 preauthorizations for Visa and Mastercard cards.</p> <p><b>Important</b> Does not support automatic preauthorization reversals.</p>
Little	<ul style="list-style-type: none"> <li>■ Credit card—supports 0.00 preauthorizations for American Express, Diners Club, Discover, JCB, Mastercard, and Visa cards.</li> <li>■ Debit card and pre-paid card—supports partial authorizations for Visa, Mastercard, American Express, Discover, Diners Club, and JCB cards.</li> </ul>
LloydsTSB Cardnet	Credit card.
Moneris	Credit card—supports 0.00 preauthorizations for Visa and Mastercard cards.
OmniPay Direct	Credit card—supports 0.00 preauthorizations using Visa, Mastercard, Maestro (International), and Maestro (UK Domestic).
OmniPay-Ireland	<ul style="list-style-type: none"> <li>■ Credit card—supports 0.00 preauthorizations using Visa and Mastercard cards.</li> <li>■ Visa Bill Payments—see <a href="#">page 55</a>.</li> </ul>
RBS WorldPay Atlanta	<ul style="list-style-type: none"> <li>■ Credit card—supports 0.00 preauthorizations for Visa and Mastercard cards.</li> <li>■ Electronic check.</li> </ul>
Streamline	Credit card—supports 0.00 preauthorizations for Visa and Mastercard cards.
TeleCheck	Electronic check—supports 1.00 preauthorizations.
TSYS Acquiring Solutions	<ul style="list-style-type: none"> <li>■ Credit card—supports 0.00 preauthorizations for Visa and Mastercard cards and 1.00 preauthorizations using American Express, Discover, Diners Club, and JCB cards.</li> <li>■ Debit card and pre-paid card—supports partial authorizations for Visa, Mastercard, American Express, Discover, Diners Club, and JCB cards.</li> <li>■ Visa Bill Payments—see <a href="#">page 55</a>.</li> </ul>



## Types of Authorizations

**Table 3** Types of Authorizations

Authorization	Description
Automatic preauthorization	<p>Automatically preauthorize a credit card when you create a customer subscription, or automatically preauthorize a bank account when you create an eCheck customer subscription. See <a href="#">page 21</a>.</p> <p>Depending on the payment method and if your account has been configured for automatic preauthorizations, CyberSource automatically runs several fraud checks during a preauthorization: AVS and CVN checks for cards, and Decision Manager for cards and eChecks.</p> <p><b>Note</b> Partial authorizations for prepaid cards and debit cards cannot be performed for automatic preauthorizations.</p> <p><b>Important</b> Contact your merchant account provider to determine whether you will be charged a fee for a preauthorization.</p>
Manual preauthorization	<p>Manually preauthorize a customer's account when you create a customer subscription. This feature is available only with the CyberSource API. See <a href="#">page 23</a>.</p> <p><b>Important</b> Contact your merchant account provider to determine whether you will be charged a fee for a preauthorization.</p>
Automatic preauthorization reversal	<p>If your processor supports full authorization reversal, you can contact CyberSource Customer Support to automatically reverse preauthorizations when you create a customer subscription. CyberSource does not charge you for reversing automatic preauthorizations. If you cannot create a customer subscription for any reason, or if the preauthorization amount is 0.00, CyberSource does not reverse the automatic preauthorization.</p> <p><b>Important</b> TSYS Acquiring Solutions does not support automatic preauthorization reversals.</p>
Partial authorization	<p>When the balance on a debit card or prepaid card is lower than the requested authorization amount, the issuing bank can approve a partial amount.</p> <p><b>Note</b> Partial authorizations for prepaid cards and debit cards cannot be performed for automatic preauthorizations.</p>

# Authorization Consents

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## Authorization for Electronic Checks

To support customer subscriptions that use electronic checks, you must display a separate consent agreement accepted by the customer before you create the customer subscription. The authorization statement must:

- Be readily identifiable as an authorization.
- Clearly and conspicuously state its terms including the transaction amount and the effective date of the transfer.
- Include the routing number and bank account number to be debited.
- Specify the frequency of the debits and the period of time during which the customer's payment authorization is granted.
- Include instructions for revoking the authorization.

## Authorization for PINless Debits

You must have a consent statement displayed on your web site or read to the customer over the phone and accepted by the customer before you create a customer subscription for PINless debits. The authorization statement must:

- Be readily identifiable as an authorization.
- Clearly and conspicuously state its terms including the transaction amount and the effective date of the transfer.
- Include the account number to be debited.
- Clearly indicate that the authorization is for a one-time purchase.
- Include instructions for revoking the authorization.

## Reporting

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### Subscription Detail Report

The Subscription Detail report is available in XML and CSV formats and provides detailed information about customer subscriptions and their transactions.

You can view the report on the Business Center, or you can use a client API to programmatically download the report.

For a detailed description of the Subscription Detail Report, and for details about downloading the report, see the *Reporting Developer Guide* ([PDF](#) | [HTML](#)).

### Subscription Payment Exception Report

The Subscription Payment Exception Report provides information about installment and recurring customer subscriptions. The report includes two lists: retry mode and on hold. See "Subscription Payment Exception Report," page 53.

## Transaction Endpoints

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**Important**

Contact CyberSource Customer Support to configure your account for Recurring Billing.

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For live transactions, send API requests to the production server:

<http://ics2a.ic3.com>

When you use the production server, the payment method you are testing determines whether you use real card numbers or real account numbers. Create customer subscriptions that use small amounts, such as 1.50. Search for and view your live customer subscriptions in the production version of the Business Center:

<https://ebc.cybersource.com>

For test transactions, send API requests to the test server:

<http://ics2testa.ic3.com>

Search for and view your test subscriptions in the test version of the Business Center:

<https://ebctest.cybersource.com>

## Test Card Numbers

You may use the following test credit card numbers for transactions:

<b>Credit Card Type</b>	<b>Test Account Number</b>
Visa	4111111111111111
Mastercard	5555555555554444
American Express	378282246310005
Discover	6011111111111117
JCB	3566111111111113
Diners Club	38000000000006
Maestro International (16 digits)	6000340000009859
Maestro Domestic (16 digits)	6759180000005546

# Validating a Subscription

**Important**

PINless debits cannot be preauthorized. You must validate the card before you create the customer subscription. See ["PINless Debit Validation," page 24](#).

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Three validation methods are available to validate a credit card or eCheck customer subscription before you create it.

## Charging a Setup Fee

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This fee can be charged only for card and eCheck payments. It is a one-time optional fee that you can charge only when you are creating a customer subscription.

Request the **ics\_pay\_subscription\_create service** and include the setup fee in the **grand\_total\_amount** field, along with the other required fields for creating a subscription. See ["Credit Card," page 25](#).

**Important**

CyberSource recommends that you do not enable partial authorizations for authorizing a setup fee. If the issuing bank approves a partial amount for the setup fee, the customer subscription is not created.

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## Automatically Preauthorizing an Account

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Only card payments and eCheck payments can be preauthorized, and CyberSource does not charge you for this feature. Before the customer subscription is created, CyberSource authorizes a small amount against the payment method entered for the customer subscription. Each payment processor supports different preauthorization amounts. See ["Supported Processors and Payment Methods," page 14](#).

If your account is configured for automatic preauthorizations, CyberSource automatically runs several fraud checks depending on the payment method:

- AVS checks—credit card only
- CVN checks—credit card only
- Decision Manager—credit card and electronic checks

If your payment processor supports full authorization reversals you can contact CyberSource Customer Support to automatically reverse preauthorizations. When you create a customer subscription with automatic preauthorizations and automatic preauthorization reversals enabled, the order of services is:

- 1 Credit card authorization for the preauthorization.
- 2 Subscription creation—only if the authorization is successful.
- 3 Full authorization reversal—only if the authorization is successful and the preauthorization amount is not 0.00.

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### To enable automatic preauthorizations using the Business Center:

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- Step 1** Log in to the Business Center:
- Live Transactions: <https://ebc.cybersource.com>
  - Test Transactions: <https://ebctest.cybersource.com>
- Step 2** In the left navigation pane, choose **Recurring Billing > Settings**.
- Step 3** Check **Perform an automatic preauthorization before creating subscriptions**.
- Step 4** Click **Submit Changes**.
- 

---

### To set the e-commerce indicator for the first payment to recurring:

---

- Step 1** Log in to the Business Center:
- Live Transactions: <https://ebc.cybersource.com>
  - Test Transactions: <https://ebctest.cybersource.com>
- Step 2** In the left navigation pane, choose **Recurring Billing > Settings**.
- Step 3** Check **Set e-commerce indicator for first payment to Recurring**.

**Important**

All subsequent recurring payments are set to recurring regardless of this setting. This setting is for all card types on Atos and for Mastercard and American Express transactions on FDC Nashville Global.

**Step 4** Click **Submit Changes**.

---

### To disable automatic preauthorizations using the API:

---

**Note**

Use the **recurring\_disable\_auto\_auth** field if your CyberSource account is configured for automatic preauthorizations.

**Step 1** Request the **ics\_pay\_subscription\_create** service. See "[Creating a Recurring Subscription](#)," page 31.

**Step 2** In the **ics\_pay\_subscription\_create** request, set the **recurring\_disable\_auto\_auth** field to **Y**.

---

## Manually Preauthorizing a Subscription

---

This feature is available only for card payments and eCheck payments. You can manually preauthorize a customer's subscription when you create it.

**Important**

If your processor (see [page 14](#)) supports full authorization reversals and if you charged more than 0.00 for the preauthorization, CyberSource recommends that you subsequently request a full authorization reversal.

---

### To manually preauthorize a card customer subscription:

---

**Step 1** Request the **ics\_pay\_subscription\_create** service. See "[Credit Card](#)," page 25.

**Step 2** Include the following fields in the request:

- **ics\_applications**—set to **ics\_auth**.
- **grand\_total\_amount**—set to **0.00** or a small amount.

**Note**

For all card types on Atos and for Mastercard and American Express transactions on FDC Nashville Global, include the following fields:

- **e\_commerce\_indicator**=recurring  
To use the Business Center for setting the e-commerce indicator to recurring, see [page 22](#).
- **auth\_first\_recurring\_payment**=Y
- **customer\_cc\_cv\_number**

See *Credit Card Services Using the SCMP API* ([PDF](#) | [HTML](#)) for detailed descriptions of the above request fields.

---

### To manually preauthorize an eCheck customer subscription:

---

**Step 1** Request the **ics\_pay\_subscription\_create** service. See "eCheck," [page 28](#).

**Step 2** Include the following fields in the request:

- **ics\_applications**—set to **ics\_ecp\_debit**.
  - **ecp\_payment\_mode**—set to **1**.
- 

## PINless Debit Validation

---

PINless debits cannot be preauthorized. Instead, you must validate the card before you create the customer subscription.

To validate a PINless debit card you must request the **ics\_pinless\_debit\_validate** service before requesting the **ics\_subscription\_create** service.

For detailed information about requesting the **ics\_pinless\_debit\_validate** service, see the *PIN Debit Processing Using the SCMP API* ([PDF](#) | [HTML](#)).



# Creating an Installment Subscription

## Credit Card

---

**Important**

You must validate the customer account before the customer subscription is created. See ["Validating a Subscription," page 21](#). If you need to include a setup fee, see ["Charging a Setup Fee," page 21](#).

---

### To create an installment subscription:

---

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

**Step 2** Include the following fields in the request:

- `customer_firstname`
- `customer_lastname`
- `bill_city`
- `bill_country`
- `customer_email`
- `bill_zip`
- `bill_state`
- `bill_address1`
- `customer_cc_number`
- `card_type`
- `customer_cc_expmo`
- `customer_cc_expyr`
- `merchant_id`
- `merchant_ref_number`
- `currency`
- `recurring_frequency`
- `recurring_payment_amount`
- `recurring_start_date`
- `recurring_number_of_payments`

See "API Fields," page 58, for detailed descriptions of the request and reply fields. See Example 1, page 91, for a request and reply example.

---

## Payment Network Token

---

**Note**

You can request an authorization before requesting that a subscription be created. For the authorization request details, see *Payment Network Tokenization Using the SCMP API* ([HTML](#) | [PDF](#)).

---

### To create an installment subscription:

---

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

For Visa cards include the following payer authentication fields:

- `e_commerce_indicator=vbv`
- `cavv=the cryptogram value`
- `xid=the cryptogram value`

For Mastercard cards include the following payer authentication fields:

- `e_commerce_indicator=spa`
- `cavv=the cryptogram value`
- `ucaf_collection_indicator=2`

For American Express cards include the following payer authentication fields:

- `e_commerce_indicator=aesk`
- `cavv=block A of the cryptogram value`. If it is a 20-byte cryptogram, include it in this field.
- `xid=block B of the cryptogram value`. If it is a 40-byte cryptogram, include the first 20-byte value (block A) in the `cavv` field and the second 20-byte value (block B) in this field.

**Step 2** Include the following fields in the request:

- customer\_firstname
- customer\_lastname
- bill\_city
- bill\_country
- customer\_email
- bill\_zip
- bill\_state
- bill\_address1
- customer\_cc\_number—populate with the network token value obtained from your payment network token provider.
- card\_type—must be 001, 002, or 003.
- customer\_cc\_expmo—populate with the network token expiration month obtained from payment network token provider.
- customer\_cc\_expyr—populate with the network token expiration year obtained from payment network token provider.
- merchant\_id
- merchant\_ref\_number
- currency
- recurring\_frequency
- recurring\_payment\_amount
- recurring\_start\_date
- recurring\_number\_of\_payments
- payment\_network\_token\_transaction\_type—set to 1.
- payment\_network\_token\_requestor\_id—this field is supported only for CyberSource through VisaNet.

See ["API Fields," page 58](#) for detailed descriptions of the request and reply fields.

---

## eCheck

---



### Important

You must validate the customer account before the customer subscription is created. See "[Validating a Subscription](#)," page 21.

---

### To create a customer subscription that uses eChecks:

---

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

**Step 2** Include the following fields in the request:

- `subscription_payment_method`—set to **check**.
- `customer_firstname`
- `customer_lastname`
- `bill_city`
- `bill_country`
- `customer_email`
- `bill_zip`
- `bill_state`
- `bill_address1`
- `customer_phone`—contact your payment processor representative to learn whether this field is required or optional.
- `merchant_id`
- `merchant_ref_number`
- `currency`
- `recurring_frequency`
- `recurring_payment_amount`
- `recurring_start_date`
- `recurring_number_of_payments`
- `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.
- `bill_company_tax_id`—contact your TeleCheck representative to learn whether this field is required or optional.
- `ecp_account_no`
- `ecp_account_type`
- `ecp_rdfi`

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

See "API Fields," page 58, for detailed descriptions of the request and reply fields.

## PINless Debit



### Important

You must validate the customer account before the customer subscription is created. See "PINless Debit Validation," page 24.

### To create a customer subscription that uses PINless debits:

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

**Step 2** Include the following fields in the request:

- `subscription_payment_method`—set to **pinless debit**.
- `customer_firstname`
- `customer_lastname`
- `bill_city`
- `bill_country`
- `customer_email`
- `bill_zip`
- `bill_state`
- `bill_address1`
- `customer_cc_number`
- `customer_cc_expmo`
- `customer_cc_expyr`
- `merchant_id`
- `merchant_ref_number`
- `currency`
- `recurring_frequency`
- `recurring_payment_amount`
- `recurring_start_date`
- `recurring_number_of_payments`

See ["API Fields," page 58](#), for detailed descriptions of the request and reply fields.

---

# Creating a Recurring Subscription

## Credit Card

---

**Important**

You must validate the customer account before the customer subscription is created. See ["Validating a Subscription," page 21](#). If you need to include a setup fee, see ["Charging a Setup Fee," page 21](#).

---

### To create a recurring subscription:

---

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

**Step 2** Include the following fields in the request:

- `customer_firstname`
- `customer_lastname`
- `bill_city`
- `bill_country`
- `customer_email`
- `bill_zip`
- `bill_state`
- `bill_address1`
- `customer_cc_number`
- `card_type`
- `customer_cc_expmo`
- `customer_cc_expyr`
- `merchant_id`
- `merchant_ref_number`
- `currency`
- `recurring_frequency`
- `recurring_payment_amount`
- `recurring_start_date`

See "API Fields," page 58, for detailed descriptions of the request and reply fields. See Example 3, page 92, for a request and reply example.

---

## Payment Network Token

---



**Note**

You can request an authorization before requesting that a subscription be created. For the authorization request details, see *Payment Network Tokenization Using the SCMP API* ([HTML](#) | [PDF](#)).

---

### To create a recurring subscription:

---

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

For Visa cards include the following payer authentication fields:

- `e_commerce_indicator=vbv`
- `cavv=the cryptogram value`
- `xid=the cryptogram value`

For Mastercard cards include the following payer authentication fields:

- `e_commerce_indicator=spa`
- `cavv=the cryptogram value`
- `ucaf_collection_indicator=2`

For American Express cards include the following payer authentication fields:

- `e_commerce_indicator=aesk`
- `cavv=block A of the cryptogram value`. If it is a 20-byte cryptogram, include it in this field.
- `xid=block B of the cryptogram value`. If it is a 40-byte cryptogram, include the first 20-byte value (block A) in the `cavv` field and the second 20-byte value (block B) in this field.

**Step 2** Include the following fields in the request:

- `customer_firstname`
- `customer_lastname`
- `bill_city`
- `bill_country`
- `customer_email`
- `bill_zip`



- bill\_state
- bill\_address1
- customer\_cc\_number—populate with the network token value obtained from your payment network token provider.
- card\_type—must be 001, 002, or 003.
- customer\_cc\_expmo—populate with the network token expiration month obtained from payment network token provider.
- customer\_cc\_expyr—populate with the network token expiration year obtained from payment network token provider.
- merchant\_id
- merchant\_ref\_number
- currency
- recurring\_frequency
- recurring\_payment\_amount
- recurring\_start\_date
- payment\_network\_token\_transaction\_type—set to 1.
- payment\_network\_token\_requestor\_id—this field is supported only for CyberSource through VisaNet.

See ["API Fields," page 58](#), for detailed descriptions of the request and reply fields.

---

## eCheck

---



### Important

You must validate the customer account before the customer subscription is created. See "[Validating a Subscription](#)," page 21.

---

### To create a recurring subscription that uses eChecks:

---

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

**Step 2** Include the following fields in the request:

- `subscription_payment_method`—set to **check**.
- `customer_firstname`
- `customer_lastname`
- `bill_city`
- `bill_country`
- `customer_email`
- `bill_zip`
- `bill_state`
- `bill_address1`
- `customer_phone`—contact your payment processor representative to learn whether this field is required or optional.
- `merchant_id`
- `merchant_ref_number`
- `currency`
- `recurring_frequency`
- `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.
- `bill_company_tax_id`—contact your TeleCheck representative to learn whether this field is required or optional.
- `ecp_account_no`
- `ecp_account_type`
- `ecp_rdfi`
- `ecp_sec_code`—required if your processor is TeleCheck.
- `ecp_check_no`—contact your payment processor representative to learn whether this field is required or optional.

See ["API Fields," page 58](#), for detailed descriptions of the request and reply fields.

---

## PINless Debit

---



**Important**

You must validate the customer account before the customer subscription is created. See ["PINless Debit Validation," page 24](#).

---

### To create a recurring subscription that uses PINless debits:

---

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

**Step 2** Include the following fields in the request:

- `subscription_payment_method`—set to **pinless debit**.
- `customer_firstname`
- `customer_lastname`
- `bill_city`
- `bill_country`
- `customer_email`
- `bill_zip`
- `bill_state`
- `bill_address1`
- `customer_cc_number`
- `customer_cc_expmo`
- `customer_cc_expyr`
- `merchant_id`
- `merchant_ref_number`
- `currency`
- `recurring_frequency`

See ["API Fields," page 58](#), for detailed descriptions of the request and reply fields.

---

# Retrieving Subscription Details

## To retrieve a subscription details:

---

**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

See ["API Fields," page 58](#), for detailed descriptions of the request and reply fields. See [Example 13, page 96](#), for a request and reply example.

---

# Updating a Subscription

## Card

---

### Updating Card Account Number

---



You can update all fields except the **recurring\_frequency**, **recurring\_start\_date** and **recurring\_number\_of\_payments** fields. In the example below, the customer's card account number is updated.

---



If your account is configured to use a 16 digit format-preserving subscription ID (see [page 12](#)), and you update the card number, you receive a new subscription ID if the last four digits of the new card number are different from the previous card number. The status of the previous subscription ID changes to *superseded*. You cannot update, delete, or cancel a customer subscription that has a status of *superseded*.

---

#### To update a customer's card account number:

---



When you update the card number for a customer subscription, CyberSource recommends that you validate the customer subscription. See "[Validating a Subscription](#)," [page 21](#).

---

**Step 1** Set the **ics\_applications** service field to **ics\_pay\_subscription\_update**.

**Step 2** Include the following fields in the request:

- **customer\_cc\_number**
- **card\_type**
- **customer\_cc\_expmo**—this field is optional if your CyberSource account is configured for relaxed requirements for address data and expiration date. See [page 59](#).

- `customer_cc_expyr`—this field is optional if your CyberSource account is configured for relaxed requirements for address data and expiration date. See [page 59](#).
- `merchant_id`
- `merchant_ref_number`
- `subscription_id`

See "API Fields," [page 58](#), for detailed descriptions of the request and reply fields. See [Example 5, page 93](#) for a request and reply example.

---

## Removing Card Expiration Date

**To remove a customer's card expiration date:**

---

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

**Step 2** Include the following fields in the request:

- `customer_cc_expmo`—set to **0** or include an empty value in this field.
- `customer_cc_expyr`—set to **0** or include an empty value in this field.
- `merchant_id`
- `merchant_ref_number`
- `subscription_id`

See "API Fields," [page 58](#) for detailed descriptions of the request and reply fields. See [Example 8, page 94](#) for a request and reply example.

---

## Payment Network Token

---

### Replacing Card Information with a Payment Network Token

You can replace the customer's card information, which is stored in the customer subscription, with a payment network token. For more information about payment network tokens, see [page 12](#).



Note

Updated billing and shipping information can also be included in the request. To remove a value that is stored in the customer subscription, include the relevant API field in the request, but do not include a value for the field.

---

#### To replace a customer's card information with a payment network token:

---

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

**Step 2** Include the following fields in the request:

- `customer_cc_number`—populate with the network token value obtained from your payment network token provider.
- `card_type`—must be 001, 002, or 003.
- `customer_cc_expmo`—populate with the network token expiration month obtained from your payment network token provider.
- `customer_cc_expyr`—populate with the network token expiration year obtained from your payment network token provider.
- `payment_network_token_transaction_type`—set to 1.
- `payment_network_token_requestor_id`—this field is supported only for CyberSource through VisaNet.
- `merchant_id`
- `merchant_ref_number`
- `subscription_id`

See "API Fields," [page 58](#) for detailed descriptions of the request and reply fields.

---

## Updating Payment Network Token Information

You can update the payment network token information that is stored in the customer subscription. For more information about payment network tokens, see [page 12](#).



**Note**

Updated billing and shipping information can also be included in the request. To remove a value that is stored in the customer subscription, include the relevant API field in the request, but do not include a value for the field.

---

### To update a customer's payment network token:

---

**Step 1** Set the **ics\_applications** service field to **ics\_pay\_subscription\_update**.

**Step 2** Include the following fields in the request:

- **customer\_cc\_number**—populate with the network token value obtained from your payment network token provider.
- **card\_type**—must be 001, 002, or 003.
- **customer\_cc\_expmo**—populate with the network token expiration month obtained from your payment network token provider.
- **customer\_cc\_expyr**—populate with the network token expiration year obtained from your payment network token provider.
- **payment\_network\_token\_transaction\_type**—set to 1.
- **payment\_network\_token\_requestor\_id**—this field is supported only for CyberSource through VisaNet.
- **merchant\_id**
- **merchant\_ref\_number**
- **subscription\_id**

See "[API Fields](#)," [page 58](#) for detailed descriptions of the request and reply fields.

---



## Replacing a Payment Network Token with Card Information

You can replace the customer's payment network token, which is stored in the customer subscription, with the customer's card information. For more information about payment network tokens, see [page 12](#).

**Note**

Updated billing and shipping information can also be included in the request. To remove a value that is stored in the customer subscription, include the relevant API field in the request, but do not include a value for the field.

---

### To update a customer's payment network token to card information:

---

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

**Step 2** Include the following fields in the request:

- `customer_cc_number`
- `card_type`
- `customer_cc_expmo`
- `customer_cc_expyr`
- `payment_network_token_transaction_type`—include an empty value in this field.
- `payment_network_token_requestor_id`—include an empty value in this field.
- `merchant_id`
- `merchant_ref_number`
- `subscription_id`

See "API Fields," [page 58](#) for detailed descriptions of the request and reply fields.

---

## eCheck

---

### Updating an eCheck Account Number

---



**Important**

You can also update the routing number by including the new value in the **ecp\_rdfi** field as part of the update request.

---

#### To update an eCheck account number:

---

**Step 1** Set the **ics\_applications** service field to **ics\_pay\_subscription\_update**.

**Step 2** Include the following fields in the request:

- **ecp\_account\_no**
- **merchant\_id**
- **merchant\_ref\_number**
- **subscription\_id**

See "API Fields," [page 58](#) for detailed descriptions of the request and reply fields. See [Example 11, page 95](#), for a request and reply example.

---

## Changing the Payment Method

---



You must validate the customer account before the customer subscription is created. See "[Validating a Subscription](#)," page 21.

---



You cannot change the payment method to or from the *Other* payment method. The *Other* payment method enables you to store data securely in a customer subscription. This payment method is useful if you do not intend to use the customer subscription for payment transactions. See [Payment Tokenization Using the SCMP API](#).

---

### To change the payment method of a customer subscription:

---

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

**Step 2** Include the following fields in the request:

- `subscription_payment_method`—change to **credit card**, or **check**, or **pinless debit**.
- `merchant_id`
- `merchant_ref_number`
- `subscription_id`

See "[API Fields](#)," page 58, for detailed descriptions of the request and reply fields.

---

## Updating Subscription Payments

---

### To update payments of a subscription:

---

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

**Step 2** Include the following fields in the request:

- `merchant_id`
- `merchant_ref_number`
- `recurring_number_of_payments_to_add`—include this field to add a number of payments to a subscription.
- `recurring_payment_event_action`—include this field to skip, unskip, approve, or unapprove a payment. Set to **skip**, **unskip**, **approve**, or **unapprove**.
- `recurring_payment_event_approved_by`—enter the name of the financial institution or person who is approving the payment.
- `recurring_payment_event_amount`—include this field to change the payment amount associated with the subscription.
- `recurring_payment_event_number`
- `subscription_id`

See ["API Fields," page 58](#), for detailed descriptions of the request and reply fields.

---

# On-Demand Transactions

## Requesting an On-Demand Transaction

---

An on-demand transaction is a real-time transaction using the details stored in a customer profile. On-demand transactions that you can request are:

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

### To request an on-demand sale transaction:

---

**Step 1** Set the `ccAuthService_runics_applications` service field to `trueics_auth,ics_bill`.

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

**Step 3** Include the following fields in the request:

- `merchantIDmerchant_id`
- `merchantReferenceCodemerchant_ref_number`
- `purchaseTotals_currencycurrency`
- `purchaseTotals_grandTotalAmountgrand_total_amount`
- `recurringSubscriptionInfo_subscriptionIDsubscription_id`

See ["API Fields," page 58](#), for detailed descriptions of the request and reply fields.

---

## To request an on-demand credit transaction:

---

**Step 1** Set the `ccCreditService_runics_applications` service field to `trueics_credit`.

**Step 2** Include the following fields in the request:

- `merchantIDmerchant_id`
- `merchantReferenceCodemerchant_ref_number`
- `purchaseTotals_currencycurrency`
- `purchaseTotals_grandTotalAmountgrand_total_amount`
- `recurringSubscriptionInfo_subscriptionIDsubscription_id`

See "API Fields," page 58, for detailed descriptions of the request and reply fields.

---

## Converting a Transaction to a Customer Subscription

---



**Important**

Transaction information resides in the CyberSource database for 60 days after the transaction is processed. When you create a customer subscription from an existing transaction, the account is already validated. You can charge a setup fee. See "Charging a Setup Fee," page 21.

---



**Note**

If your account is configured to use automatic preauthorizations, CyberSource does not perform a preauthorization when you convert a transaction to a customer subscription.

---

## To convert a transaction to a customer subscription:

---

**Step 1** Set the `paySubscriptionCreateService_runics_applications` service field to `trueics_pay_subscription_create`.

**Step 2** Include the following fields in the request:

- `merchantIDmerchant_id`
- `merchantReferenceCodemerchant_ref_number`
- `recurringSubscriptionInfo_frequencyrecurring_frequency`
- `paySubscriptionCreateService_paymentRequestIDpayment_request_id`—include the request ID value returned from the original transaction request.



**Note**

If you are using the FDC Nashville Global processor, you can also update the **customer\_emailbillTo\_email** field. Include the field with the new value in the request.

---

See "[API Fields](#)," [page 58](#), for detailed descriptions of the request and reply fields.

---

# Cancelling or Deleting a Subscription

## Cancelling a Subscription

---



Only recurring and installment customer subscriptions can be cancelled.

---

### To cancel a customer subscription:

---

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

**Step 2** Include the following fields in the request:

- `merchant_id`
- `merchant_ref_number`
- `subscription_status`—set to **cancel**.
- `subscription_id`

See "API Fields," page 58, for detailed descriptions of the request and reply fields. See Example 17, page 97, for a request and reply example.

---



## Deleting a Subscription

---



Deleting a customer subscription is permanent. When a subscription is deleted, any subscriptions it superseded are also deleted.

---

### To delete a customer subscription:

---

**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`

See ["API Fields," page 58](#), for detailed descriptions of the request and reply fields. See , for a request and reply example.

---

# Additional Features

## Email Notifications

---



**Important**

You can configure email notifications on the Subscription Settings page in the Business Center, or contact CyberSource Customer Support to configure this functionality.

---

CyberSource can send emails to your customers on your behalf to alert them of events related to their subscriptions. CyberSource offers the following types of email notifications:

- Pre-processing notification—informs the customer of an upcoming payment. This message can be sent seven days before CyberSource processes the payment. You can configure this setting by selecting the number of days the customer receives the notification before their transaction has been processed. When a card is to expire within 60 days, CyberSource adds a paragraph with this information to the message.
- Successful payment message—informs the customer of a successful payment. This email message is not sent if you process a one-time payment for a subscription.
- Failed payment message—informs the customer of a problem with one of the payments for the installment or recurring subscription. This email is sent only when the subscription goes on hold, not simply because one payment attempt has failed.

### To configure email notifications:

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- Step 1** Log in to the Business Center:
- Live Transactions: <https://ebc.cybersource.com>
  - Test Transactions: <https://ebctest.cybersource.com>
- Step 2** In the left navigation pane, choose **Recurring Billing > Settings**.
- Step 3** Configure the email notifications you would like to send to a customer.
- Step 4** Click **Submit Changes**.
-

## Email Format

For each type of notification, you must enter text in each section of the message:

**Header**—use the header section to add information about your company appropriate for the type of email message. For example, if the email is a successful payment message, the text you might add is *Demo company thanks you for your recent purchase.*

**Body**—use the body section to add information about the transaction appropriate for the type of email message. Add the customer's name, a description of the product purchased, and the total amount for the transaction.

**Footer**—use the footer to add a message that gives the customer contact details for your company. For example, *If you have any queries relating to your purchase, please visit us at [www.democompany.com](http://www.democompany.com) or call us at 123-123-1234.*

## Email Smart Tags

You can insert email smart tags to add specific information to each email notification. If no data exists for the smart tag, no information is displayed in the email.

**Table 4 Email Smart Tags**

Smart Tag	Description
##AMOUNT##	Amount of the payment.
##COMMENTS##	Optional comments that you included when creating the subscription.
##CUSTOMER_ACCOUNT_ID##	Optional account ID, tracking number, reward number, or other unique number that you assign to the customer.
##CUSTOMER_FIRST_NAME##	Customer first name.
##CUSTOMER_LAST_NAME##	Customer last name.
##ACCOUNT_NUMBER_LAST_DIGITS##	Card number with all but the last four digits masked.
##MERCHANT_NAME##	Merchant name.
##ORDER_NUMBER##	Order or merchant reference number that you assigned to the customer's subscription.
##PAYMENT_DATE##	Date that a successful payment or failed payment attempt was processed.
##SCHEDULED_DATE##	Date of an upcoming payment that is used for the pre-notification email.
##TITLE##	Title of the customer subscription.

## Email Templates

CyberSource provides email templates for each type of email notification.

### Successful Payment Template

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Subject: Your Account Has Been Billed by ##MERCHANT\_NAME##  
<HEADER>  
Dear ##CUSTOMER\_FIRST\_NAME## ##CUSTOMER\_LAST\_NAME##,  
A payment has been charged to your account:  
Order Number: ##ORDER\_NUMBER##  
For: ##TITLE##  
On: ##PAYMENT\_DATE##  
Amount: ##AMOUNT##  
Account: ##ACCOUNT\_NUMBER\_LAST\_DIGITS##  
<FOOTER>

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### Failed Payment Template

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Subject: ##MERCHANT\_NAME## Had a Problem Billing Your Account  
<HEADER>  
Dear ##CUSTOMER\_FIRST\_NAME## ##CUSTOMER\_LAST\_NAME##,  
Order Number: ##ORDER\_NUMBER##  
For: ##TITLE##  
On: ##PAYMENT\_DATE##  
Amount: ##AMOUNT##  
Account: ##ACCOUNT\_NUMBER\_LAST\_DIGITS##  
<FOOTER>

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## Payment Exceptions

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Contact CyberSource Customer Support to set the maximum amount of payment retries before a transaction is placed *on hold*.

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If a scheduled credit card payment fails, CyberSource automatically retries to collect the payment. While CyberSource is retrying to process the transaction, the customer subscription is in *retry mode*. After all possible retries are exhausted, the customer subscription changes from *retry mode* to *on hold*.

### Subscription Payment Exception Report

The Subscription Payment Exception Report provides information about installment and recurring customer subscriptions. The report includes two lists: *retry mode* and *on hold*.

#### Retry Mode

Subscriptions in this list are in *retry mode* because CyberSource is attempting to process payments that have failed.

#### Corrective Action (On Hold)

Subscriptions in the *On Hold* list are on hold because they need corrective action. This situation exists because all retries have been exhausted or because a payment failed for a reason that requires your attention, such as, an expired credit card number. You cannot manually place a subscription on hold, and CyberSource does not automatically cancel a subscription that is on hold.

If the subscription went on hold for a reason that requires you to update the subscription, contact the customer to get the updated information. When you update the subscription, it is automatically taken off hold, and all past payments are automatically scheduled for collection the next day. If you want to prevent the past-due payment from being scheduled, you can skip it, see [page 44](#) "Updating Subscription Payments," [page 44](#).



CyberSource recommends that you skip past-due payments before updating a subscription with the correct information (see "[Updating Subscription Payments](#)," [page 44](#) [page 44](#)). If you update the subscription first and then skip the past-due payments, you could create a timing conflict that results in the payments being executed instead of being skipped. To avoid this possibility, skip the payments before updating the subscription.

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CyberSource recommends that you skip past-due payments before updating a subscription with the correct information (see ). If you update the subscription first and then skip the past-due payments, you could create a timing conflict that results in the payments being executed instead of being skipped. To avoid this possibility, skip the payments before updating the subscription.

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## To take a subscription off hold:

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**Step 1** Determine why the subscription is on hold:

- In the Subscription Payment Exception Report, look at the status column.
- View the transaction details for the last failed payment attempt by viewing the subscription information.

**Step 2** Update the subscription with new or corrected information.

When you update the subscription, it is automatically taken off hold and all past payments are automatically scheduled for collection the next day. To prevent past-due payments from being scheduled, you can skip them as described in .

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## Optional Data Storage

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Each payment method enables you to store data securely in a customer subscription. If you are using the *Other* payment method, you must use CyberSource API services to submit a customer subscription request. This payment method is useful if you do not intend to use the customer subscription for payment transactions.

You can include two types of data storage fields in a customer subscription:

- **merchant\_secure\_data\_1 to 4**—CyberSource encrypts this data before storing it in the database. The validation performed on these fields is a size check. Fields 1 to 3 are string (100) and the fourth field is string (2K). You can include any data in the encrypted fields.
- **merchant\_defined\_data1 to 4**—CyberSource does not encrypt these fields before storing them in the database. Legal limitations exist on the type of data that you can include in the unencrypted fields.



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, 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, intentionally or not, 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.



When you create a customer subscription based on an existing transaction, the merchant-defined data fields are not transferred to the new customer subscription.

## Visa Bill Payment Program

This feature is a transaction indicator for specific authorization or credit requests that Visa wants to differentiate from other types of purchases and credits. Customers can use their Visa cards to pay bills, such as monthly utility bills. Visa requests that you flag the bill payments and credits so that they can be easily identified.

When you create a customer profile using a Visa card, set the **bill\_payment** field to **Y**. This value is case sensitive.

When you process a one-time payment, set the **bill\_payment** field to **Y**. This value is case sensitive.

When you process a one-time credit, set the **bill\_payment** field to **Y**. This value is case sensitive.

For more information about the Visa Bill payment Program and the processors that support it, see *Credit Card Services Using the SCMP API* ([PDF](#) | [HTML](#)).

## Replacement Expiration Dates

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Contact CyberSource Customer Support to configure your account to use replacement expiration dates. This feature is available only for installment and recurring customer subscriptions.

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Effective October 17, 2014, an issuing bank can decline an authorization request for a recurring transaction with a Visa Europe card if the expiration date is incorrect, invalid, or missing. If you do not provide the correct expiration date for a recurring transaction the authorization request may be declined.

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Your account can be configured so that when a credit card's expiration date passes, CyberSource automatically uses a replacement expiration date to process payments for that customer subscription. See "[Supported Processors and Payment Methods](#)," page 14, for a list of processors that support replacement expiration dates.

## Customer Subscription Sharing

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Contact CyberSource Customer Support to enable your account for subscription sharing.

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When you create a customer subscription, your CyberSource merchant ID is associated with that subscription. You can share customer profiles among merchant IDs, and you can access customer subscriptions that were created with other CyberSource merchant IDs.

You can:

- Create a customer subscription by converting an existing transaction that was processed with a CyberSource merchant ID other than your own.
- Retrieve customer subscription information—in your request include your merchant ID and the subscription ID of the customer subscription (see [page 36](#)). If the customer subscription is not enabled for subscription sharing, CyberSource returns the ESYSTEM reply flag (see [page 87](#)).
- Update customer subscription information—In your request include your merchant ID and the subscription ID of the customer subscription (see [page 37](#)). If the customer subscription is not enabled for profile sharing, CyberSource returns the ESYSTEM reply flag (see [page 87](#)).



- Perform an on-demand transaction using the customer subscription—In your request include your merchant ID and the subscription ID of the customer subscription (see [page 45](#)). If the customer subscription is not enabled for profile subscription, CyberSource returns the ESYSTEM reply flag (see [page 87](#)).

You cannot delete a customer subscription that has a merchant ID other than your own.

## Account Updater

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CyberSource Account Updater is integrated with the Recurring Billing functionality so that your customer subscriptions can be kept up-to-date with the latest credit card data changes. These changes can include a new expiration date, a new credit card number, or a brand change such as a change from Visa to Mastercard.

You can use the Account Updater REST API to submit a batch of subscription IDs (tokens) to be processed by the Account Updater service, or CyberSource can configure your account to automatically update your customer subscriptions with updated credit card data. See the *Account Updater User Guide* ([PDF](#) | [HTML](#)).

# API Fields

The Recurring Billing service names in the API field tables have been shortened:

Service name	Shortened Name
ics_pay_subscription_create	Create
ics_pay_subscription_delete	Delete
ics_pay_subscription_update	Update
ics_pay_subscription_event_update	Event Update
ics_pay_subscription_retrieve	Retrieve

## Data Types

Data Type	Description
Date and time	Format is YYYY-MM-DDThhmmssZ, where: <ul style="list-style-type: none"> <li>■ T separates the date and the time</li> <li>■ Z indicates Coordinated Universal Time (UTC), which is also known as Greenwich Mean Time</li> </ul> <b>Example</b> 2012-08-11T224757Z equals 10:47:57 P.M. on August 11, 2012
Decimal	Number that includes a decimal point <b>Examples:</b> 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

## Relaxed Requirements for Address Data and Expiration Date

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### Services:

- ics\_pay\_subscription\_create

### Processors:

- American Express Direct
- Chase Paymentech Solutions
- CyberSource through VisaNet
- FDC Compass
- FDC Nashville Global
- FDMS South
- Ingenico ePayments
- GPN

To enable relaxed requirements for address data and expiration date, contact CyberSource Customer Support to have your account configured for this feature.

Historically, this data was mandated by CyberSource. With the advent of digital payments and an increasingly global e-commerce environment, CyberSource decided to relax the requirements for address data and expiration date.

Relaxed requirements for address data make the following fields optional when creating recurring subscriptions:

- bill\_address1
- bill\_city
- bill\_country
- bill\_state
- bill\_zip: if you include this field in your request, you must also include **bill\_country**.
- customer\_email
- customer\_firstname
- customer\_lastname

Relaxed requirements for expiration date to make the following fields optional when updating customer subscriptions:

- customer\_cc\_expmo: if you include this field in your request, you must also include **customer\_cc\_expyr**.
- customer\_cc\_expyr: if you include this field in your request, you must also include **customer\_cc\_expmo**.

**Important**

When relaxed requirements for address data and expiration date are enabled for your CyberSource account, and your service request does not include one or more of the fields in the preceding list, you increase the risk of declined transactions and fraud depending on your location, your processor, and the cardholder's issuing bank.

It is your responsibility to determine whether a field is required for the transaction you are requesting. For example, effective October 2014, an issuing bank can decline an authorization request for a recurring transaction with a Visa Europe card if the expiration date is incorrect, invalid, or missing. If you do not provide the correct expiration date for a recurring transaction the authorization request may be declined.

## Request Fields

**Table 5 Request Fields**

Field Name	Description	Used By & Required (R)/ Optional (O)	Data Type & Length
amount	Use this field with the <b>offer0</b> field or use the <b>grand_total_amount</b> field to specify the amount for a setup fee or for a manual preauthorization. These features are not available for all payment methods. See " <a href="#">Charging a Setup Fee</a> ," <a href="#">page 21</a> .	Create (See description) Update (O)	String (15)
bill_address1	First line of the billing address.	Create (R) <sup>1</sup> Update (O)	CyberSource through VisaNet: String (40)  Litle: String (35)  Moneris: String (50)  All other processors: String (60)

<sup>1</sup> 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 59](#). **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
bill_address2	Second line of the billing address.	Create (O) Update (O)	CyberSource through VisaNet: String (40)  Litle: String (35)  Moneris: String (50)  All other processors: String (60)
bill_city	City of the billing address.	Create (R) <sup>1</sup> Update (O)	String (50)
bill_company_tax_id	Tax identifier for the customer's company. <b>Important</b> 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 code for the shipping address. Use the two-character <a href="#">ISO country codes</a> .	Create (R) <sup>1</sup> Update (O)	String (2)
bill_payment	Indicates that the payments for this customer subscription are for the Bill Payment program. See " <a href="#">Visa Bill Payment Program</a> ," page 55.  This feature applies to all transactions using this customer subscription.  Possible values: <ul style="list-style-type: none"> <li>■ N (default): Not a Visa Bill Payment.</li> <li>■ Y: Visa Bill Payment.</li> </ul>	Create (O) Update (O)	String (1)
bill_state	State or province in the billing address. Use the two-character <a href="#">ISO state and province code</a> . <b>Important</b> Required when the billing country is the U.S. or Canada; otherwise, optional.	Create (See description) <sup>1</sup> Update (O)	String (2)

<sup>1</sup> 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 59. **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
bill_zip	<p>Postal code for the billing 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><b>Example</b> 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><b>Example</b> A1B 2C3</p>	<p>Create (R)<sup>1</sup></p> <p>Update (O)</p>	<p>CyberSource through VisaNet: String (9)</p> <p>All other processors: String (10)</p>
card_type	<p>Type of card to authorize. Possible values:</p> <ul style="list-style-type: none"> <li>■ 001: Visa</li> <li>■ 002: Mastercard, Eurocard—European regional brand of Mastercard.</li> <li>■ 003: American Express</li> <li>■ 004: Discover</li> <li>■ 005: Diners Club</li> <li>■ 006: Carte Blanche</li> <li>■ 007: JCB</li> <li>■ 014: EnRoute</li> <li>■ 021: JAL</li> <li>■ 024: Maestro (UK Domestic)</li> <li>■ 031: Delta—use this value only for Ingenico ePayments. For other processors, use 001 for all Visa card types.</li> <li>■ 033: Visa Electron</li> <li>■ 034: Dankort</li> <li>■ 036: Carte Bleu</li> <li>■ 037: Carta Si</li> <li>■ 042: Maestro (International)</li> <li>■ 043: GE Money UK card—before setting up your system to work with GE Money UK cards, contact the CyberSource UK Customer Support Group.</li> </ul>	<p>Create (R for card payments)</p> <p>Update (O)</p>	String (3)

<sup>1</sup> 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 59](#). **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
caVV	<p><b>Visa</b> Cryptogram for payment network tokenization transactions. The value for this field must be 28-character base64 or 40-character hex binary. All cryptograms use one of these formats.</p> <p><b>American Express</b> Block A of the cryptogram for payment network tokenization transactions. The value for this field must be 28-character base64 or 40-character hex binary. All cryptograms use one of these formats.</p>	Create (R- required for payment network token transactions with Visa and American Express)	String (40)
comments	<p>Optional comments you have for the customer subscription.</p> <p><b>Warning</b> Do not use this field to store sensitive customer information.</p>	Create (O) Update (O)	String (255)
company_name	Name of the customer's company.	Create (O) Update (O)	String (60)
currency	Currency used by the customer.	Create (R) Update (O)	String (3)
customer_account_id	Your identifier for the customer.	Create (O) Update (O)	String (100)
customer_cc_cv_indicator	<p>Indicates whether a card verification number was included in the request. Possible values:</p> <ul style="list-style-type: none"> <li>■ 0 (default): CVN service not requested. This default is used if you do not include <b>customer_cc_cv_number</b> in the request.</li> <li>■ 1 (default): CVN service requested and supported. This default is used if you include <b>customer_cc_cv_number</b> in the request.</li> <li>■ 2: CVN on credit card is illegible.</li> <li>■ 9: CVN was not imprinted on credit card.</li> </ul>	Create (O)	Integer (1)

<sup>1</sup> 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 59](#). **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
customer_cc_cv_number	<p>Card verification number. Include this field only if you are using automatic preauthorization and want to run the CVN check. See <a href="#">"Validating a Subscription," page 21</a>.</p> <p><b>Important</b> For American Express card types, the CVN must be 4 digits.</p> <p><b>Note</b> Do not include this field if you are creating a customer subscription that uses the Ingenico ePayments payment processor.</p>	Create (O)	Integer (4)
customer_cc_expmo	<p>Expiration month.</p> <p>Format: MM</p>	Create (R for card payments) Update <sup>1</sup>	String (2)
customer_cc_expyr	<p>Expiration year.</p> <p>Format: YYYY</p> <p><b>FDC Nashville Global and FDMS South</b> 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.</p>	Create (R for card payments) Update <sup>1</sup>	FDC Nashville Global and FDMS South: String (See description) All other processors: String (4)
customer_cc_issue_number	<p>Indicates how many times a Maestro (UK Domestic) card has been issued to the account holder. The card might or might not have an issue number; the field is required if the card has an issue number. The number can consist of one or two digits, and the first digit might be a zero. Include exactly what is printed on the card—a value of 2 is different than a value of 02. Do not include the field, even with a blank value, if the card is not a Maestro (UK Domestic) card.</p>	Create (See description) Update (O)	String (5)
customer_cc_number	Card account number.	Create (R for card payments) Update (O)	Integer (20)

<sup>1</sup> 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 59](#). **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
customer_cc_startmo	Month of the start of the Maestro (UK Domestic) card validity period. The card might or might not have a start date printed on it; the field is required if the card has a start date. Do not include the field, even with a blank value, if the card is not a Maestro (UK Domestic) card.  Format: MM  Possible values: 01 through 12	Create (See description)  Update (O)	Integer (2)
customer_cc_startyr	Year of the start of the Maestro (UK Domestic) card validity period. The card might or might not have a start date printed on it; the field is required if the card has a start date. Do not include the field, even with a blank value, if the card is not a Maestro (UK Domestic) card.  Format: YYYY	Create (See description)  Update (O)	Integer (4)
customer_email	Customer email address.	Create (R) <sup>1</sup>  Update (O)	String (255)
customer_firstname	Customer first name.	Create (R) <sup>1</sup>  Update (O)	String (60)
customer_lastname	Customer last name.	Create (R) <sup>1</sup>  Update (O)	String (60)
customer_phone	Customer phone number. When you create a customer subscription, the requirements depend on the payment method: <ul style="list-style-type: none"> <li>■ Credit cards—optional.</li> <li>■ Electronic checks—contact your payment processor representative to learn whether this field is required or optional.</li> <li>■ PINless debits—optional.</li> </ul>	Create (See description)  Update (See description)	String (6 to15)  String (10) for eCheck payments using Telecheck.
date_of_birth	Customer date of birth.  Format: YYYY-MM-DD or YYYYMMDD	Create (O)  Update (O)	String (10)

<sup>1</sup> 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 59](#). **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
decision_manager_enabled	<p>Indicates whether to use Decision Manager for a customer subscription.</p> <p>Use this field only if you are using Decision Manager and your system is configured to use automatic preauthorizations. See <a href="#">"Automatically Preauthorizing an Account," page 21.</a></p> <p>If your account is enabled for , will be used on the preauthorization that occurs before the customer subscription is created. You can use this field to turn off for the preauthorization for this specific customer subscription. Possible values:</p> <ul style="list-style-type: none"> <li>■ false: do not use Decision Manager for this customer subscription.</li> <li>■ true (default): use Decision Manager for this customer subscription.</li> </ul> <p>For more information about Decision Manager, see the <i>Decision Manager Using the SCMP API Developer Guide</i> (<a href="#">PDF</a>   <a href="#">HTML</a>).</p>	Create (O)	String (5)
decline_avs_flags	<p>List of AVS codes that cause the customer subscription creation request to be declined for AVS reasons. Use a space to separate the codes in the list. Use this field only if you are using automatic preauthorization. See <a href="#">"AVS and CVN Codes," page 88.</a></p> <p><b>Important</b> You must include the value N in the list if you want to receive declines for the AVS code N.</p>	Create (O)	String (255)
driver_license_no	<p>Customer driver's license number.</p> <p><b>Important</b> Contact your TeleCheck representative to find out whether this field is required or optional.</p>	Create (See description) Update (See description)	String (30)
driver_license_state	<p>State or province in which the customer's driver's license was issued. Use the two character <a href="#">ISO state and province code</a>.</p> <p><b>Important</b> Contact your TeleCheck representative to find out whether this field is required or optional.</p>	Create (See description) Update (See description)	String (2)

<sup>1</sup> 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 59.](#) **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
e_commerce_indicator	Type of transaction. Possible values: <ul style="list-style-type: none"> <li>■ internet (default): e-commerce order placed using a web site.</li> <li>■ moto: mail order or telephone order.</li> <li>■ recurring: recurring transaction.</li> </ul>	Create (O) Update (O)	String (13)
ecp_account_no	Checking account number.	Create (R for eCheck payments) Update (O)	Integer (8 to 17)
ecp_account_type	Checking account type. Possible values: <ul style="list-style-type: none"> <li>■ C: checking</li> <li>■ S: savings (USD only)</li> <li>■ X: corporate checking (USD only)</li> <li>■ G: general ledger</li> </ul>	Create (R for eCheck payments) Update (O)	String (1)
ecp_rdfi	Bank routing number. This value is also known as the <i>transit number</i> .  If the currency used is CAD, the maximum length of the routing number is 8 digits.  If the currency used is USD, the maximum length of the routing number is 9 digits.	Create (R for eCheck payments) Update (O)	Integer (9)

<sup>1</sup> 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 59. **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
ecp_sec_code	<p><b>Important</b> 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"> <li>■ CCD: corporate cash disbursement—a 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.</li> <li>■ PPD: prearranged payment and deposit entry—a 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.</li> <li>■ TEL: telephone-initiated entry—a 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.</li> <li>■ WEB: internet-initiated entry—a 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.</li> </ul>	<p>Create (See description)</p> <p>Update (O)</p>	String (3)

<sup>1</sup> 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 59. **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
grand_total_amount	Use this field or use the <b>offer0</b> line item field with the <b>amount</b> field to specify the amount for a setup fee or for a manual preauthorization. These features are not available for all payment methods. See <a href="#">"Validating a Subscription," page 21.</a>	Create (See description) Update (O)	String (15)
ics_applications	Comma-separated list of CyberSource services to process.	Required for all services	String (255)
ignore_avs	Indicates whether CyberSource should ignore the results of the AVS check and create the customer subscription even if the credit card does not pass the AVS check. Use this field only if you are using automatic preauthorization. See <a href="#">"Automatically Preauthorizing an Account," page 21.</a>  Possible values: <ul style="list-style-type: none"> <li>■ yes: ignore the results of the AVS check and create the customer subscription.</li> <li>■ no (default): if the AVS check fails, do not create the customer subscription.</li> </ul> When this value is true, the list in the <b>decline_avs_flags</b> field is ignored.	Create (O)	String (5)
ignore_card_expiration	Indicates whether to ignore a card expiration date when creating a subscription.  Possible values: <ul style="list-style-type: none"> <li>■ N: do not ignore the card expiration date.</li> <li>■ Y: ignore the card expiration date.</li> </ul> <b>Note</b> If this field is set to Y, the <b>recurring_disable_auto_auth</b> field must also be set to Y.	Create (O)	String (1)
merchant_descriptor_alternate	Alternate contact information for your business, such as an email address or URL.	Create (O) Update (O)	String (13)

<sup>1</sup> 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 59.](#) **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
merchant_defined_data1	<p>Four fields that you can use to store information. These values are displayed on the Subscription Transaction Details page on the Business Center. See <a href="#">"Optional Data Storage," page 54.</a></p> <p><b>Warning</b> Merchant-defined data fields are not intended to and MUST NOT be used to capture personally identifying information. Accordingly, merchants are prohibited from capturing, obtaining, and/or transmitting any personally identifying information in or via the merchant-defined data fields. 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.</p> <p><b>Note</b> If you are creating a customer subscription based on an existing transaction, the merchant-defined data fields do not get transferred to the new customer subscription.</p>	Create (O) Update (O)	String (64)
merchant_defined_data2			
merchant_defined_data3			
merchant_defined_data4			
merchant_id	Your CyberSource merchant ID.	Required for all services	String (30)
merchant_ref_number	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)

<sup>1</sup> 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 59.](#) **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
merchant_secure_data1 merchant_secure_data2 merchant_secure_data3	Storage fields for any type of data. The only validation performed on these fields is a size check. The data is encrypted before it is stored in the database. See <a href="#">"Optional Data Storage," page 54.</a>	Create (O) Update (O)	String (100)
merchant_secure_data4	Storage field for any type of data. The only validation performed on this field is a size check. The data is encrypted before it is stored in the database. See <a href="#">"Optional Data Storage," page 54.</a>  <b>Note</b> The maximum number of characters allowed is 2048.	Create (O) Update (O)	String (2K)
offer0	Use the <b>offer0</b> line item with the <b>amount</b> field or use <b>grand_total_amount</b> to specify the amount for a setup fee or for a manual preauthorization. These features are not available for all payment methods. See <a href="#">"Validating a Subscription," page 21.</a>	Create (See description) Update (O)	String (50)
payment_network_token_requestor_id	Value that identifies your business and indicates that the cardholder's account number is tokenized. This value is assigned by the token service provider and is unique within the token service provider's database. See <a href="#">page 26</a> or <a href="#">page 32.</a>  <b>Note</b> This field is supported only for CyberSource through VisaNet and FDC Nashville Global.	Create (O)	Integer (11)
payment_network_token_transaction_type	Type of transaction that provided the token data. This value does not specify the token service provider; it specifies the entity that provided you with information about the token. See <a href="#">page 26</a> or <a href="#">page 32.</a>  Value:  1: In-app transaction. An application on the customer's mobile device provided the token data for an e-commerce transaction.	Create (R-required for payment network token transaction)	String (1)

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 59.](#) **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
payment_request_id	<p>The <b>request_id</b> value returned from a previous request for a authorization transaction. This value links the previous request to the current follow-on request.</p> <p><b>Important</b> This field is required when converting an existing authorization to a customer subscription. See <a href="#">page 46</a>.</p>	Create (See description)	String (26)
payment_request_token	<p>The <b>request_token</b> value returned from a previous request for a credit card authorization. This value links the previous request to the current follow-on request. This field is an encoded string that does not contain any confidential information, such as account numbers or card verification numbers. The string can contain up to 256 characters.</p> <p><b>Important</b> You must include this field or <b>payment_request_id</b> when converting an existing authorization to a customer subscription. See <a href="#">page 46</a>.</p>	Create (See description)	String (256)
recurring_automatic_renew	<p>Indicates whether to automatically renew the payment schedule for a subscription. Possible values:</p> <ul style="list-style-type: none"> <li>■ true (default): automatically renew.</li> <li>■ false: do not renew automatically.</li> </ul>	Create (O)	String (5)
recurring_disable_auto_auth	<p>Indicates whether to turn off the preauthorization check when creating this customer subscription. See <a href="#">page 21</a>. Use this field if your CyberSource account is configured for automatic preauthorizations, but for this specific customer subscription you prefer to override that setting. Possible values:</p> <ul style="list-style-type: none"> <li>■ N: no, perform the preauthorization for this customer subscription.</li> <li>■ Y: yes, turn off the preauthorization for this customer subscription.</li> </ul>	Create (O)	String (1)

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 59](#). **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
recurring_frequency	<p>Frequency of payments for the subscription. Possible values:</p> <ul style="list-style-type: none"> <li>■ on-demand: no payment schedule. See <i>Payment Tokenization Using the SCMP API</i> (<a href="#">PDF</a>   <a href="#">HTML</a>).</li> <li>■ weekly: every 7 days.</li> <li>■ bi-weekly: every 2 weeks.</li> <li>■ quad-weekly: every 4 weeks.</li> <li>■ monthly</li> <li>■ semi-monthly: twice every month (1st and 15th).</li> <li>■ quarterly</li> <li>■ semi-annually: twice every year.</li> <li>■ annually</li> </ul>	Create (R)	String (20)
recurring_number_of_payments	<p>Total number of payments for the duration of the installment subscription. The maximum allowed value is 261, which is the equivalent of 5 years (including two leap days) of weekly payments. Maximum values:</p> <ul style="list-style-type: none"> <li>■ 261: weekly</li> <li>■ 130: bi-weekly</li> <li>■ 65: quad-weekly</li> <li>■ 60: monthly</li> <li>■ 120: semi-monthly</li> <li>■ 20: quarterly</li> <li>■ 10: semi-annually</li> <li>■ 5: annually</li> <li>■ 0: on demand. No recurring frequency. See <i>Payment Tokenization Using the SCMP API</i> (<a href="#">PDF</a>   <a href="#">HTML</a>).</li> </ul>	Create (R for installment subscriptions; otherwise, not used.)	Integer (3)
recurring_number_of_payments_to_add	<p>Number of payments to add to an existing installment subscription. The maximum allowed value is 261, which is the equivalent of 5 years (including two leap days) of weekly payments.</p>	Update (O)	Integer (3)

<sup>1</sup> 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 59. **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
recurring_payment_amount	Amount of the subscription payments. This value must be greater than 0; otherwise, the recurring or installment subscription is not created.	Create (R) Update (O)	String (15)
recurring_payment_event_action	Action to perform for the payment that is being updated. Possible values: <ul style="list-style-type: none"> <li>■ approve: approve the payment for processing.</li> <li>■ unapprove: unapprove the payment. CyberSource will not process the payment.</li> <li>■ skip: skip the payment. CyberSource will not process the payment.</li> <li>■ unskip: unskip the payment. Unskipping a payment does not automatically approve it. You must approve the payment in a separate request.</li> </ul> <p>See <a href="#">"Updating Subscription Payments," page 44.</a></p>	Event Update (O)	String (9)
recurring_payment_event_amount	Amount of the individual payment.	Event Update (O)	String (15)
recurring_payment_event_approved_by	Name of the financial institution or person who is approving the payment.	Event Update (O)	String (30)
recurring_payment_event_number	Number of the payment to update.  For example, for a subscription with monthly payments that start in January, a value of 6 indicates that the June payment in the first year of the subscription and a value of 15 indicates the March payment in the second year of the subscription.	Event Update (R)	String (15)
recurring_start_date	Date on which your customer is billed for the first time for an installment or recurring subscription.  Format: YYYYMMDD	Create (O)	String (10)
ship_to_address1	First line of the shipping address.	Create (O) Update (O)	String (60)
ship_to_address2	Second line of the shipping address.	Create (O) Update (O)	String (60)
ship_to_city	City of the shipping address.	Create (O) Update (O)	String (50)

<sup>1</sup> 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 59.](#) **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
ship_to_company_name	Name of the company receiving the product.	Create (O)	String (60)
ship_to_country	Country code for the shipping address. Use the two-character <a href="#">ISO country codes</a> .	Create (O) Update (O)	String (2)
ship_to_firstname	First name of the person receiving the product.	Create (O) Update (O)	String (60)
ship_to_lastname	Last name of the person receiving the product.	Create (O) Update (O)	String (60)
ship_to_phone	Phone number for the shipping address.	Create (O) Update (O)	String (15)
ship_to_state	State or province in the billing address. Use the two-character <a href="#">ISO state and province code</a> .	Create (O) Update (O)	String (2)
ship_to_zip	Postal code for the shipping address. The postal code must consist of 5 to 9 digits.  If the billing country is the U.S., the 9-digit postal code must follow this format: [5 digits][dash][4 digits] <b>Example</b> 12345-6789  If the billing country is Canada, the 6-digit postal code must follow this format: [alpha][numeric][alpha][space][numeric][alpha][numeric] <b>Example</b> A1B 2C3  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.	Create (O) Update (O)	String (10)
subscription_id	Value that identifies the customer subscription for which the service is being requested. This value is sent to you when the customer subscription is created.	Update (R) Retrieve (R)	String (26)

<sup>1</sup> 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 59. **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
subscription_payment_method	<p>Method of payment. See <a href="#">"Supported Processors and Payment Methods," page 14</a>. Possible values:</p> <ul style="list-style-type: none"> <li>■ credit card</li> <li>■ check</li> <li>■ other—see <a href="#">"Optional Data Storage," page 54</a>.</li> <li>■ pinless debit</li> </ul> <p>Create: this field is required when you create a customer subscription with a payment method other than credit card.</p>	<p>Create (See description)</p> <p>Update (O)</p>	String (20)
subscription_status	<p>Status for the installment or recurring subscription.</p> <p>Possible value:</p> <p>cancel: cancel all future scheduled payments for the subscription. See <a href="#">page 44</a>.</p>	Update (O)	String (15)
subscription_title	Name or title of the customer subscription.	<p>Create (O)</p> <p>Update (O)</p>	String (60)
timeout	Number of seconds the system waits before returning a timeout error. The default is 110 seconds.	Optional for all services	Positive integer (3)
ucaf_collection_indicator	Required field for payment network tokenization transactions with Mastercard. Set the value for this field to 2.	Create (R-required for payment network token transactions with Mastercard)	String with numbers only (1)
xid	<p><b>Visa</b></p> <p>Cryptogram for payment network tokenization transactions. The value for this field must be 28-character base64 or 40-character hex binary. All cryptograms use one of these formats.</p> <p><b>American Express</b></p> <p>Block B of the cryptogram for payment network tokenization transactions. The value for this field must be 28-character base64 or 40-character hex binary. All cryptograms use one of these formats.</p>	Create (R-required for payment network token transactions with Visa and American Express)	String (40)

<sup>1</sup> 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 59](#). **Important** It is your responsibility to determine whether a field is required for the transaction you are requesting.

## Reply Fields

**Table 6** Reply Fields

Field Name	Description	Returned By	Data Type & Length
auth_auth_amount	Amount that was authorized.	Create	Decimal (15)
auth_auth_avs	AVS result code. See <a href="#">page 88</a> .	Create	String (1)
auth_auth_code	Authorization code. Returned only if the processor returns this value.  See Encoded Account Numbers and Zero Amount Authorizations in <i>Credit Card Services Using the SCMP API</i> ( <a href="#">PDF</a>   <a href="#">HTML</a> ).	Create	String (7)
auth_rcode	Indicates whether the authorization was successful. Possible values: <ul style="list-style-type: none"> <li>■ -1: An error occurred.</li> <li>■ 0: The request was declined.</li> <li>■ 1: The request was successful.</li> </ul>	Create	Integer (1)
auth_rflag	One-word description of the result of the authorization request. See <a href="#">page 87</a> .	Create	String (50)
auth_rmsg	Message that explains the reply flag <b>auth_rflag</b> . Do not display this message to the customer, and do not use this field to write an error handler.	Create	String (255)
bill_bill_amount	Amount that was captured.	Create	Decimal (15)
bill_rcode	Indicates whether the capture was successful. Possible values: <ul style="list-style-type: none"> <li>■ -1: An error occurred.</li> <li>■ 0: The request was declined.</li> <li>■ 1: The request was successful.</li> </ul>	Create	Integer (1)
bill_rflag	One-word description of the result of the capture request. See <a href="#">page 87</a> .	Create	String (50)
bill_rmsg	Message that explains the reply flag <b>bill_rflag</b> . Do not display this message to the customer, and do not use this field to write an error handler.	Create	String (255)
ics_rcode	One-digit code that indicates whether the entire request was successful. Possible values: <ul style="list-style-type: none"> <li>■ -1: an error occurred</li> <li>■ 0: the request was declined</li> <li>■ 1: the request was successful</li> </ul>	All services	Integer (1)

Table 6 Reply Fields (Continued)

Field Name	Description	Returned By	Data Type & Length
ics_rflag	One-word description of the result of the entire request. See <a href="#">page 87</a> .	All services	String (50)
ics_rmsg	Message that explains the reply flag <b>ics_rflag</b> . Do not display this message to the customer, and do not use this field to write an error handler.	All services	String (255)
merchant_ref_number	Order reference or tracking number that you provided in the request.	All services	String (50)
merchant_secure_data4	Storage field for any type of data. The only validation performed on this field is a size check. The data is encrypted before it is stored in the database. See " <a href="#">Optional Data Storage</a> ," <a href="#">page 54</a> .  <b>Note</b> The maximum number of characters allowed is 2071.	Create (O) Update (O)	String (2K)
pay_subscription_event_update_owner_merchant_id	CyberSource merchant ID that was used to create the subscription for which the service was requested. This field is returned only if you are using subscription sharing and only if you requested this service for a subscription that was created with a CyberSource merchant ID for which sharing is enabled.	Event Update	String (30)
pay_subscription_event_update_rcode	One-digit code that indicates whether the service request was successful. Possible values:  <ul style="list-style-type: none"> <li>■ -1: an error occurred</li> <li>■ 0: the request was declined</li> <li>■ 1: the request was successful</li> </ul>	Event Update	Integer (1)
pay_subscription_event_update_rflag	One-word description of the result of the service request. See <a href="#">page 87</a> .	Event Update	String (50)
pay_subscription_event_update_rmsg	Message that explains the reply flag <b>ics_rflag</b> . Do not display this message to the customer, and do not use this field to write an error handler.	All services	String (255)
pay_subscription_create_rcode	One-digit code that indicates whether the specific service request was successful. Possible values:  <ul style="list-style-type: none"> <li>■ -1: an error occurred</li> <li>■ 0: the request was declined</li> <li>■ 1: the request was successful</li> </ul>	Create	Integer (1)

Table 6 Reply Fields (Continued)

Field Name	Description	Returned By	Data Type & Length
pay_subscription_create_rflag	One-word description of the result of the specific service request. See <a href="#">"Reply Flags," page 87</a> .	Create	String (50)
pay_subscription_create_rmsg	Message that explains the reply flag <b>pay_subscription_create_rflag</b> . Do not display this message to the customer, and do not use this field to write an error handler.	Create	String (255)
pay_subscription_create_subscription_id	Identifier for the customer subscription.	Create	String (26)
pay_subscription_delete_rcode	One-digit code that indicates whether the specific service request was successful. Possible values: <ul style="list-style-type: none"> <li>■ -1: an error occurred</li> <li>■ 0: the request was declined</li> <li>■ 1: the request was successful</li> </ul>	Delete	Integer (1)
pay_subscription_delete_rflag	One-word description of the result of the specific service request. See <a href="#">"Reply Flags," page 87</a> .	Delete	String (50)
pay_subscription_delete_rmsg	Message that explains the reply flag <b>pay_subscription_delete_rflag</b> field. Do not display this message to the customer, and do not use this field to write an error handler.	Delete	String (255)
pay_subscription_delete_subscription_id	Identifier for the customer subscription.	Delete	String (26)
pay_subscription_retrieve_merchant_defined_data1	Four fields for storing information. To understand the kinds of data storage fields, see <a href="#">"Optional Data Storage," page 54</a> .	Retrieve	String (64)
pay_subscription_retrieve_merchant_defined_data2			
pay_subscription_retrieve_merchant_defined_data3			
pay_subscription_retrieve_merchant_defined_data4			

Table 6 Reply Fields (Continued)

Field Name	Description	Returned By	Data Type & Length
pay_subscription_retrieve_merchant_secure_data1 pay_subscription_retrieve_merchant_secure_data2 pay_subscription_retrieve_merchant_secure_data3	Data that was encrypted. CyberSource decrypts the data before returning it. To understand the different kinds of data storage fields, see <a href="#">"Optional Data Storage," page 54</a> .	Retrieve	String (100)
pay_subscription_retrieve_approval_required	Indicates whether the installment or recurring subscription uses payments requiring approval. Possible values: <ul style="list-style-type: none"> <li>■ true: payments require approval.</li> <li>■ false: payments do not require approval, which means that they are automatic.</li> </ul>	Retrieve	String (5)
pay_subscription_retrieve_automatic_renew	Indicates whether the installment subscription will be automatically renewed. Possible values: <ul style="list-style-type: none"> <li>■ true: the subscription are renewed automatically.</li> <li>■ false: the subscription is not renewed automatically.</li> </ul> For recurring subscriptions, this value will always be <b>true</b> .	Retrieve	String (5)
pay_subscription_retrieve_bill_address1	First line of the billing address.	Retrieve	String (60)
pay_subscription_retrieve_bill_address2	Second line of the billing address.	Retrieve	String (60)
pay_subscription_retrieve_bill_city	City of the customer address.	Retrieve	String (50)
pay_subscription_retrieve_bill_company_tax_id	Company tax identifier.	Retrieve	String with numbers only (9)
pay_subscription_retrieve_bill_country	Country code for the billing address. Use the two-character <a href="#">ISO codes</a> .	Retrieve	String (2)
pay_subscription_retrieve_bill_payment	Indicates whether the payments for this customer subscription are for the Visa Bill Payment program. Possible values: <ul style="list-style-type: none"> <li>■ N (default): not a Visa Bill Payment.</li> <li>■ Y: Visa Bill Payment.</li> </ul> See <a href="#">"Visa Bill Payment Program," page 55</a> .	Retrieve	String (1)



**Table 6 Reply Fields (Continued)**

Field Name	Description	Returned By	Data Type & Length
pay_subscription_retrieve_bill_state	State or province of billing address. Use the <a href="#">two-character ISO</a> state and province codes.	Retrieve	String (2)
pay_subscription_retrieve_bill_zip	Postal code in the billing address.	Retrieve	String (10)
pay_subscription_retrieve_card_type	Card type.	Retrieve	String (3)
pay_subscription_retrieve_comments	Comments that you included for the customer subscription.	Retrieve	String (255)
pay_subscription_retrieve_company_name	Name of the customer company.	Retrieve	String (40)
pay_subscription_retrieve_currency	Currency used by the customer.	Retrieve	String (5)
pay_subscription_retrieve_customer_account_id	Your identifier for the customer.	Retrieve	String (50)
pay_subscription_retrieve_customer_cc_expmo	Expiration month for the card. Format: MM	Retrieve	Integer (2)
pay_subscription_retrieve_customer_cc_expyr	Expiration year for the card. Format: YYYY	Retrieve	Integer (4)
pay_subscription_retrieve_customer_cc_issue_number	Issue number for the Maestro (UK Domestic) card.	Retrieve	String (5)
pay_subscription_retrieve_customer_cc_number	Card account number.	Retrieve	String (20)
pay_subscription_retrieve_customer_cc_startmo	Start month for the Maestro (UK Domestic) card. Format: MM	Retrieve	Integer (2)
pay_subscription_retrieve_customer_cc_startyr	Start year for the Maestro (UK Domestic) card. Format: YYYY	Retrieve	Integer (4)
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 6 Reply Fields (Continued)**

Field Name	Description	Returned By	Data Type & Length
pay_subscription_ retrieve_customer_phone	Customer phone number.	Retrieve	String (20)
pay_subscription_ retrieve_date_of_birth	Date of birth of the customer. Format: YYYY-MM-DD or YYYYMMDD.	Retrieve	String (10)
pay_subscription_ retrieve_driver_license_ no	Driver's license number of the customer.	Retrieve	String (30)
pay_subscription_ retrieve_driver_license_ state	State or province from which the customer's driver's license was issued.	Retrieve	String (2)
pay_subscription_ retrieve_ecp_account_no	Bank account number.	Retrieve	Integer (17)
pay_subscription_ retrieve_ecp_account_ type	Account type. Possible values: <ul style="list-style-type: none"> <li>■ C: checking</li> <li>■ S: savings (USD only)</li> <li>■ X: corporate checking (USD only)</li> </ul>	Retrieve	String (1)
pay_subscription_ retrieve_ecp_ authenticate_id	Identification number returned when an Authenticate request is processed and returned in subsequent monetary transactions.	Retrieve	Numeric (32)
pay_subscription_ retrieve_ecp_rdfi	Bank routing number.	Retrieve	Integer (9)

Table 6 Reply Fields (Continued)

Field Name	Description	Returned By	Data Type & Length
pay_subscription_retrieve_ecp_sec_code	<p>Code that specifies the authorization method for the transaction. Possible values:</p> <ul style="list-style-type: none"> <li>■ 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. A standing authorization is required for recurring transactions.</li> <li>■ 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 and a written standing authorization is required for recurring transactions.</li> <li>■ 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. There is no recurring billing option for TEL.</li> <li>■ 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.</li> </ul>	Retrieve	String (3)
pay_subscription_retrieve_end_date	<p>End date for the installment subscription.</p> <p>Format: YYYYMMDD</p>	Retrieve	String (8)
pay_subscription_retrieve_frequency	<p>Frequency of payments for the customer subscription.</p>	Retrieve	String (20)
pay_subscription_retrieve_merchant_ref_number	<p>Merchant-generated order reference or tracking number.</p>	Retrieve	String (50)

Table 6 Reply Fields (Continued)

Field Name	Description	Returned By	Data Type & Length
pay_subscription_retrieve_merchant_secure_data4	Data that was encrypted. CyberSource decrypts the data before returning it. To understand the different kinds of data storage fields, see <a href="#">"Optional Data Storage," page 54</a> .	Retrieve	String (2048)
pay_subscription_retrieve_owner_merchant_id	CyberSource merchant ID that was used to create the customer subscription for which the service was requested. This field is returned only if you are using subscription sharing and only if you requested this service for a customer subscription that is created with a CyberSource merchant ID for which sharing is enabled. See <a href="#">"Customer Subscription Sharing," page 56</a> .	Retrieve	String (30)
pay_subscription_retrieve_payment_method	Method of payment. See <a href="#">"Supported Processors and Payment Methods," page 14</a> . Possible values: <ul style="list-style-type: none"> <li>■ credit card</li> <li>■ check</li> <li>■ other—see <a href="#">"Optional Data Storage," page 54</a>.</li> <li>■ pinless debit</li> </ul>	Retrieve	String (20)
pay_subscription_retrieve_payments_left	Number of payments remaining in the schedule for an installment subscription. For a recurring subscription, this value is <b>0</b> .	Retrieve	Integer (3)
pay_subscription_retrieve_rcode	One-digit code that indicates whether the specific service request is successful. Possible values: <ul style="list-style-type: none"> <li>■ -1: an error occurred</li> <li>■ 0: the request was declined</li> <li>■ 1: the request was successful</li> </ul>	Retrieve	Integer (1)
pay_subscription_retrieve_recurring_amount	The payment amount for the customer subscription.	Retrieve	String (15)
pay_subscription_retrieve_rflag	One-word description of the result of the specific service request. See <a href="#">"Reply Flags," page 87</a> .	Retrieve	String (50)
pay_subscription_retrieve_rmsg	Message that explains the reply flag <b>pay_subscription_retrieve_rflag</b> field. Do not display this message to the customer, and do not use this field to write an error handler.	Retrieve	String (255)

Table 6 Reply Fields (Continued)

Field Name	Description	Returned By	Data Type & Length
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 <a href="#">ISO codes</a> .	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)
pay_subscription_retrieve_ship_to_state	State or province of shipping address. Use the <a href="#">two-character ISO state and province codes</a> .	Retrieve	String (2)
pay_subscription_retrieve_ship_to_zip	Postal code in the shipping address.	Retrieve	String (10)
pay_subscription_retrieve_start_date	Start date for an installment or recurring subscription.	Retrieve	String (8)
pay_subscription_retrieve_status	Status of the customer subscription. Possible values: <ul style="list-style-type: none"> <li>■ Cancelled: the subscription has been cancelled.</li> <li>■ Current: the subscription is active.</li> <li>■ Superseded: the subscription has been updated and a new subscription ID has been assigned to it.</li> </ul>	Retrieve	String (9)
pay_subscription_retrieve_subscription_id	Subscription ID.	Retrieve	String (26)
pay_subscription_retrieve_subscription_id_new	The new subscription ID that supersedes the previous subscription ID for the customer subscription.	Retrieve	String (16)
pay_subscription_retrieve_title	Name or title for the customer subscription.	Retrieve	String (60)

Table 6 Reply Fields (Continued)

Field Name	Description	Returned By	Data Type & Length
pay_subscription_update_owner_merchant_id	CyberSource merchant ID that is used to create the customer subscription for which the service is requested. This field is returned only if you are using subscription sharing and only if you requested this service for a customer subscription that is created with a CyberSource merchant ID for which sharing is enabled. See <a href="#">"Customer Subscription Sharing," page 56</a> .	Update	String (30)
pay_subscription_update_rcode	One-digit code that indicates whether the specific service request is successful. Possible values: <ul style="list-style-type: none"> <li>■ -1: an error occurred</li> <li>■ 0: the request was declined</li> <li>■ 1: the request was successful</li> </ul>	Update	Integer (1)
pay_subscription_update_rflag	One-word description of the result of the specific service request. See <a href="#">"Reply Flags," page 87</a> .	Update	String (50)
pay_subscription_update_rmsg	Message that explains the reply flag <b>pay_subscription_update_rflag</b> . 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 customer subscription.	Update	String (26)
pay_subscription_update_subscription_id_new	The new subscription ID that supersedes the previous subscription ID for the customer subscription.	Update	String (16)
request_id	Identifier for the request.	All services	String (26)
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. The string can contain a maximum of 256 characters.	All Services	String (256)

## Reply Flags

The following table describes the reply flags returned by the SCMP API for customer subscriptions. For a discussion of reply codes, reply flags, and reply messages, see *Getting Started with CyberSource Advanced for the SCMP API* ([PDF](#) | [HTML](#)).



### Note

Because CyberSource can add reply codes, reply flags, and reply messages at any time, you need to:

- Parse the reply data according to the names of the fields instead of their order in the reply. For more information on parsing reply fields, see the documentation for your client.
- Program your error handler to use the reply flag value to determine the result if it receives a reply code that it does not recognize.

**Table 7 Reply Flags**

Reply Flag	Description
DAVSNO	The credit card was accepted by the bank but refused by CyberSource because it did not pass the AVS check. AVS result is N.
DCALL	You must call the issuing bank to proceed with the transaction.
DCV	The credit card was accepted by the bank but refused by CyberSource because it did not pass the CVN check. CVN result is N.
DCARDEXPIRED	CyberSource declined the request because the card has expired.
DCARDREFUSED	The bank declined the transaction. Transactions are declined for reasons such as insufficient funds cannot be differentiated from other transactions at the time of authorization.
DCHECKREFUSED	The processor declined the electronic check transaction.
DINVALIDCARD	The card number did not pass CyberSource basic checks.
DINVALIDDATA	Data provided is not consistent with the request. For example, the customer subscription has been superseded. See <a href="#">"Updating a Subscription," page 37</a> .
DMISSINGFIELD	The request is missing a required field.
ESYSTEM	System error. You must design your transaction management system to include a way to correctly handle CyberSource system errors. Depending on which payment processor is handling the transaction, the error can indicate a valid CyberSource system error or a processor rejection because of invalid data. In either case, CyberSource recommends that you do not design your system to endlessly retry sending a transaction when a system error occurs. See the <a href="#">client documentation</a> for the CyberSource client you are using for important information about how to handle system errors and retries.
ETIMEOUT	The request timed out.

**Table 7 Reply Flags (Continued)**

Reply Flag	Description
SOK	Transaction was successful.
SPARTIALAPPROVAL	Your authorization request was partially approved. See " <a href="#">Validating a Subscription</a> ," page 21.

## AVS and CVN Codes

An issuing bank uses the AVS code to confirm that your customer is providing the correct billing address. If the customer provides incorrect data, the transaction might be fraudulent. The international and U.S. domestic Address Verification Service (AVS) codes are the Visa standard AVS codes, except for codes 1 and 2, which are CyberSource AVS codes. The standard AVS return codes for other types of credit cards (including American Express cards) are mapped to the Visa standard codes.

**Important**

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

## International AVS Codes

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

**Table 8 International AVS Codes**

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



## U.S. Domestic AVS Codes

**Table 9 Domestic AVS Codes**

Code	Response	Description
A	Partial match	Street address matches, but 5-digit and 9-digit postal codes do not match.
B	Partial match	Street address matches, but postal code is not verified.
C	No match	Street address and postal code do not match.
D & M	Match	Street address and postal code match.
E	Invalid	AVS data is invalid, or AVS is not allowed for this card type.
F	Partial match	Card member name does not match, but billing postal code matches. Returned only for the American Express card type.
G		Not supported.
H	Partial match	Card member name does not match, but street address and postal code match. Returned only for the American Express card type.
I	No match	Address not verified.
J	Match	Card member name, billing address, and postal code match. Shipping information verified and chargeback protection guaranteed through the Fraud Protection Program. Returned only if you are registered to use AAV+ with the American Express Phoenix processor.
K	Partial match	Card member name matches, but billing address and billing postal code do not match. Returned only for the American Express card type.
L	Partial match	Card member name and billing postal code match, but billing address does not match. Returned only for the American Express card type.
M	Match	Street address and postal code match.
N	No match	One of the following: <ul style="list-style-type: none"> <li>■ Street address and postal code do not match.</li> <li>■ Card member's name, street address, and postal code do not match. Returned only for the American Express card type.</li> </ul>
O	Partial match	Card member name and billing address match, but billing postal code does not match. Returned only for the American Express card type.
P	Partial match	Postal code matches, but street address is not verified.
Q	Match	Card member name, billing address, and postal code match. Shipping information verified but chargeback protection not guaranteed (Standard program). Returned only if you are registered to use AAV+ with the American Express Phoenix processor.
R	System unavailable	System unavailable.

**Table 9 Domestic AVS Codes (Continued)**

Code	Response	Description
S	Not supported	U.S. issuing bank does not support AVS.
T	Partial match	Card member name does not match, but street address matches. Returned only for the American Express card type.
U	System unavailable	Address information unavailable for one of these reasons: <ul style="list-style-type: none"> <li>■ The U.S. bank does not support non-U.S. AVS.</li> <li>■ The AVS in a U.S. bank is not functioning properly.</li> </ul>
V	Match	Card member name, billing address, and billing postal code match. Returned only for the American Express card type.
W	Partial match	Street address does not match, but 9-digit postal code matches.
X	Match	Street address and 9-digit postal code match.
Y	Match	Street address and 5-digit postal code match.
Z	Partial match	Street address does not match, but 5-digit postal code matches.
1	Not supported	AVS is not supported for this processor or card type.
2	Unrecognized	The processor returned an unrecognized value for the AVS response.
3	Match	Address is confirmed. Returned only for PayPal Express Checkout.
4	No match	Address is not confirmed. Returned only for PayPal Express Checkout.

## CVN Codes

**Table 10 CVN Codes**

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

# Examples

## Creating a Subscription

---

### Installment: Credit Card without a Setup Fee

#### Example 1 Request: Credit Card Subscription without a Setup Fee

---

```
customer_firstname=John
customer_lastname=Smith
bill_address1=1295 charleston rd
bill_city=Mountain View
bill_state=ca
bill_zip=94042
bill_country=us
customer_email=demo@cybersource.com
currency=usd
customer_cc_number=4111111111111111
customer_cc_expmo=01
customer_cc_expyr=20
card_type=001
merchant_id=demomerchant
merchant_ref_number=123456789
recurring_frequency=monthly
recurring_start_date=20140221
recurring_number_of_payments=4
recurring_payment_amount=15.00
ics_applications=ics_pay_subscription_create
```

---

**Example 2 Reply: Credit Card Subscription without a Setup Fee**


---

```

ics_decision_reason_code=100
ics_rcode=1
ics_return_code=1000000
ics_rflag=SOK
ics_rmmsg=Request was processed successfully.
merchant_ref_number=123456789
pay_subscription_create_rcode=1
pay_subscription_create_rflag=SOK
pay_subscription_create_rmmsg=Request was processed successfully.
pay_subscription_create_subscription_id=3829668893822130706689
pay_subscription_create_time=2013-10-28T132755Z
request_id=3829668893822130706689

```

---

**Recurring: Credit Card with a 5.00 Setup Fee****Example 3 Request: Credit Card Subscription with a 5.00 Setup Fee**


---

```

customer_firstname=John
customer_lastname=Smith
bill_address1=1295 charleston rd
bill_city=Mountain View
bill_state=ca
bill_zip=94042
bill_country=us
customer_email=demo@cybersource.com
currency=usd
customer_cc_number=4111111111111111
customer_cc_expmo=01
customer_cc_expyr=20
card_type=001
merchant_id=demomerchant
merchant_ref_number=123456789
recurring_frequency=monthly
recurring_start_date=20140221
recurring_payment_amount=15.00
grand_total_amount=5.00
ics_applications=ics_pay_subscription_create
ics_applications=ics_auth
ics_applications=ics_bill

```

---

**Example 4     Reply: Credit Card Customer Subscription with a Setup Fee**


---

```

auth_rcode=1
auth_rflag=SOK
auth_rmsg=Request was processed successfully.
auth_auth_amount=5.00
bill_rcode=1
bill_rflag=SOK
bill_rmsg=Request was processed successfully.
bill_bill_amount=5.00
ics_decision_reason_code=100
ics_rcode=1
ics_return_code=1000000
ics_rflag=SOK
ics_rmsg=Request was processed successfully.
merchant_ref_number=123456789
pay_subscription_create_rcode=1
pay_subscription_create_rflag=SOK
pay_subscription_create_rmsg=Request was processed successfully.
pay_subscription_create_subscription_id=3829668893822130706689
pay_subscription_create_time=2013-10-28T132755Z
request_id=3829668893822130706689

```

---

## Updating a Subscription

---

### Updating Card Account Number

---

**Important**

If your account is configured to use a 16-digit format-preserving subscription ID, and you update the card with a new account number, you receive a new subscription ID. This new subscription ID is created if the final four digits of the new card number are different from the final four digits of the previous card number.

---

**Example 5     Request: Updating a Customer Subscription (Card Details)**


---

```

merchant_id=demomerchant
merchant_ref_number=123456789
customer_cc_number=4111111111111111
customer_cc_expmo=01
customer_cc_expyr=20
card_type=001
subscription_id=3829680248342130706689
ics_applications=ics_pay_subscription_update

```

---

**Example 6 Reply: Updating a Customer Subscription (Card Details)**


---

```

ics_rcode=1
ics_rflag=SOK
ics_rmsg=Request was processed successfully.
merchant_ref_number=123456789
pay_subscription_update_owner_merchant_id=demomerchant
pay_subscription_update_rcode=1
pay_subscription_update_rflag=SOK
pay_subscription_update_rmsg=Request was processed successfully.
pay_subscription_update_subscription_id_new=2356901248342130705370
pay_subscription_update_time=2013-10-28T134651Z
request_id=3829680259022130706689

```

---

## Removing Card Expiration Dates

**Example 7 Request: Removing Card Expiration Dates**


---

```

merchant_id=demomerchant
merchant_ref_number=123456789
customer_cc_expmo=0
customer_cc_expyr=0
subscription_id=3829680248342130706689
ics_applications=ics_pay_subscription_update

```

---

**Example 8 Reply: Removing Card Expiration Dates**


---

```

ics_rcode=1
ics_rflag=SOK
ics_rmsg=Request was processed successfully.
merchant_ref_number=123456789
pay_subscription_update_owner_merchant_id=demomerchant
pay_subscription_update_rcode=1
pay_subscription_update_rflag=SOK
pay_subscription_update_rmsg=Request was processed successfully.
pay_subscription_update_subscription_id_new=2356901248342130705370
pay_subscription_update_time=2013-10-28T134651Z
request_id=3829680259022130706689

```

---

## Updating a Subscription Payment Event

**Example 9 Request: Updating a Payment Event**


---

```

merchant_id=demomerchant
merchant_ref_number=123456789
recurring_payment_event_amount=20.00
recurring_payment_event_number=2
subscription_id=3829680248342130706689
ics_applications=ics_pay_subscription_event_update

```

---

**Example 10 Reply: Updating a Payment Event**


---

```

ics_rcode=1
ics_rflag=SOK
ics_rmsg=Request was processed successfully.
merchant_ref_number=123456789
pay_subscription_event_update_owner_merchant_id=demomerchant
pay_subscription_event_update_rcode=1
pay_subscription_event_update_rflag=SOK
pay_subscription_event_update_rmsg=Request was processed successfully.
request_id=3829680259022130706689

```

---

**Updating an eCheck Account Number****Important**

You can also update the routing number by including the new value in the **ecp\_rdfi** field as part of the update request.

---

**Example 11 Request: Updating an eCheck Account Number**


---

```

merchant_id=demomerchant
merchant_ref_number=123456789
ecp_account_no=41113456
ics_applications= ics_pay_subscription_update
subscription_payment_method=check
subscription_id=4889851572820170561911

```

---

**Example 12 Reply: Updating an eCheck Account Number**


---

```

ics_rcode=1
ics_rflag=SOK
ics_rmsg=Request was processed successfully.
merchant_ref_number=123456789
pay_subscription_update_time=2017-03-08T150422Z
pay_subscription_update_subscription_id=4889851572820170561911
request_id=4889854608010170561911
pay_subscription_update_rmsg=Request was processed successfully.
pay_subscription_update_rcode=1
pay_subscription_update_rflag=SOK
request_token=Ahi jbwSTCRRdWmzZL3V3MUT7kTTz8A3NwyaSZe jFcst+AOAAnQpJ

```

---

## Retrieving a Subscription

---

### Example 13 Request: Retrieving a Customer Subscription

---

```
merchant_id=demomerchant
merchant_ref_number=123456789
subscription_id=3829684519002130706689
ics_applications=ics_pay_subscription_retrieve
```

---

### Example 14 Reply: Retrieving a Customer Subscription

---

```
ics_rcode=1
ics_rflag=SOK
ics_rmsg=Request was processed successfully.
merchant_ref_number=123456789
pay_subscription_retrieve_approval_required=false
pay_subscription_retrieve_automatic_renew=false
pay_subscription_retrieve_bill_address1=1295 Charleston Road
pay_subscription_retrieve_bill_city=Mountain View
pay_subscription_retrieve_bill_country=US
pay_subscription_retrieve_bill_payment=N
pay_subscription_retrieve_bill_state=CA
pay_subscription_retrieve_bill_zip=94042
pay_subscription_retrieve_currency=USD
pay_subscription_retrieve_customer_cc_number=4111111111111111
pay_subscription_retrieve_customer_email=jdoe@example.com
pay_subscription_retrieve_customer_firstname=JOHN
pay_subscription_retrieve_customer_lastname=DOE
pay_subscription_retrieve_customer_phone=6504322000
pay_subscription_retrieve_frequency=on-demand
pay_subscription_retrieve_owner_merchant_id=demomerchant
pay_subscription_retrieve_payment_method=credit card
pay_subscription_retrieve_rcode=1
pay_subscription_retrieve_ship_to_address1=1295 Ship To Street
pay_subscription_retrieve_ship_to_address2=High Street
pay_subscription_retrieve_ship_to_city=San Francisco
pay_subscription_retrieve_ship_to_country=US
pay_subscription_retrieve_ship_to_firstname=JOHN
pay_subscription_retrieve_ship_to_lastname=DOE
pay_subscription_retrieve_ship_to_state=CA
pay_subscription_retrieve_ship_to_zip=94042-1234
pay_subscription_retrieve_status=CURRENT
pay_subscription_retrieve_subscription_id=3829684519002130706689
request_id=3829684529252130706689
```

---



## Deleting a Subscription

---

### Example 15 Request: Deleting a Customer Subscription

---

```
merchant_id=demomerchant
merchant_ref_number=123456789
subscription_id=3829688163002130706689
ics_applications=ics_pay_subscription_delete
```

---

### Example 16 Reply: Deleting a Customer Subscription

---

```
ics_rcode=1
ics_rflag=SOK
ics_rmsg=Request was processed successfully.
merchant_ref_number=123456789
pay_subscription_delete_rcode=1
pay_subscription_delete_rflag=SOK
pay_subscription_delete_rmsg=Request was processed successfully.
pay_subscription_delete_subscription_id=3829688163002130706689
request_id=3829688182452130706689
```

---

## Cancelling a Subscription

---

### Example 17 Request: Cancelling a Customer Subscription

---

```
merchant_id=demomerchant
merchant_ref_number=123456789
subscription_id=3829688163002130706689
subscription_status=cancel
ics_applications=ics_pay_subscription_update
```

---

### Example 18 Reply: Cancelling a Customer Subscription

---

```
ics_rcode=1
ics_rflag=SOK
ics_rmsg=Request was processed successfully.
merchant_ref_number=123456789
pay_subscription_update_rcode=1
pay_subscription_update_rflag=SOK
pay_subscription_update_rmsg=Request was processed successfully.
pay_subscription_update_subscription_id=2356901248342130705370
request_id=3829688182452130706689
```

---