Google Pay

Using the Simple Order API

May 2019

CyberSource®
the power of payment
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Recent Revisions to This Document

<table>
<thead>
<tr>
<th>Release</th>
<th>Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 2019</td>
<td>Removed the following request fields that were erroneously added in the April 2019 release:</td>
</tr>
<tr>
<td></td>
<td>- ccSaleService_directoryServerTransactionID</td>
</tr>
<tr>
<td></td>
<td>- ccSaleService_networkTokenCryptogram</td>
</tr>
<tr>
<td></td>
<td>- ccSaleService_paSpecificationVersion</td>
</tr>
<tr>
<td></td>
<td>Removed the following reply fields that were erroneously added in the April 2019 release:</td>
</tr>
<tr>
<td></td>
<td>- payerAuthEnrollReply_directoryServerTransactionID</td>
</tr>
<tr>
<td></td>
<td>- payerAuthValidateReply_directoryServerTransactionID</td>
</tr>
<tr>
<td>April 2019</td>
<td>Added the following request fields that support tokenized transactions using a network token with 3D Secure or SecureCode (see &quot;API Request Fields,&quot; page 22):</td>
</tr>
<tr>
<td></td>
<td>- ccAuthService_directoryServerTransactionID</td>
</tr>
<tr>
<td></td>
<td>- ccAuthService_networkTokenCryptogram</td>
</tr>
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<tr>
<td></td>
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<td>- ccSaleService_networkTokenCryptogram</td>
</tr>
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<td></td>
<td>- ccSaleService_paSpecificationVersion</td>
</tr>
<tr>
<td></td>
<td>Added the following reply fields that support tokenized transactions using a network token with 3D Secure or SecureCode (see &quot;API Reply Fields,&quot; page 31):</td>
</tr>
<tr>
<td></td>
<td>- payerAuthEnrollReply_directoryServerTransactionID</td>
</tr>
<tr>
<td></td>
<td>- payerAuthValidateReply_directoryServerTransactionID</td>
</tr>
<tr>
<td></td>
<td>Added support for the processor Elavon Americas. See &quot;Supported Processors, Card Types, and Optional Features,&quot; page 10.</td>
</tr>
<tr>
<td></td>
<td>Added support for the following optional features by Elavon Americas (see &quot;Supported Processors, Card Types, and Optional Features,&quot; page 10):</td>
</tr>
<tr>
<td></td>
<td>- Merchant-Initiated transactions</td>
</tr>
<tr>
<td></td>
<td>- Multiple partial captures</td>
</tr>
<tr>
<td></td>
<td>- Recurring payments</td>
</tr>
<tr>
<td>Release</td>
<td>Changes</td>
</tr>
<tr>
<td>--------------</td>
<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td>March 2019</td>
<td>Added support for the processor <em>Credit Mutuel-CIC</em>. See &quot;Supported</td>
</tr>
<tr>
<td></td>
<td>Processors, Card Types, and Optional Features,&quot; page 10.</td>
</tr>
<tr>
<td></td>
<td>Added support for Recurring Payments as an optional feature for the</td>
</tr>
<tr>
<td></td>
<td>processors <em>Credit Mutuel-CIC</em> and <em>SIX</em>. See &quot;Supported Processors, Card</td>
</tr>
<tr>
<td></td>
<td>Types, and Optional Features,&quot; page 10.</td>
</tr>
<tr>
<td>July 2018</td>
<td>All processors: updated optional features. See &quot;Supported Processors,</td>
</tr>
<tr>
<td></td>
<td>Card Types, and Optional Features,&quot; page 10.</td>
</tr>
<tr>
<td></td>
<td>Added support for the processor <em>Worldpay VAP</em>. See &quot;Supported Processors,</td>
</tr>
<tr>
<td></td>
<td>Card Types, and Optional Features,&quot; page 10.</td>
</tr>
<tr>
<td>June 2018</td>
<td>Added a new chapter on formatting encrypted data. See Chapter 2,</td>
</tr>
<tr>
<td></td>
<td>&quot;Formatting Encrypted Payment Data,&quot; on page 15.</td>
</tr>
<tr>
<td>April 2018</td>
<td>Initial release.</td>
</tr>
</tbody>
</table>
About This Guide

Audience and Purpose

This document is written for merchants who want to enable customers to use Google Pay to pay for in-app purchases. This document provides an overview of integrating the Google API and describes how to request the CyberSource API to process an authorization.

This document describes the Google Pay service and the CyberSource API. You must request the Google API to receive the customer’s encrypted payment data before requesting the CyberSource API to process the transaction.

Conventions

Notes and Important Statements

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

An Important statement contains information essential to successfully completing a task or learning a concept.
## Text and Command Conventions

<table>
<thead>
<tr>
<th>Convention</th>
<th>Usage</th>
</tr>
</thead>
</table>
| **Bold**   | ■ Field and service names in text; for example: Include the *ics_applications* field.  
 ■ Items that you are instructed to act upon; for example: Click *Save*. |
| **Screen text** | ■ XML elements.  
 ■ Code examples and samples.  
 ■ Text that you enter in an API environment; for example: Set the *davService_run* field to *true*. |

## Related Documents

CyberSource Documents:
- *Getting Started with CyberSource Advanced for the Simple Order API* (PDF | HTML)  
- Simple Order API and SOAP Toolkit API Documentation and Downloads page  
- *Credit Card Services Using the Simple Order API* (PDF | HTML)  
- *Payment Network Tokenization Using the Simple Order API* (PDF | HTML)  

Google Pay documents:
- Google Pay API: https://developers.google.com/pay/api/  

Refer to the Support Center for complete CyberSource technical documentation: http://www.cybersource.com/support_center/support_documentation

## Customer Support

For support information about any CyberSource service, visit the Support Center: http://www.cybersource.com/support
Google Pay Overview

Google Pay is a simple, secure in-app mobile and Web payment solution. You can choose CyberSource to process Google Pay transactions through all e-commerce channels.

You can simplify your payment processing by allowing CyberSource to decrypt the payment data for you during processing.

This method integrates simply and allows you to process transactions without seeing the payment network token and transaction data.

1. Using the Google API, request the customer’s encrypted payment data.
2. Using the CyberSource API, construct and submit the authorization request and include the encrypted payment data from the Google Pay call back.
3. CyberSource decrypts the encrypted payment data to create the payment network token and processes the authorization request.

For complete details, see "How Google Pay Works," page 12.

Payment Network Tokenization

Payment network tokenization enables you to securely request a payment transaction with a payment network token instead of a customer’s primary account number (PAN).

The payment network token is included in the customer’s encrypted payment data, which is returned by the payment processor.

For in-app and browser transactions, payment network tokenization uses some of the CyberSource payer authentication request fields. This approach simplifies your implementation if your order management system already uses payer authentication.
Requirements

- Create a CyberSource merchant evaluation account if you do not have one already: https://www.cybersource.com/register/
- Have a merchant account with a supported processor (see "Supported Processors, Card Types, and Optional Features," page 10).
- Install the CyberSource Simple Order API client.
- Create a Google developer account and embed Google Pay into your application or web sites.
- For details about integrating Google Pay, see Google Pay’s API documentation.

All optional features are described in Payment Network Tokenization Using the Simple Order API.

Supported Processors, Card Types, and Optional Features

<table>
<thead>
<tr>
<th>Processors</th>
<th>Card Types</th>
<th>Optional Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Express Direct</td>
<td>American Express</td>
<td>Recurring Payments</td>
</tr>
<tr>
<td>Barclays</td>
<td>Visa, Mastercard</td>
<td>Recurring Payments, Multiple partial captures</td>
</tr>
<tr>
<td>Chase Paymentech Solutions</td>
<td>Visa, Mastercard, American Express, Discover</td>
<td>Recurring Payments</td>
</tr>
<tr>
<td>Credit Mutuel-CIC</td>
<td>Visa, Mastercard, Cartes Bancaires</td>
<td>Recurring Payments</td>
</tr>
</tbody>
</table>
Table 1  Supported Processors, Card Types, and Optional Features (Continued)

<table>
<thead>
<tr>
<th>Processors</th>
<th>Card Types</th>
<th>Optional Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>CyberSource through VisaNet. The supported acquirers are:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Australia and New Zealand Banking Group Limited (ANZ)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Vantiv</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Westpac</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elavon Americas</td>
<td>Visa, Mastercard, American Express, JCB, Discover</td>
<td>Merchant-Initiated transactions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Multiple partial captures</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Recurring payments</td>
</tr>
<tr>
<td>FDC Compass</td>
<td>Visa, Mastercard, American Express</td>
<td>Recurring payments</td>
</tr>
<tr>
<td>FDC Nashville Global</td>
<td>Visa, Mastercard, American Express, Discover</td>
<td>Recurring payments</td>
</tr>
<tr>
<td>JCN Gateway</td>
<td>JCB</td>
<td>Multiple partial captures</td>
</tr>
<tr>
<td>GPN</td>
<td>Visa, Mastercard, American Express</td>
<td>Recurring payments</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Split shipments</td>
</tr>
<tr>
<td>OmniPay Direct. The supported acquirers are:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Bank of America Merchant Services</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• First Data Europe through OmniPay Direct</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Global Payments International Acquiring through OmniPay Direct</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SIX</td>
<td>Visa, Mastercard</td>
<td>Recurring payments</td>
</tr>
<tr>
<td>Streamline</td>
<td>Visa, Mastercard</td>
<td>Recurring payments</td>
</tr>
<tr>
<td>TSYS Acquiring Solutions</td>
<td>Visa, Mastercard, American Express</td>
<td>Recurring payments</td>
</tr>
<tr>
<td>Worldpay VAP</td>
<td>Visa, Mastercard</td>
<td>Recurring payments</td>
</tr>
<tr>
<td>Worldpay VAP was previously called Litle.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
How Google Pay Works

1. The customer chooses the Google Pay button. Using the Google API, your system initiates the Google Pay request identifying cybersource as your payment gateway, passing your CyberSource merchant ID as the gateway merchant ID.

2. The customer confirms the payment. The Google API contacts Google Pay services to retrieve the consumer’s payment parameters.

3. If the customer’s selected payment credentials are tokenized or you are tokenizing new payment credentials, the Google Pay service contacts the appropriate payment network to retrieve the appropriate cryptogram.

4. The payment network returns the appropriate token and cryptogram to the Google Pay service.

5. Google creates encrypted payment data using the gateway-specific key that is supplied in the Wallet request and includes it in the Google API response.

6. The Google Pay call back returns the encrypted payment data.

7. Your system prepares the Google Pay response information for submission to the CyberSource service.

   a. CyberSource sends the authorization request to the acquirer.

   b. The acquirer processes the request from CyberSource and creates the payment network authorization request.
c The payment network processes the request from the acquirer and creates the issuer authorization request.

d The issuer processes the request from the payment network. The issuer looks up the payment information and returns an approved or declined authorization message to the payment network.

e The payment network returns the authorization response to the acquirer.

f The acquirer returns the authorization response to CyberSource.

8 CyberSource returns the authorization response to your system.

9 Your system returns the authorization response to the payment application.

10 The payment application displays the confirmation or decline message to the customer.

a The acquirer submits the settlement request to the issuer for funds.

b The issuer supplies the funds to the acquirer for the authorized transactions.

**Additional CyberSource Services**

Refer to *Credit Card Services Using the Simple Order API* for information on how to request these follow-on services.

**Table 2 CyberSource Services**

<table>
<thead>
<tr>
<th>CyberSource Service</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capture</td>
<td>A follow-on service that uses the request ID returned from the previous authorization. The request ID links the capture to the authorization. This service transfers funds from the customer’s account to your bank and usually takes two to four days to complete.</td>
</tr>
<tr>
<td>Sale</td>
<td>A sale is a bundled authorization and capture. Request the authorization and capture services at the same time. CyberSource processes the capture immediately.</td>
</tr>
<tr>
<td>Authorization Reversal</td>
<td>A follow-on service that uses the request ID returned from the previous authorization. An authorization reversal releases the hold that the authorization placed on the customer’s credit card funds. Use this service to reverse an unnecessary or undesired authorization.</td>
</tr>
</tbody>
</table>
Transaction Endpoints

CAS (test transactions):

https://ics2wstest.ic3.com/commerce/1.x/transactionProcessor/
CyberSourceTransaction_1.104.xsd

Production (live transactions):

https://ics2ws.ic3.com/commerce/1.x/transactionProcessor/CyberSourceTransaction_1.104.xsd
Formatting the Payment Blob

To transmit Google Pay responses to CyberSource securely, you must first encode them using Base64. Example 1 shows a Google Pay response.

Example 1  Google Pay Response

```
{"signature":"MEUCIQDhTxhHqwY8pX89hpYxaSK5jFgsqgG2E1rX77QXseK8tAIgUBvYYAI/bnBS8T/Tfxnmd2AF981My50PyGexM5dMJk\u003d","protocolVersion":"ECv1","signedMessage":"\"encr yptedMessage\"":"odyUGGA7B+b1letYcJbS43AQUFQJpWEFCN4UExQ5LX0\/XcLwKE1Xc95nMnnmP091M2Kgp13FYsL768ccCzA2hBGLYF+fucgJtcvkrUhcNSyXr7hwf12BEsrweqJM6I7Vs5 lfrPAukRJeLDOQ4FxmTLW49QyP8vIZC+zz2c+23zozzI5oB9jE8fA2dolFai3Cu6gXqdRKh\/IHRh7UniLUtY+DG5FQV2pwST2uBSNNkZhl8WYJDHbxBjz0UebVPObmT5cc8AKU5dgHRdfr4GKpeZ4EBzB90 BPxLqYhopriJ61bFgFVsQQ6\/8H bq7IImMH5y7G8p8qAFkWnB78zCLOFh5BjXcjkxGoFp2gjAsrhrhtHAFbe3WQBupkwJu09\/6l\/
MyJpCsrMPHFouF/\dj0SYjq+xIO971CH2ec7jQrAhISLWZ92kuMvGKFWpu0CKn2XqTXQ=","ephemeralPublicKey":"\"MFk wEvYHKoZ1zj0CAQYIKoZIzj0DAqCDQgAEnn4yjy0N6x1XO8\8j7/4jvmLJCAYQqXlwp1FhjUtqIM0cTijZfI9so2QEOs2ZnVp3D0d13JYIDve+396KkAQ==","tag":"DRp cc+YQ33RNgstCxx2nJbMJnirbU5DW3dStjfhFiwcv="}"
```

Example 2 shows how to transform the Google Pay payment information into the Base64-encoded blob.

Example 2  Android Code

```
new String(Base64.encode(paymentData.getPaymentMethodToken().getToken().getBytes()))
```
To construct the following blob, encode Example 1 using Base64 and include it in the CyberSource payment request. Example 3 shows a formatted Google Pay blob.

<table>
<thead>
<tr>
<th>Example 3</th>
<th>Google Pay Blob</th>
</tr>
</thead>
<tbody>
<tr>
<td>eyJzaWduYXRlcmludOiJNRVVDSVFEaFR4aEhxd1k4cFhCoWhwWXhhU0s1akZnc3FwRzJFMXJYNzdRWNHzSzh0Q1UnVUJ2WVI1BSS9ibkJTOFQvVGZ4bm0yQUY5DFNjdV5MBH1eUdleE01ZElKa1x1MDAzaZCIsInByb3BvY29sVmVyc2lvbiI6IklKV8dLiIiLCJzaWduZWRNZXNzYWdlIjoielwi2W5jcn1wdGVkTWVzc2F2ZnVwIwI2lub2R5VUdHQ0dCK2JsbGV0WNY1M0M0FRVZBSnBXRU5DTj1vRWVFeFElTPgwXC99Y0x3S0VsWGNCOTVUtW5tUE85bE0yS0dwMTNGWXXMnzY4Z2NDekFgQkdMNUYrZnVnY0pUY32rc1VoY05TeVhyN2h3ZjEyQkVzcmd1cUpNNkk3VnM1bGZyUER1aJZUxEXUc0RmhtVEtXN1lReV4aU4dk1aQyt0ejjJKlozem96ekkb0I5akU4ZkEYZG9sRmExM0NINmdyVcRLSFvvSUhsad0Vb1M0VXVUeSSwzwGZGVUeG11KKeheieEjgeeBvZWNJUcPym11UNWNjOEFLVTvkZ0hSZ2GzyNEdLcEVaNEVcEK5MEJQeExxWUwb3ByaUo2bGJGZ0Zwc1FR1wvOEhCcVE3SW1JTUg1eTdhOHA4UcFGalduqjc4WmNNMEZoNUJqW99qa3Hb02wMmduqNYaGh0dEhBrmJ1M1dRQnVQa3dKdTA5C9eC9Ne0pwQ1Nyc1E1Rm91Rl1wZGowU1lqUST4STASU2xDSFplYzdqUXJBaE1TTFdaOURa3VNdldLUFwdTBDS24yWHFUWFE9XC1sXC1jPGh1bWVwYXwQdWXsANWNLZX1iJpcik1kG4a3Fd11I29aSXPqQBNR1VJS29aSXpQMERBUWNEUdBR5uNH1geTBONhhsWE84XC84ajdcLzRqdm1MSK1ZXQFmWEx3UDFGaqp1VGdJTT1vQ3RQaWpaZkk5c28yUUVPczJab1ZwMDQw2GwzSl1JRFZ1KzN5KXrQVE99FVwI1FwidGFnXCI6XCI6JCUnBjYytZUTMzUk5nc1RjeHp0bkpiTUpuaXJiVTVEVzNKU3Rq2mhGaXdjPVwifSj9</td>
<td></td>
</tr>
</tbody>
</table>
CyberSource Decryption

Transaction Authorization

To request an authorization for a Google Pay transaction:

Step 1  Set the encryptedPayment_data field to the value of the encryptedMessage field that was returned in the Full Wallet response.

Step 2  Set the paymentSolution field to 012.

Note  See "API Request Fields," page 22, and "API Reply Fields," page 31, for detailed field descriptions.
Example 4  Authorization Request

```xml
<requestMessage xmlns="urn:schemas-cybersource-com:transaction-data-1.121">
  <merchantID>demomerchant</merchantID>
  <merchantReferenceCode>demorefnum</merchantReferenceCode>
  <billTo>
    <firstName>James</firstName>
    <lastName>Smith</lastName>
    <street1>1295 Charleston Road</street1>
    <city>Test City</city>
    <state>CA</state>
    <postalCode>99999</postalCode>
    <country>US</country>
    <email>demo@example.com</email>
  </billTo>
  <purchaseTotals>
    <currency>USD</currency>
    <grandTotalAmount>5.00</grandTotalAmount>
  </purchaseTotals>
  <encryptedPayment>
    <data>ABCDEFabcdefABCDEFabcdef0987654321234567</data>
  </encryptedPayment>
  <card>
    <cardType>001</cardType>
  </card>
  <ccAuthService run="true"/>
  <paymentSolution>012</paymentSolution>
</requestMessage>
```
Example 5  Authorization Response

<c:replyMessage>
  <c:requestID>4465840340765000001541</c:requestID>
  <c:decision>ACCEPT</c:decision>
  <c:reasonCode>100</c:reasonCode>
  <c:requestToken>Ahj/7wSR5C/4Icd2fdAKakGladfg5535r/ghx3290AoBj3u</c:requestToken>
  <c:purchaseTotals>
    <c:currency>USD</c:currency>
  </c:purchaseTotals>
  <c:ccAuthReply>
    <c:reasonCode>100</c:reasonCode>
    <c:amount>5.00</c:amount>
    <c:authorizationCode>888888</c:authorizationCode>
    <c:avsCode>X</c:avsCode>
    <c:avsCodeRaw>I1</c:avsCodeRaw>
    <c:authorizedDateTime>2015-11-03T20:53:54Z</c:authorizedDateTime>
    <c:processorResponse>100</c:processorResponse>
    <c:reconciliationID>11267051CGJSMQDC</c:reconciliationID>
  </c:ccAuthReply>
  <c:token>
    <c:prefix>294672</c:prefix>
    <c:suffix>4397</c:suffix>
    <c:expirationMonth>08</c:expirationMonth>
    <c:expirationYear>2021</c:expirationYear>
  </c:token>
</c:replyMessage>
Data Type Definitions

For more information about these data types, see the World Wide Web Consortium (W3C) XML Schema Part 2: Datatypes Second Edition.

Table 3  Data Type Definitions

<table>
<thead>
<tr>
<th>Data Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integer</td>
<td>Whole number {..., -3, -2, -1, 0, 1, 2, 3, ...}</td>
</tr>
<tr>
<td>String</td>
<td>Sequence of letters, numbers, spaces, and special characters</td>
</tr>
</tbody>
</table>

Numbered Elements

The CyberSource XML schema includes several numbered elements. You can include these complex elements more than once in a request. For example, when a customer order includes more than one item, you must include multiple <item> elements in your request. Each item is numbered, starting with 0. The XML schema uses an id attribute in the item’s opening tag to indicate the number. For example:

<item id="0">

As a name-value pair field name, this tag is represented as item_0. In this portion of the field name, the underscore before the number does not indicate hierarchy in the XML schema. The item fields are generically referred to as item_#<element name> in the documentation.
Below is an example of the numbered <item> element and the corresponding name-value pair field names. If you are using SOAP, the client contains a corresponding Item class.

**Example 6  Numbered XML Schema Element Names and Name-Value Pair Field Names**

<table>
<thead>
<tr>
<th>XML Schema Element Names</th>
<th>Corresponding Name-Value Pair Field Names</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;item id=&quot;0&quot;&gt;</td>
<td>item_0_unitPrice</td>
</tr>
<tr>
<td></td>
<td>item_0_quantity</td>
</tr>
<tr>
<td>&lt;unitPrice&gt;</td>
<td></td>
</tr>
<tr>
<td>&lt;quantity&gt;</td>
<td></td>
</tr>
<tr>
<td>&lt;/item&gt;</td>
<td></td>
</tr>
<tr>
<td>&lt;item id=&quot;1&quot;&gt;</td>
<td>item_1_unitPrice</td>
</tr>
<tr>
<td></td>
<td>item_1_quantity</td>
</tr>
<tr>
<td>&lt;unitPrice&gt;</td>
<td></td>
</tr>
<tr>
<td>&lt;quantity&gt;</td>
<td></td>
</tr>
<tr>
<td>&lt;/item&gt;</td>
<td></td>
</tr>
</tbody>
</table>

**Important**

When a request is in XML format and includes an <item> element, the element must include an id attribute. For example: `<item id="0">`.

**Relaxed Requirements for Address Data and Expiration Date**

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

> Unless otherwise noted, all field names are case sensitive, and all fields accept special characters such as @, #, and %.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>Used By: Required (R) or Optional (O)</th>
<th>Data Type (Length)</th>
</tr>
</thead>
<tbody>
<tr>
<td>billTo_city</td>
<td>City of the billing address.</td>
<td>ccAuthService (R)²</td>
<td>String (50)</td>
</tr>
<tr>
<td>billTo_country</td>
<td>Country of the billing address. Use the two-character ISO Standard Country Codes.</td>
<td>ccAuthService (R)²</td>
<td>String (2)</td>
</tr>
<tr>
<td>billTo_email</td>
<td>Customer’s email address.</td>
<td>ccAuthService (R)²</td>
<td>String (255)</td>
</tr>
<tr>
<td>billTo_firstName</td>
<td>Customer’s first name. For a credit card transaction, this name must match the name on the card.</td>
<td>ccAuthService (R)²</td>
<td>String (60)</td>
</tr>
<tr>
<td>billTo_ipAddress</td>
<td>Customer’s IP address.</td>
<td>ccAuthService (O)</td>
<td>String (15)</td>
</tr>
<tr>
<td>billTo_lastName</td>
<td>Customer’s last name. For a credit card transaction, this name must match the name on the card.</td>
<td>ccAuthService (R)²</td>
<td>String (60)</td>
</tr>
<tr>
<td>billTo_phoneNumber</td>
<td>Customer’s phone number. CyberSource recommends that you include the country code when the order is from outside the U.S.</td>
<td>ccAuthService (O)</td>
<td>String (15)</td>
</tr>
<tr>
<td>billTo_postalCode</td>
<td>Postal code for the billing address. The postal code must consist of 5 to 9 digits.</td>
<td>ccAuthService (R)²</td>
<td>String (9)</td>
</tr>
</tbody>
</table>

1. When the billing country is the U.S., the 9-digit postal code must follow this format: [5 digits][dash][4 digits]

   **Example** 12345-6789

2. When the billing country is Canada, the 6-digit postal code must follow this format: [alpha][numeric][alpha][space] [numeric][alpha][numeric]

   **Example** A1B 2C3

---

1. The TC 33 Capture file contains information about the purchases and refunds that a merchant submits to CyberSource. CyberSource through VisaNet creates the TC 33 Capture file at the end of the day and sends it to the merchant's acquirer, who uses this information to facilitate end-of-day clearing processing with payment card companies.

2. 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 21. **Important** It is your responsibility to determine whether a field is required for the transaction you are requesting.
### Table 4 Request Fields (Continued)

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<thead>
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<th>Field</th>
<th>Description</th>
<th>Used By: Required (R) or Optional (O)</th>
<th>Data Type (Length)</th>
</tr>
</thead>
<tbody>
<tr>
<td>billTo_state</td>
<td>State or province of the billing address. For an address in the U.S. or Canada, use the State, Province, and Territory Codes for the United States and Canada.</td>
<td>ccAuthService (R)²</td>
<td>String (2)</td>
</tr>
<tr>
<td>billTo_street1</td>
<td>First line of the billing street address.</td>
<td>ccAuthService (R)²</td>
<td>String (60)</td>
</tr>
<tr>
<td>billTo_street2</td>
<td>Additional address information.</td>
<td>ccAuthService (O)</td>
<td>String (60)</td>
</tr>
<tr>
<td>card_accountNumber</td>
<td>The payment network token value. This value is obtained by decrypting the customer's encrypted payment data. Populate this field with the decrypted dpan value.</td>
<td>ccAuthService (R)</td>
<td>Nonnegative integer (20)</td>
</tr>
<tr>
<td>card_cardType</td>
<td>Type of card to authorize. Possible values:</td>
<td>ccAuthService (R)</td>
<td>String (3)</td>
</tr>
<tr>
<td></td>
<td>- 001: Visa</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- 002: Mastercard</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- 003: American Express</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- 004: Discover</td>
<td></td>
<td></td>
</tr>
<tr>
<td>card_cvNumber</td>
<td>CVN.</td>
<td>ccAuthService (R)</td>
<td>Nonnegative integer (4)</td>
</tr>
<tr>
<td>card_expirationMonth</td>
<td>Two-digit month in which the payment network token expires. Format: MM. Possible values: 01 through 12.</td>
<td>ccAuthService (R)</td>
<td>String (2)</td>
</tr>
<tr>
<td>card_expirationYear</td>
<td>Four-digit year in which the payment network token expires. Format: YYYY.</td>
<td>ccAuthService (R)</td>
<td>Nonnegative integer (4)</td>
</tr>
</tbody>
</table>

1 The TC 33 Capture file contains information about the purchases and refunds that a merchant submits to CyberSource. CyberSource through VisaNet creates the TC 33 Capture file at the end of the day and sends it to the merchant's acquirer, who uses this information to facilitate end-of-day clearing processing with payment card companies.

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### Table 4 Request Fields (Continued)

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>Used By: Required (R) or Optional (O)</th>
<th>Data Type (Length)</th>
</tr>
</thead>
</table>
| ccAuthService_cavv            | **Visa** 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. **American Express** For a 20-byte cryptogram, set this field to the cryptogram for payment network tokenization transactions. For a 40-byte cryptogram, set this field to 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. **Discover** Cryptogram for payment network tokenization transactions. The value for this field can be a 20 or 40-character hex binary. All cryptograms use one of these formats. **CyberSource through VisaNet** The value for this field corresponds to the following data in the TC 33 capture file:  
  - Record: CP01 TCR8  
  - Position: 77-78  
  - **Field**: CAVV version and authentication action. | ccAuthService (R) | String (40) |
| ccAuthService_commerceIndicator | For a payment network tokenization transaction. Possible values:  
  - aesk: American Express card type  
  - spa: Mastercard card type  
  - internet: Visa card type  
  - dipb: Discover card type  
  **Important** For Visa in-app transactions, the internet value is mapped to the Visa ECI value 7. | ccAuthService (R for merchant decryption, O for CyberSource decryption) | String (20) |
| ccAuthService_directoryServerTransactionID | Identifier generated during the authentication transaction by the Mastercard Directory Server and passed back with the authentication results. | ccAuthService (O) | String (36) |
| ccAuthService_eciRaw | Raw electronic commerce indicator (ECI). | ccAuthService (O) | String (2) |

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### Table 4  Request Fields (Continued)

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<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>Used By:</th>
<th>Data Type (Length)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ccAuthService_networkTokenCryptogram</td>
<td>Token authentication verification value cryptogram. For token-based transactions with 3D Secure or SecureCode, you must submit both types of cryptograms: network token and 3D Secure/SecureCode. The value for this field must be 28-character Base64 or 40-character hex binary. All cryptograms use one of these formats.</td>
<td>ccAuthService (O)</td>
<td>String (40)</td>
</tr>
<tr>
<td>ccAuthService_paSpecificationVersion</td>
<td>The 3D Secure version that you used for Secured Consumer Authentication (SCA); for example, 3D Secure version 1.0.2 or 2.0.0.</td>
<td>ccAuthService (O)</td>
<td>String (20)</td>
</tr>
<tr>
<td>ccAuthService_run</td>
<td>Whether to include <code>ccAuthService</code> in your request. Possible values:</td>
<td>ccAuthService (R)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- <code>true</code>: Include the service in your request.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- <code>false</code> (default): Do not include the service in your request.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ccAuthService_xid</td>
<td>Visa 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.</td>
<td>ccAuthService (R)</td>
<td>String (40)</td>
</tr>
<tr>
<td>encryptedPayment_data</td>
<td>The encrypted payment data value. If you are using the CyberSource decryption option, populate this field with the encrypted payment data value returned by the Full Wallet request. See &quot;Google Pay Overview,&quot; page 9.</td>
<td>ics_auth (R)</td>
<td></td>
</tr>
</tbody>
</table>

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<table>
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<tr>
<th>Field</th>
<th>Description</th>
<th>Used By: Required (R) or Optional (O)</th>
<th>Data Type (Length)</th>
</tr>
</thead>
<tbody>
<tr>
<td>item_#_productCode</td>
<td>Type of product. This value is used to determine the product category: electronic, handling, physical, service, or shipping. The default is default. See &quot;Numbered Elements,&quot; page 20.</td>
<td>ccAuthService (O)</td>
<td>String (255)</td>
</tr>
<tr>
<td>item_#_productName</td>
<td>Name of the product. This field is required when the item_#_productCode value is not default or one of the values related to shipping and/or handling. See &quot;Numbered Elements,&quot; page 20.</td>
<td>ccAuthService (See description)</td>
<td>String (255)</td>
</tr>
<tr>
<td>item_#_productSKU</td>
<td>Identification code for the product. This field is required when the item_#_productCode value is not default or one of the values related to shipping and/or handling. See &quot;Numbered Elements,&quot; page 20.</td>
<td>ccAuthService (See description)</td>
<td>String (255)</td>
</tr>
<tr>
<td>item_#_quantity</td>
<td>The default is 1. This field is required when the item_#_productCode value is not default or one of the values related to shipping and/or handling. See &quot;Numbered Elements,&quot; page 20.</td>
<td>ccAuthService (See description)</td>
<td>Integer (10)</td>
</tr>
<tr>
<td>item_#_taxAmount</td>
<td>Total tax to apply to the product. This value cannot be negative. See &quot;Numbered Elements,&quot; page 20.</td>
<td>ccAuthService (See description)</td>
<td>String (15)</td>
</tr>
<tr>
<td>item_#_unitPrice</td>
<td>Per-item price of the product. This value cannot be negative. You can include a decimal point (.), but you cannot include any other special characters. See &quot;Numbered Elements,&quot; page 20.</td>
<td>ccAuthService (See description)</td>
<td>String (15)</td>
</tr>
<tr>
<td>merchantID</td>
<td>Your CyberSource merchant ID. Use the same merchant ID for evaluation, testing, and production.</td>
<td>ccAuthService (R)</td>
<td>String (30)</td>
</tr>
</tbody>
</table>

1. The TC 33 Capture file contains information about the purchases and refunds that a merchant submits to CyberSource. CyberSource through VisaNet creates the TC 33 Capture file at the end of the day and sends it to the merchant’s acquirer, who uses this information to facilitate end-of-day clearing processing with payment card companies.

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<th>Used By: Required (R) or Optional (O)</th>
<th>Data Type (Length)</th>
</tr>
</thead>
<tbody>
<tr>
<td>merchantReferenceCode</td>
<td>Merchant-generated order reference or tracking number. CyberSource recommends that you send a unique value for each transaction so that you can perform meaningful searches for the transaction. For information about tracking orders, see <em>Getting Started with CyberSource Advanced for the Simple Order API</em>.</td>
<td>ccAuthService (R)</td>
<td>String (50)</td>
</tr>
<tr>
<td>paymentNetworkToken_assuranceLevel</td>
<td>Confidence level of the tokenization. This value is assigned by the token service provider.</td>
<td>ccAuthService (O)</td>
<td>String (2)</td>
</tr>
</tbody>
</table>
| paymentNetworkToken_deviceTechType| Type of technology used in the device to store token data. Possible value:  
002: Host card emulation (HCE)  
Emulation of a smart card by using software to create a virtual and exact representation of the card. Sensitive data is stored in a database that is hosted in the cloud. For storing payment credentials, a database must meet very stringent security requirements that exceed PCI DSS.  
*Note*  This field is supported only for FDC Compass.                                                                                                           | ccAuthService (O)                    | Integer (3)        |
| paymentNetworkToken_requestorID   | 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.                                                                                                                                     | ccAuthService (O)                    | String (11)        |
| paymentNetworkToken_transactionType| 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. Possible value:  
: 1: In-app transaction.  
An application on the customer’s mobile device provided the token data for an e-commerce transaction.                                                                                                                | ccAuthService (R)                    | String (1)         |

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<th>Data Type (Length)</th>
</tr>
</thead>
<tbody>
<tr>
<td>paymentSolution</td>
<td>Identifies Google Pay as the payment solution that is being used for the transaction: Set the value for this field to 012.</td>
<td>ccAuthService (R)</td>
<td>String (3)</td>
</tr>
</tbody>
</table>

**Note** This unique ID differentiates digital solution transactions within the CyberSource platform for reporting purposes.

---

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<th>Data Type (Length)</th>
</tr>
</thead>
<tbody>
<tr>
<td>pos_environment</td>
<td>Operating environment. Possible values for all card types except Mastercard:</td>
<td>ccAuthService (O)</td>
<td>String (1)</td>
</tr>
<tr>
<td></td>
<td>■ 0: No terminal used or unknown environment.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>■ 1: On merchant premises, attended.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>■ 2: On merchant premises, unattended. Examples: oil, kiosks, self-checkout,</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>mobile telephone, personal digital assistant (PDA).</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>■ 3: Off merchant premises, attended. Examples: portable POS devices at</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>trade shows, at service calls, or in taxis.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>■ 4: Off merchant premises, unattended. Examples: vending machines, home</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>computer, mobile telephone, PDA.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>■ 5: On premises of cardholder, unattended.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>■ 9: Unknown delivery mode.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>■ S: Electronic delivery of product. Examples: music, software, or eTickets</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>that are downloaded over the internet.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>■ T: Physical delivery of product. Examples: music or software that is</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>delivered by mail or by a courier.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Possible values for Mastercard:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>■ 2: On merchant premises, unattended, or cardholder terminal. Examples:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>oil, kiosks, self-checkout, home computer, mobile telephone, personal</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>digital assistant (PDA). Cardholder terminal is supported only for</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mastercard transactions on CyberSource through VisaNet.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>■ 4: Off merchant premises, unattended, or cardholder terminal. Examples:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>vending machines, home computer, mobile telephone, PDA. Cardholder</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>terminal is supported only for Mastercard transactions on CyberSource</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>through VisaNet.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>This field is supported only on American Express</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Direct and CyberSource through VisaNet.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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<th>Description</th>
<th>Used By: Required (R) or Optional (O)</th>
<th>Data Type (Length)</th>
</tr>
</thead>
<tbody>
<tr>
<td>purchaseTotals_currency</td>
<td>Currency used for the order: USD</td>
<td>ccAuthService (R)</td>
<td>String (5)</td>
</tr>
<tr>
<td>purchaseTotals_grandTotalAmount</td>
<td>Grand total for the order. This value cannot be negative. You can include a decimal point (.), but you cannot include any other special characters. CyberSource truncates the amount to the correct number of decimal places.</td>
<td>ccAuthService (R)</td>
<td>Decimal (60)</td>
</tr>
<tr>
<td>ucaf_authenticationData</td>
<td>Cryptogram for payment network tokenization transactions with Mastercard.</td>
<td>ccAuthService (R)</td>
<td>String (32)</td>
</tr>
<tr>
<td>ucaf_collectionIndicator</td>
<td>Required field for payment network tokenization transactions with Mastercard. Set the value for this field to 2.</td>
<td>ccAuthService (R)</td>
<td>String with numbers only (1)</td>
</tr>
</tbody>
</table>

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API Reply Fields

Important

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

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

Note

Your payment processor can include additional API reply fields that are not documented in this guide. See *Credit Card Services Using the Simple Order API* for detailed descriptions of additional API reply fields.

### Table 5 Reply Fields

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>Returned By</th>
<th>Data Type &amp; Length</th>
</tr>
</thead>
</table>
| card_suffix      | Last four digits of the cardholder's account number. This field is returned only for tokenized transactions. You can use this value on the receipt that you give to the cardholder.  

**CyberSource through VisaNet**  
The value for this field corresponds to the following data in the TC 33 capture file:

- **Record**: CP01 TCRB
- **Position**: 85
- **Field**: American Express last 4 PAN return indicator.

**Note** This field is returned only for CyberSource through VisaNet and FDC Nashville Global. |
|                  | ccAuthReply | String (4) |
| ccAuthReply_amount | Amount that was authorized. ccAuthReply | String (15) |
| ccAuthReply_authorizationCode | Authorization code. Returned only when the processor returns this value. ccAuthReply | String (7) |

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1 The TC 33 Capture file contains information about the purchases and refunds that a merchant submits to CyberSource. CyberSource through VisaNet creates the TC 33 Capture file at the end of the day and sends it to the merchant’s acquirer, who uses this information to facilitate end-of-day clearing processing with payment card companies.
<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>Returned By</th>
<th>Data Type &amp; Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>ccAuthReply_authorizedDateTime</td>
<td>Time of authorization.</td>
<td>ccAuthReply</td>
<td>String (20)</td>
</tr>
<tr>
<td></td>
<td>Format: YYYY-MM-DDThh:mm:ssZ</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ccAuthReply_avsCode</td>
<td>AVS results. See Credit Card Services Using the Simple Order API for a detailed list of AVS codes.</td>
<td>ccAuthReply</td>
<td>String (1)</td>
</tr>
<tr>
<td>ccAuthReply_avsCodeRaw</td>
<td>AVS result code sent directly from the processor. Returned only when the processor returns this value.</td>
<td>ccAuthReply</td>
<td>String (10)</td>
</tr>
<tr>
<td>ccAuthReply_cvCode</td>
<td>CVN result code. See Credit Card Services Using the Simple Order API for a detailed list of CVN codes.</td>
<td>ccAuthReply</td>
<td>String (1)</td>
</tr>
<tr>
<td>ccAuthReply_cvCodeRaw</td>
<td>CVN result code sent directly from the processor. Returned only when the processor returns this value.</td>
<td>ccAuthReply</td>
<td>String (10)</td>
</tr>
<tr>
<td>ccAuthReply_paymentCardService</td>
<td>Mastercard service that was used for the transaction. Mastercard provides this value to CyberSource. Possible value: 53: Mastercard card-on-file token service</td>
<td>ccAuthReply</td>
<td>String (2)</td>
</tr>
<tr>
<td></td>
<td><strong>Note</strong> This field is returned only for CyberSource through VisaNet.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The TC 33 Capture file contains information about the purchases and refunds that a merchant submits to CyberSource. CyberSource through VisaNet creates the TC 33 Capture file at the end of the day and sends it to the merchant’s acquirer, who uses this information to facilitate end-of-day clearing processing with payment card companies.
### Table 5  Reply Fields (Continued)

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>Returned By</th>
<th>Data Type &amp; Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>ccAuthReply_paymentCardServiceResult</td>
<td>Result of the Mastercard card-on-file token service. Mastercard provides this value to CyberSource. Possible values:</td>
<td>ccAuthReply</td>
<td>String (1)</td>
</tr>
<tr>
<td></td>
<td>- C: Service completed successfully.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- F: One of the following:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Incorrect Mastercard POS entry mode. The Mastercard POS entry mode should be 81 for an authorization or authorization reversal.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Incorrect Mastercard POS entry mode. The Mastercard POS entry mode should be 01 for a tokenized request.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Token requestor ID is missing or formatted incorrectly.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- I: One of the following:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Invalid token requestor ID.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Suspended or deactivated token.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Invalid token (not in mapping table).</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- T: Invalid combination of token requestor ID and token.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- U: Expired token.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- W: Primary account number (PAN) listed in electronic warning bulletin.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Note</strong></td>
<td>This field is returned only for CyberSource through VisaNet.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ccAuthReply_processorResponse</td>
<td>For most processors, this is the error message sent directly from the bank. Returned only when the processor returns this value.</td>
<td>ccAuthReply</td>
<td>String (10)</td>
</tr>
<tr>
<td>ccAuthReply_reasonCode</td>
<td>Numeric value corresponding to the result of the credit card authorization request. See Credit Card Services Using the Simple Order API for a detailed list of reason codes.</td>
<td>ccAuthReply</td>
<td>Integer (5)</td>
</tr>
<tr>
<td>ccAuthReply_reconciliationID</td>
<td>Reference number for the transaction. This value is not returned for all processors.</td>
<td>ccAuthReply</td>
<td>String (60)</td>
</tr>
</tbody>
</table>

1 The TC 33 Capture file contains information about the purchases and refunds that a merchant submits to CyberSource. CyberSource through VisaNet creates the TC 33 Capture file at the end of the day and sends it to the merchant’s acquirer, who uses this information to facilitate end-of-day clearing processing with payment card companies.
### Appendix A

#### API Fields

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>Returned By</th>
<th>Data Type &amp; Length</th>
</tr>
</thead>
</table>
| ccAuthReply_transactionQualification | Type of authentication for which the transaction qualifies as determined by the Mastercard authentication service, which confirms the identity of the cardholder. Mastercard provides this value to CyberSource. Possible values:  
  - 1: Transaction qualifies for Mastercard authentication type 1.  
  
  **Note** This field is returned only for CyberSource through VisaNet. | ccAuthReply                    | String (1)                   |
| ccAuthReversalReply_paymentCardService | Mastercard service that was used for the transaction. Mastercard provides this value to CyberSource. Possible value:  
  - 53: Mastercard card-on-file token service  
  
  **Note** This field is returned only for CyberSource through VisaNet. | ccAuthReversalReply            | String (2)                   |

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### Table 5  Reply Fields (Continued)

<table>
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<tr>
<th>Field</th>
<th>Description</th>
<th>Returned By</th>
<th>Data Type &amp; Length</th>
</tr>
</thead>
</table>
| ccAuthReversalReply_paymentCardService Result | Result of the Mastercard card-on-file token service. Mastercard provides this value to CyberSource. Possible values:  
  - C: Service completed successfully.  
  - F: One of the following:  
    - Incorrect Mastercard POS entry mode. The Mastercard POS entry mode should be 81 for an authorization or authorization reversal.  
    - Incorrect Mastercard POS entry mode. The Mastercard POS entry mode should be 01 for a tokenized request.  
    - Token requestor ID is missing or formatted incorrectly.  
  - I: One of the following:  
    - Invalid token requestor ID.  
    - Suspended or deactivated token.  
    - Invalid token (not in mapping table).  
  - T: Invalid combination of token requestor ID and token.  
  - U: Expired token.  
  - W: Primary account number (PAN) listed in electronic warning bulletin.  

  **Note**  This field is returned only for CyberSource through VisaNet. | ccAuthReversalReply | String (1) |
| decision                    | Summarizes the result of the overall request. Possible values:  
  - ACCEPT  
  - ERROR  
  - REJECT  
  - REVIEW: Returned only when you use CyberSource Decision Manager. | ccAuthReply | String (6) |
| invalidField_0 through invalidField_N | Fields in the request that contained invalid data. For information about missing or invalid fields, see *Getting Started with CyberSource Advanced for the Simple Order API*. | ccAuthReply | String (100) |

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1 The TC 33 Capture file contains information about the purchases and refunds that a merchant submits to CyberSource.

CyberSource through VisaNet creates the TC 33 Capture file at the end of the day and sends it to the merchant’s acquirer, who uses this information to facilitate end-of-day clearing processing with payment card companies.
<table>
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<tr>
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<th>Description</th>
<th>Returned By</th>
<th>Data Type &amp; Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>merchantReferenceCode</td>
<td>Order reference or tracking number that you provided in the request. If you included multi-byte characters in this field in the request, the returned value might include corrupted characters.</td>
<td>ccAuthReply</td>
<td>String (50)</td>
</tr>
<tr>
<td>missingField_0 through missingField_N</td>
<td>Required fields that were missing from the request. For information about missing or invalid fields, see <em>Getting Started with CyberSource Advanced for the Simple Order API.</em></td>
<td>ccAuthReply</td>
<td>String (100)</td>
</tr>
</tbody>
</table>
| paymentNetworkToken_accountStatus       | Possible values:  
  - N: Nonregulated  
  - R: Regulated  
This field is returned only for CyberSource through VisaNet.                                                                                         | ccAuthReply   | String (1)        |
| paymentNetworkToken_assuranceLevel      | Confidence level of the tokenization. This value is assigned by the token service provider.                                                                                                               | ccAuthReply   | String (2)        |
| paymentNetworkToken_originalCardCategory| Mastercard product ID associated with the primary account number (PAN). For the possible values, see “Mastercard Product IDs” in *Credit Card Services Using the Simple Order API.*  

**CyberSource through VisaNet**  
For the possible values, see “Mastercard Product IDs” in *Credit Card Services for CyberSource through VisaNet Using the Simple Order API.*  

**Note** This field is returned only for Mastercard transactions on CyberSource through VisaNet. | ccAuthReply   | String (3)        |
| paymentNetworkToken_requestorID         | 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. This value is returned only if the processor provides it.  

**Note** This field is supported only for CyberSource through VisaNet and FDC Nashville Global. | ccAuthService | String (11)       |
| purchaseTotals_currency                 | Currency used for the order. For the possible values, see the *ISO Standard Currency Codes.*                                                                                                             | ccAuthReply   | String (5)        |
| reasonCode                              | Numeric value corresponding to the result of the overall request. See *Credit Card Services Using the Simple Order API* for a detailed list of reason codes.                                             | ccAuthReply   | Integer (5)       |

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<th>Returned By</th>
<th>Data Type &amp; Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>requestID</td>
<td>Identifier for the request generated by the client.</td>
<td>ccAuthReply</td>
<td>String (26)</td>
</tr>
<tr>
<td>requestToken</td>
<td>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.</td>
<td>ccAuthReply</td>
<td>String (256)</td>
</tr>
<tr>
<td>token_expirationMonth</td>
<td>Month in which the token expires. CyberSource includes this field in the reply message when it decrypts the payment blob for the tokenized transaction. Format: MM. Possible values: 01 through 12.</td>
<td>ccAuthReply</td>
<td>String (2)</td>
</tr>
<tr>
<td>token_expirationYear</td>
<td>Year in which the token expires. CyberSource includes this field in the reply message when it decrypts the payment blob for the tokenized transaction. Format: YYYY.</td>
<td>ccAuthReply</td>
<td>String (4)</td>
</tr>
<tr>
<td>token_prefix</td>
<td>First six digits of token. CyberSource includes this field in the reply message when it decrypts the payment blob for the tokenized transaction.</td>
<td>ccAuthReply</td>
<td>String (6)</td>
</tr>
<tr>
<td>token_suffix</td>
<td>Last four digits of token. CyberSource includes this field in the reply message when it decrypts the payment blob for the tokenized transaction.</td>
<td>ccAuthReply</td>
<td>String (4)</td>
</tr>
</tbody>
</table>

1 The TC 33 Capture file contains information about the purchases and refunds that a merchant submits to CyberSource. CyberSource through VisaNet creates the TC 33 Capture file at the end of the day and sends it to the merchant’s acquirer, who uses this information to facilitate end-of-day clearing processing with payment card companies.