Affirm Services

Simple Order API

Developer Guide

cybersource
A Visa Solution

Contents

Recent Revisions to This Document

23.01

New Examples

Updated all Simple Order API examples.

22.01

Editorial Changes

This revision contains only editorial changes and no technical updates.

20.01

API Fields

Added **merchantDefinedData** field examples and information to Creating a Session (on page 11) and Simple Order API Fields (on page 29).

19.03

Integration

Added new information about Affirm, product benefits, and going live. See Integrating with Affirm (on page 8).

19.02

Multibyte

Added information about multibyte character strings. See Working with Multibyte Character Strings (on page 30).

19.01

GA Release

Initial general audience release.

About This Guide

This section provides information about the Simple Order API guide for Affirm Services.

Audience and Purpose

This guide is written for merchants who want to offer Affirm payments to customers.

Implementing Cybersource payment processing services requires software development skills. You must write code that uses the Cybersource API request and reply fields to integrate the services into your existing order management system.

This guide describes tasks you must complete to integrate the Cybersource services and Affirm into your existing order management system.

Conventions

The following special statements are used in this document:

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

> ⚠️ **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.

Related Documentation

Refer to these sites for technical documentation:

- Technical Documentation Portal: https://docs.cybersource.com/en/index.html

- Technical Documentation Hub: https://developer.cybersource.com/docs.html

- Support Center: https://www.cybersource.com/en-us/support/technical-documentation.html

Customer Support

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

http://www.cybersource.com/support

Integrating with Affirm

Introduction

Affirm is a real-time financing solution that you can offer to your customers.

Affirm integrates seamlessly in your existing checkout flow, enabling your customers to split their purchases into easy monthly payments. Because there are no gimmicks or hidden fees, what your customers see at checkout is exactly what they will pay, on a payment schedule of their choosing.

Benefits

Affirm optimizes financing for an offline environment, with the following benefits:

- Improved customer choice and experience

- Transparent and flexible monthly payments

- Improved customer conversion, average return on value, and revenue per visitor

- Affirm takes on all risk of fraud and default after shipment

- Affirm supports payment authorization, capture and settlement, and refunds just like a credit card

Requirements

You must obtain an account ID from Affirm and provide it to Cybersource Customer Support.

Transaction Flow

Affirm Transaction Flow
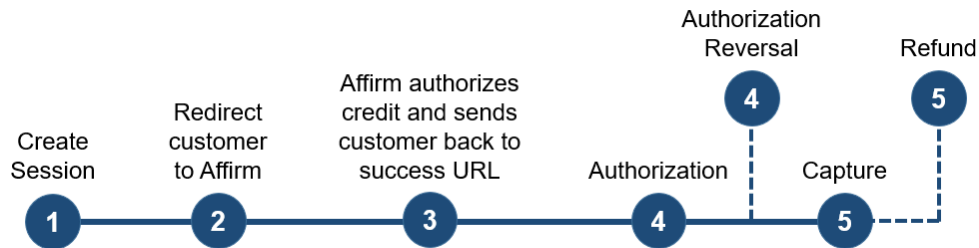
1. When the customer chooses the Affirm payment method, send the sessions service request. Cybersource returns a redirection URL to the Affirm site. See Chapter 2, "Creating a Session." (on page 11)

2. Using the redirection URL, redirect the customer to the Affirm site where the customer requests credit approval.

3. Affirm authorizes credit for the customer, creates a checkout token, and sends the customer back to the success URL that you sent in the sessions service request. This URL is appended with the checkout token that you extract and use in subsequent service requests.

4. Request the authorization service and include the checkout token in the request. See Chapter 3, "Authorizing a Payment." (on page 17)

   To reverse an authorization, use the authorization reversal service. See Chapter 4, "Reversing an Authorization." (on page 20)

5. Request the capture service. See Chapter 5, "Capturing an Authorization." (on page 23)

   To request a refund, use the refund service. See Chapter 6, "Refunding a Payment." (on page 26)

Testing

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

```
https://ics2wstesta.ic3.com/commerce/1.x/transactionProcessor
```

To perform a test:

1. Request the sessions service to initiate a checkout.

2. Redirect the client using the redirection URL returned in sessions service response.

3. When you are redirected to Affirm checkout, use a valid U.S. phone number to go through the Affirm checkout.

4. Enter `1234` as the PIN. (For production, the PIN is sent to the customer's phone number.)

5. Upon a successful credit confirmation, the checkout token is returned by the GET method to the success URL.

6. Loan declination can be simulated by clicking the `x` in the Affirm checkout flow to cancel the loan. Both cancellations and declinations are sent to the cancel URL.

7. Retrieve the checkout token from the front end, and send an authorization request.

8. Use the request ID from the authorization reply to send follow-on calls for authorization reversal and captures.

9. Use the request ID of the capture to send a partial or full refund.

Going Live

For information about going live, see Getting Started with Cybersource Advanced for the Simple Order API (PDF | HTML).

For information about endpoints, see the Endpoints document. For the Affirm services, use the Akamai endpoints.

Creating a Session

The sessions service:

- Creates a session.

- Responds with the redirection URL, the web page to which you redirect the customer where the customer applies for credit from Affirm.

> **Note:** Affirm includes the values that you send for the item-level fields on the invoice that Affirm sends to the customer.

Include the following required fields:

- apPaymentType—set to `AFM`.

- apSessionsService_cancelURL—set to your web site URL that the customer is directed to after canceling the Affirm payment.

- apSessionsService_successURL—set to your web site URL that the customer is directed to after successfully completing the Affirm payment.

- apSessionsService_run—set to `true`.

- billTo_city

- billTo_country

- billTo_email

- billTo_firstName

- billTo_lastName

- billTo_phoneNumber—set to valid phone number.

- billTo_postalCode

- billTo_state

- billTo_street1

- billTo_street2

- item_#_productName

- item_#_productSKU

- item_#_quantity

- item_#_totalAmount

- item_#_unitPrice

- merchantID

- merchantReferenceCode

- purchaseTotals_currency

- shipTo_city

- shipTo_country

- shipTo_email

- shipTo_firstName

- shipTo_lastName

- shipTo_postalCode

- shipTo_state

- shipTo_street1

- shipTo_street2

Cybersource recommends that you include the **purchaseTotals_taxAmount** field when you request the sessions service.

For descriptions of these fields, see Appendix A, "Simple Order API Fields." (on page 29)

Simple Order XML Example

Sessions Request

This example contains some optional fields.

```xml
<requestMessage xmlns="urn:schemas-cybersource-com:transaction-data-1.186">
            <merchantID>[CYBERSOURCE MID HERE]</merchantID>
            <merchantReferenceCode>[UNIQUE REF HERE]</merchantReferenceCode>
            <billTo>
                <firstName>Test</firstName>
                <lastName>Tester</lastName>
                <street1>850 OH-97</street1>
                <city>Bellville</city>
                <state>OH</state>
                <postalCode>44813</postalCode>
                <country>US</country>
                <email>testtester@email.com</email>
            </billTo>
            <shipTo>
                <firstName>Test</firstName>
                <lastName>Tester</lastName>
                <street1>850 OH-97</street1>
                <city>Bellville</city>
                <state>OH</state>
                <postalCode>44813</postalCode>
                <country>US</country>
                <email>testtester@email.com</email>
            </shipTo>
            <item>
                <unitPrice>75.00</unitPrice>
                <quantity>2</quantity>
                <productCode>123TestItem</productCode>
                <productName>Blue Shirt</productName>
                <productSKU>shirt$bluegreen</productSKU>
                <taxAmount>4.50</taxAmount>
                <totalAmount>154.50</totalAmount>
                <productDescription>Blue Shirt</productDescription>
            </item>
            <purchaseTotals>
                <currency>USD</currency>
                <grandTotalAmount>154.50</grandTotalAmount>
            </purchaseTotals>
            <apPaymentType>afm</apPaymentType>
            <apSessionsService run="true">
                <cancelURL>https://www.google.com</cancelURL>
                <successURL>https://www.google.com</successURL>
```

```
            <failureURL>https://www.google.com</failureURL>
        </apSessionsService>
    </requestMessage>
```

Sessions Reply

```
<c:replyMessage xmlns:c="urn:schemas-cybersource-com:transaction-data-1.142">
    <c:merchantReferenceCode>ref1234</c:merchantReferenceCode>
    <c:requestID>5064077031526017003012</c:requestID>
    <c:requestToken>AhjnrwSTEoYvvYr63+4EwhjWjLmR29VxBptJqXDsBae08gv6D</c:requestTok
en>
    <c:apSessionsReply>
        <c:merchantURL>https://
sandbox.affirm.com/checkout/GVFEH5P3AKUH1RRU/new/2QCH8HLF3JBKGRT6/</c:merchantURL>
        <c:reasonCode>100</c:reasonCode>
        <c:status>COMPLETED</c:status>
        <c:responseCode>00000</c:responseCode>
        <c:amount>52.00</c:amount>
    </c:apSessionsReply>
    <c:decision>ACCEPT</c:decision>
    <c:reasonCode>100</c:reasonCode>
</c:replyMessage>
```

Simple Order API Name-Value Pair Example

Sessions Request

```
merchantID=mid12345
merchantReferenceCode=ref1234
billTo_firstName=Jane
billTo_lastName=Smith
billTo_street1=123 Main Street
billTo_street2=#1060
billTo_city=Small Town
billTo_state=CA
billTo_country=US
billTo_postalCode=98765
billTo_email=jsmith@example.com
billTo_phoneNumber=19876543210
shipTo_firstName=Jane
shipTo_lastName=Smith
shipTo_street1=123 Main Street
shipTo_street2=Apt 123
shipTo_city=Small Town
shipTo_state=CA
shipTo_country=US
shipTo_postalCode=98765
shipTo_email=jsmith@example.com
shipTo_phoneNumber=19876543210
item_0_totalAmount=52.00
item_0_quantity=5
item_0_unitPrice=10.00
item_0_productName=Skirt on the sky
item_0_productSKU=skirtonsky$bluegreen
purchaseTotals_currency=USD
merchantDefinedData_field1=abcdef
ap_payment_type=AFM
apSessionsService_run=true
ap_sessions_cancel_url=http://cancel.example.com
ap_sessions_success_url=http://success.example.com
```

Sessions Reply

```
merchantReferenceCode=ref1234
requestID=5064077031526017003012
requestToken=AhjnrwSTEoYvvYr63+4EwhjWjLmR29VxBptJqXDsBae08gv6DjJD
apSessionsReply_reasonCode=100
apSessionsReply_status=COMPLETED
apSessionsReply_responseCode=00000
```

```
apSessionsReply_merchantURL=https://
sandbox.affirm.com/checkout/GVFEH5P3AKUH1RRU/new/2QCH8HLF3JBKGRT6/
decision=ACCEPT
reasonCode=100
apSessionsReply_amount=52.00
```

Authorizing a Payment

The authorization service responds with an Affirm URL that you direct the customer to after the transaction is completed.

Include the following required fields:

- apAuthService_preapprovalToken—set to the checkout token generated by Affirm. When Affirm authorizes credit, Affirm generates the checkout token and sends it to the browser.

- apAuthService_run—set to `true`.

- apPaymentType—set to `AFM`.

- billTo_city

- billTo_country

- billTo_email

- billTo_firstName

- billTo_lastName

- billTo_phoneNumber

- billTo_postalCode

- billTo_state

- billTo_street1

- merchantID

- merchantReferenceCode

- purchaseTotals_currency

- purchaseTotals_grandTotalAmount—set to the same grand total amount that was used in the sessions request.

For descriptions of these fields, see Appendix A, "Simple Order API Fields." (on page 29)

Simple Order API XML Example

Authorization Request

```xml
<requestMessage xmlns="urn:schemas-cybersource-com:transaction-data-1.186">
          <merchantID>[CYBERSOURCE MID HERE]</merchantID>
          <merchantReferenceCode>[REF FROM SESSION HERE]</merchantReferenceCode>
          <billTo>
              <firstName>Test</firstName>
              <lastName>Tester</lastName>
              <street1>850 OH-97</street1>
              <city>Bellville</city>
              <state>OH</state>
              <postalCode>44813</postalCode>
              <country>US</country>
              <email>testtester@email.com</email>
          </billTo>
          <purchaseTotals>
              <currency>USD</currency>
              <grandTotalAmount>154.50</grandTotalAmount>
          </purchaseTotals>
          <apPaymentType>afm</apPaymentType>
          <apAuthService run="true">
              <preapprovalToken>[processorToken FROM SESSION REPLY
 HERE]</preapprovalToken>
          </apAuthService>
      </requestMessage>
```

Authorization Reply

```xml
<c:replyMessage xmlns:c="urn:schemas-cybersource-com:transaction-data-1.142">
   <c:merchantReferenceCode>ref1234</c:merchantReferenceCode>
   <c:requestID>5022171547236631601541</c:requestID>
   <c:requestToken>AhjnrwSTEoYvvYr63+4EwhjWjLmR29VxBptJqXDsBae08gv6D</c:requestTok
en>
   <c:apAuthReply>
      <c:reasonCode>100</c:reasonCode>
      <c:status>AUTHORIZED</c:status>
      <c:responseCode>00003</c:responseCode>
      <c:processorTransactionID>A8S0G2N3V5I1ESMD</c:processorTransactionID>
      <c:amount>52.00</c:amount>
   </c:apAuthReply>
   <c:decision>ACCEPT</c:decision>
   <c:reasonCode>100</c:reasonCode>
</c:replyMessage>
```

Simple Order API Name-Value Pair Example

Authorization Request

```
merchantID=mid12345
merchantReferenceCode=ref1234
billTo_firstName=Jane
billTo_lastName=Smith
billTo_street1=123 Main Street
billTo_city=Small Town
billTo_state=CA
billTo_country=US
billTo_postalCode=98765
billTo_email=jsmith@example.com
billTo_phoneNumber=19876543210
purchaseTotals_currency=USD
purchaseTotals_grandTotalAmount=52.00
apPaymentType=AFM
apAuthService_run=true
apAuthService_preapprovalToken=QVA6DL4OFY7EJM26
```

Authorization Reply

```
merchantReferenceCode=ref1234
requestID=5022171547236631601541
requestToken=Ahjn7wSTEEChjZtBWGGFjxFSG4aMWDBinUvA+kEsNP3DSGTb
apAuthReply_reasonCode=100
apAuthReply_status=AUTHORIZED
apAuthReply_responseCode=00003
apAuthReply_amount=52.00
apAuthReply_processorTransactionID=A8S0G2N3V5I1ESMD
decision=ACCEPT
reasonCode=100
```

Reversing an Authorization

The authorization reversal service enables you to reverse the amount that was authorized.

Include the following required fields:

- apAuthReversalService_authRequestID—set to the request ID that was included in the authorization reply message.

- apAuthReversalService_run—set to `true`.

- apPaymentType—set to `AFM`.

- merchantID

- merchantReferenceCode

For descriptions of these fields, see Appendix A, "Simple Order API Fields." (on page 29)

Simple Order API XML Example

Authorization Reversal Request

```
<requestMessage xmlns="urn:schemas-cybersource-com:transaction-data-1.186">
        <merchantID>[CYBERSOURCE MID HERE]</merchantID>
        <merchantReferenceCode>[REF FROM SESSION HERE]</merchantReferenceCode>
        <apPaymentType>afm</apPaymentType>
        <apAuthReversalService  run="true">
            <authRequestID>[requestID FROM AUTH REPLY HERE]</preapprovalToken>
        </apAuthReversalService >
    </requestMessage>
```

Authorization Reversal Reply

```
<c:replyMessage xmlns:c="urn:schemas-cybersource-com:transaction-data-1.142">
    <c:merchantReferenceCode>ref1234</c:merchantReferenceCode>
    <c:requestID>5022171547236631601541</c:requestID>
    <c:requestToken>AhjnrwSTEoYvvYr63+4EwhjWjLmR29VxBptJqXDsBae08gv6D</c:requestTok
en>
    <c:apAuthReversalReply>
        <c:reasonCode>100</c:reasonCode>
        <c:status>AUTH_REVERSED</c:status>
        <c:responseCode>00007</c:responseCode>
        <c:reconciliationID>A8S0G2N3V5I1ESMD</c:reconciliationID>
    </c:apAuthReversalReply>
    <c:decision>ACCEPT</c:decision>
    <c:reasonCode>100</c:reasonCode>
</c:replyMessage>
```

Simple Order API Name-Value Pair Example

Authorization Reversal Request

```
merchantID=mid12345
merchantReferenceCode=ref1234
apPaymentType=AFM
apAuthReversalService_run=true
apAuthReversalService_authRequestID=5022171254726545401541
```

Authorization Reversal Reply

```
merchantReferenceCode=ref1234
requestID=5022171547236631601541
decision=ACCEPT
reasonCode=100
requestToken=Ahjn7wSTEEChjZtBWGGFjxFSG4aMWDBinUvA+kEsNP3DSGTb
apAuthReversalReply_status=AUTH_REVERSED
apAuthReversalReply_responseCode=00007
apAuthReversalReply_reconciliationID=A8S0G2N3V5I1ESMD
```

Capturing an Authorization

The capture service enables you to capture only the entire authorized amount. Partial and multiple captures are not supported.

Include the following required fields:

- apCaptureService_authRequestID—set to the request ID that was included in the authorization reply message.

- apCaptureService_run—set to `true`.

- apPaymentType—set to `AFM`.

- merchantID

- merchantReferenceCode

- purchaseTotals_currency

- purchaseTotals_grandTotalAmount

Cybersource recommends that you include the following optional fields when you request the capture service:

- item_#_productName

- item_#_quantity

- item_#_totalAmount

- item_#_unitPrice

For descriptions of these fields, see Appendix A, "Simple Order API Fields." (on page 29)

Simple Order API XML Example

Capture Request

```xml
<requestMessage xmlns="urn:schemas-cybersource-com:transaction-data-1.186">
        <merchantID>[CYBERSOURCE MID HERE]</merchantID>
        <merchantReferenceCode>[REF FROM SESSION HERE]</merchantReferenceCode>
        <purchaseTotals>
            <currency>USD</currency>
            <grandTotalAmount>154.50</grandTotalAmount>
        </purchaseTotals>
        <apPaymentType>afm</apPaymentType>
        <apCaptureService run="true">
        <authRequestID>[requestID FROM AUTH REPLY HERE]</authRequestID>
        </apCaptureService>
    </requestMessage>
```

Capture Reply

```xml
<c:replyMessage xmlns:c="urn:schemas-cybersource-com:transaction-data-1.142">
   <c:merchantReferenceCode>ref1234</c:merchantReferenceCode>
   <c:requestID>5022171547236631601541</c:requestID>
   <c:requestToken>AhjnrwSTEoYvvYr63+4EwhjWjLmR29VxBptJqXDsBae08gv6D</c:requestTok
en>
   <c:apCaptureReply>
      <c:reasonCode>100</c:reasonCode>
      <c:status>SETTLED</c:status>
      <c:responseCode>00004</c:responseCode>
      <c:amount>52.00</c:amount>
   </c:apCaptureReply>
   <c:decision>ACCEPT</c:decision>
   <c:reasonCode>100</c:reasonCode>
</c:replyMessage>
```

Simple Order API Name-Value Pair Example

Capture Request

```
merchantID=mid12345
merchantReferenceCode=ref1234
purchaseTotals_currency=USD
purchaseTotals_grandTotalAmount=52.00
apPaymentType=AFM
apCaptureService_run=true
apCaptureService_authRequestID=5090279157766055601540
```

Capture Reply

```
merchantReferenceCode=ref1234
requestID=5022171547236631601541
requestToken=Ahjn7wSTEEChjZtBWGGFjxFSG4aMWDBinUvA+kEsNP3DSGTb
apCaptureReply_reasonCode=100
apCaptureReply_status=SETTLED
apCaptureReply_responseCode=00004
apCaptureReply_amount=52.00
decision=ACCEPT
reasonCode=100
```

Refunding a Payment

The refund service enables you to refund the entire captured amount or part of the captured amount. Partial and multiple refunds are supported when the sum of all refunds is less than or equal to the total captured amount.

Include the following required fields:

- apPaymentType—set to `AFM`.

- apRefundService_refundRequestID—set to the request ID that was included in the capture reply message.

- apRefundService_run—set to `true`.

- merchantID

- merchantReferenceCode

- purchaseTotals_currency

- purchaseTotals_grandTotalAmount

Cybersource recommends that you include the following fields when you request the refund service:

- billTo_email

- billTo_firstName

- billTo_lastName

- item_#_productName

- item_#_quantity

- item_#_totalAmount

- item_#_unitPrice

For descriptions of these fields, see Appendix A, "Simple Order API Fields." (on page 29)

Simple Order API XML Example

Refund Request

```xml
<requestMessage xmlns="urn:schemas-cybersource-com:transaction-data-1.186">
        <merchantID>[CYBERSOURCE MID HERE]</merchantID>
        <merchantReferenceCode>[REF FROM SESSION HERE]</merchantReferenceCode>
        <purchaseTotals>
            <currency>USD</currency>
            <grandTotalAmount>154.50</grandTotalAmount>
        </purchaseTotals>
        <apPaymentType>afm</apPaymentType>
        <apRefundService run="true">
        <refundRequestID>[requestID FROM CAPTURE REPLY HERE]</refundRequestID>
        </apRefundService>
     </requestMessage>
```

Refund Reply

```xml
<c:replyMessage xmlns:c="urn:schemas-cybersource-com:transaction-data-1.142">
   <c:merchantReferenceCode>ref1234</c:merchantReferenceCode>
   <c:requestID>5022171547236631601541</c:requestID>
   <c:requestToken>AhjnrwSTEoYvvYr63+4EwhjWjLmR29VxBptJqXDsBae08gv6D</c:requestTok
en>
   <c:apRefundReply>
      <c:reasonCode>100</c:reasonCode>
      <c:status>REFUNDED</c:status>
      <c:responseCode>00006</c:responseCode>
      <c:transactionID>6IWYH3XH5XR7DP2A</c:transactionID>
   </c:apRefundReply>
   <c:decision>ACCEPT</c:decision>
   <c:reasonCode>100</c:reasonCode>
</c:replyMessage>
```

Simple Order API Name-Value Pair Example

Refund Request

```
merchantID=mid12345
merchantReferenceCode=ref1234
purchaseTotals_currency=USD
purchaseTotals_grandTotalAmount=52.00
apPaymentType=AFM
apRefundService_run=true
apRefundService_refundRequestID=5090279157766055601540
```

Refund Reply

```
merchantReferenceCode=ref1234
requestID=5022171547236631601541
requestToken=Ahjn7wSTEEChjZtBWGGFjxFSG4aMWDBinUvA+kEsNP3DSGTb
apRefundReply_reasonCode=100
apRefundReply_status=REFUNDED
apRefundReply_responseCode=00006
apRefundReply_transactionID=6IWYH3XH5XR7DP2A
decision=ACCEPT
reasonCode=100
```

Simple Order API Fields

Formatting Restrictions

Do not use the following characters: < > $ % ^ * _ = [ ] \ { } | ; ~ ` Using these characters may result in data validation errors.

Data Type Definitions

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

Data Type	Description
Date and time	Format is yyyy-MM-DDThh:mm:ssZ where: • T separates the date and the time. • Z indicates Coordinated Universal Time (UTC), also known as Greenwich Mean Time (GMT). **Example:** 2021-01-11T22:47:57Z is January 11, 2021, at 22:47:57 (10:47:57 p.m.).
Integer	Whole number {..., -3, -2, -1, 0, 1, 2, 3, ...}
String	Sequence of letters, numbers, spaces, and special characters

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 called `item_0`. In this portion of the field name, the underscore before the number does not indicate hierarchy in the XML schema. Each item field is 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 the Simple Object Access Protocol (SOAP), the client contains a corresponding item class.

XML Schema Element Names	Corresponding Name-Value Pair Field Names

`<item id="0">`
`  <unitPrice>`
`  <quantity>`
`</item>`
	`item_0_unitPrice`
	`item_0_quantity`

`<item id="1">`
`  <unitPrice>`
`  <quantity>`
`</item>`
	`item_1_unitPrice`
	`item_1_quantity`

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

Working with Multibyte Character Strings

Multibyte Characters

Some languages—such as Korean, Chinese, and Russian—require more than one ASCII byte per character. Therefore, a string of multibyte characters can exceed the allotted string length of some Cybersource API fields.

In some languages, a short name that has only three or four characters might be equivalent to 10 or 15 bytes in UTF-8. Therefore, it is important to consider the overall length of a multibyte string to be sure that it fits into the allotted ASCII string length.

For best success when working with languages, make sure that the total length of a multibyte string does not exceed the ASCII string length for a specific API field.

Request Fields

Request Fields

Field	Description	Required (R) / Optional (O)	Data Type & Length
apAuthReversalService_authRequestID	Request ID of the authorization that you want to reverse. Set the value of this field to the value of the request ID that was returned in the authorization reply message.	Authorization Reversal (R)	String (26)
apAuthReversalService_run	Whether to include **apAuthReversalService** in the request. Possible values: • `true`: Include the service in the request. • `false` (default): Do not include the service in the request.	Authorization Reversal (R)	String (5)
apAuthService_preapprovalToken	Token generated by Affirm. When Affirm authorizes the order, Affirm generates a preapproval token and sends it to the browser. See Transaction Flow (on page 9).	Authorization (R)	String (60)
apAuthService_run	Whether to include **apAuthService** in the request. Possible values: • `true`: Include the service in the request. • `false` (default): Do not include the service in the request.	Authorization (R)	String (5)
apCaptureService_authRequestID	Request ID of the authorization that you want to capture. Set the value of this field to the value of the request ID that was returned in the authorization reply message.	Capture (R)	String (26)
apCaptureService_run	Whether to include **apCaptureService** in the request. Possible values:	Capture (R)	String (5)

Field	Description	Required (R) / Optional (O)	Data Type & Length
	• `true`: Include the service in the request. • `false` (default): Do not include the service in the request.		
apPaymentType	Identifier for the payment type. Set the value for this field to `AFM`.	Required for all services.	String (3)
apRefundService_refundRequestID	Request ID of the capture that you want to refund. Set the value of this field to the value of the request ID that was returned in the capture reply message.	Refund (R)	String (26)
apRefundService_run	Whether to include **apRefundService** in the request. Possible values: • `true`: Include the service in the request. • `false` (default): Do not include the service in the request.	Refund (R)	String (5)
apSessionsService_cancelURL	Your web site URL that the customer is directed to after canceling the Affirm payment: You direct the customer to the Affirm URL that is included in the authorization response. If the customer cancels the payment, Affirm directs the customer to this cancel URL.	Sessions (R)	String (255)
apSessionsService_run	Whether to include **apsService** in the request. Possible values: • `true`: Include the service in the request. • `false` (default): Do not include the service in the request.	Sessions (R)	String (5)
apSessionsService_successURL	Your web site URL that the customer is directed to after successfully completing the Affirm payment:	Sessions (R)	String (255)

Request Fields (continued)

Field	Description	Required (R) / Optional (O)	Data Type & Length
	You direct the customer to the Affirm URL that is included in the authorization request. If the customer successfully completes the payment, Affirm directs the customer to this success URL.		
billTo_city	City of the billing address.	Authorization (R) Sessions (R)	String (50)
billTo_country	Country of the billing address. Use the two-character ISO Standard Country Codes. For Authorization requests: You must use the same value for this field that was sent in the billTo_country field of the Sessions request.	Authorization (R) Sessions (R)	String (2)
billTo_email	Customer's email address.	Authorization (R) Refund (O but recommended) Sessions (R)	String (255)
billTo_firstName	Customer's first name.	Authorization (R) Refund (O but recommended) Sessions (R)	String (60)
billTo_lastName	Customer's last name.	Authorization (R) Refund (O but recommended) Sessions (R)	String (60)

Request Fields (continued)

Field	Description	Required (R) / Optional (O)	Data Type & Length
billTo_phoneNumber	Customer's phone number. It is recommended that you include the country code when the order is from outside the U.S.	Authorization (R) Sessions (R)	String (15)
billTo_postalCode	Postal code for the billing address. The postal code must consist of 5 to 9 digits. When the billing country is the U.S., the 9-digit postal code must follow this format: [5 digits][dash][4 digits] 12345-6789	Authorization (R) Sessions (R)	String (10)
billTo_state	State of the billing address. Use the State, Province, and Territory Codes.	Authorization (R) Sessions (R)	String (2)
billTo_street1	First line of the billing street address.	Authorization (R) Sessions (R)	String (60)
billTo_street2	Additional address information. Attention: Accounts Payable	Authorization (O) Sessions (R)	String (60)
item_#_discountAmount	Item-level discount amount. If the item quantity is 1, then this value is the discount for the item. If the item quantity is more than 1, then this value is the discount for the entire quantity of the item. See "Numbered Elements." (on page 29)	Authorization (O) Sessions (O)	String (15)
item_#_productCode	Type of product. This value is used to determine the category that the product is in: electronic, handling, physical, service, or shipping. The	Authorization (O) Sessions (O)	String (255)

Request Fields (continued)

Field	Description	Required (R) / Optional (O)	Data Type & Length
	default value is default. See Chapter , Product Codes (on page 44), for a list of valid values. See "Numbered Elements." (on page 29)		
item_#_productName	Product name. 📝 **Note:** To include a shipping amount in a request, set the value of this field to `shipping` and include the item_#_unitPrice, item_#_totalAmount, and item_#_quantity fields for the shipping item. See "Numbered Elements." (on page 29)	Authorization (O) Capture (O but recommended) Refund (O but recommended) Sessions (R)	String (255)
item_#_productSKU	Identification code for the product. See "Numbered Elements." (on page 29)	Authorization (O) Sessions (R)	String (255)
item_#_quantity	The default is `1`. See "Numbered Elements." (on page 29)	Authorization (O) Capture (O but recommended) Refund (O but recommended) Sessions (R)	Integer (10)
item_#_taxRate	Tax rate for the item. See "Numbered Elements." (on page 29)	Authorization (O) Sessions (O)	String (15)
item_#_totalAmount	Item-level total amount. If the item quantity is 1, then this value is the total amount for the item. If the item	Authorization (O)	String (15)

Request Fields (continued)

Field	Description	Required (R) / Optional (O)	Data Type & Length
	quantity is more than 1, then this value is the total amount for the entire quantity of the item. See "Numbered Elements." (on page 29)	Capture (O but recommended) Refund (O but recommended) Sessions (R)	
item_#_unitPrice	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. Cybersource truncates the amount to the correct number of decimal places. Authorization and Sessions If a discount applies to the cost of the item, this value includes the discount amount. For example, if the original (pre-discount) price is 10.00 and the discount amount is 5.00, the price of the item is 15.00. Do not include the tax amount in this value. See "Numbered Elements." (on page 29)	Authorization (O) Capture (O but recommended) Refund (O but recommended) Sessions (R)	String (15)
merchantDefinedData_field1	The unique ID that identifies a particular merchant to Affirm for transactions in a Cybersource integration.	Sessions (O)	String (255)
merchantID	Your Cybersource merchant ID. Use the same merchant ID for evaluation, testing, and production.	Required for all services.	String (30)
merchantReferenceCode	Merchant-generated transaction number 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	Required for all services.	String (50)

Request Fields (continued)

Field	Description	Required (R) / Optional (O)	Data Type & Length
	tracking orders and transactions, see Getting Started with Cybersource Advanced for the Simple Order API.		
purchaseTotals_currency	Currency for the transaction. Use the three-character ISO Standard Currency Codes.	Authorization (R) Authorization reversal (O) Capture (R) Refund (R) Sessions (R)	String (5)
purchaseTotals_discountAmount	Total discount for the entire order.	Sessions (O)	String (15)
purchaseTotals_grandTotalAmount	Grand total for the transaction. This value cannot be negative. You can include a decimal point (.), but you cannot include any other special characters. Cybersource truncates the amount to the correct number of decimal places.	Authorization (R) Authorization reversal (O) Capture (O but recommended) Refund (O but recommended) Sessions (O)	String (15)
purchaseTotals_taxAmount	Total tax amount for the order.	Authorization (O) Sessions (O but recommended)	String (15)
shipTo_city	City of the shipping address.	Authorization (O) Sessions (R)	String (40)
shipTo_country	Country of the shipping address. Use the two-character ISO Standard Country Codes.	Authorization (O)	String (2)

Request Fields (continued)

Field	Description	Required (R) / Optional (O)	Data Type & Length
		Sessions (R)	
shipTo_email	Email of the recipient.	Authorization (O) Sessions (R)	String (255)
shipTo_firstName	First name of the recipient.	Authorization (O) Sessions (R)	String (60)
shipTo_lastName	Last name of the recipient.	Authorization (O) Sessions (R)	String (60)
shipTo_phoneNumber	Phone number for the shipping address.	Authorization (O) Sessions (O)	String (20)
shipTo_postalCode	Postal code for the shipping address. The postal code must consist of 5 to 9 digits. When the shipping country is the U.S., the 9-digit postal code must follow this format: [5 digits][dash][4 digits] 12345-6789	Authorization (O) Sessions (R)	String (20)
shipTo_state	State of the shipping address. Use the State, Province, and Territory Codes.	Authorization (O) Sessions (R)	String (40)
shipTo_street1	First line of the shipping address.	Authorization (O) Sessions (R)	String (100)
shipTo_street2	Second line of the shipping address.	Authorization (O) Sessions (R)	String (100)

Reply Fields

Reply Fields

Field	Description	Returned By	Data Type & Length
apAuthReply_amount	Authorized amount.	Authorization	String (15)
apAuthReply_dateTime	Date and time when the service was requested.	Authorization	String (20)
apAuthReply_processorTransactionID	Affirm-generated transaction identifier.	Authorization	String (15)
apAuthReply_reasonCode	Numeric value corresponding to the result of the authorization request. See Reason Codes and Affirm Response Codes (on page 45).	Authorization	Integer (5)
apAuthReply_responseCode	Affirm response code.See Reason Codes and Affirm Response Codes (on page 45).	Authorization	String (5)
apAuthReply_status	Affirm authorization status. Possible values: • `AUTHORIZED`: Payment successfully authorized. • `FAILED`: Request failed.	Authorization	String (15)
apAuthReversalReply_dateTime	Date and time when the service was requested.	Authorization Reversal	String (20)
apAuthReversalReply_reasonCode	Numeric value corresponding to the result of the authorization reversal request. See Reason Codes and Affirm Response Codes (on page 45).	Authorization Reversal	Integer (5)
apAuthReversalReply_reconciliationID	Cybersource-generated reference number. You can use this value to reconcile your transactions with information from Affirm and information in Cybersource reports.	Authorization Reversal	String (60)
apAuthReversalReply_responseCode	Affirm response code. See Reason Codes and Affirm Response Codes (on page 45).	Authorization Reversal	String (5)
apAuthReversalReply_status	Affirm authorization reversal status. Possible values:	Authorization Reversal	String (15)

Reply Fields (continued)

Field	Description	Returned By	Data Type & Length
	• `AUTH_REVERSED`: Authorization successfully reversed. • `FAILED`: Request failed.		
apCaptureReply_amount	Amount that was captured.	Capture	String (15)
apCaptureReply_dateTime	Date and time when the service was requested.	Capture	String (20)
apCaptureReply_reasonCode	Numeric value corresponding to the result of the capture request. See Reason Codes and Affirm Response Codes (on page 45).	Capture	Integer (5)
apCaptureReply_responseCode	Affirm response code. See Reason Codes and Affirm Response Codes (on page 45).	Capture	String (5)
apCaptureReply_status	Affirm capture status. Possible values: • `CAPTURED`: Payment successfully captured. • `FAILED`: Request failed.	Capture	String (15)
apRefundReply_dateTime	Date and time when the service was requested.	Refund	String (20)
apRefundReply_transactionID	Affirm identifier of the refund transaction.	Refund	String (50)
apRefundReply_reasonCode	Numeric value corresponding to the result of the refund request. See Reason Codes and Affirm Response Codes (on page 45).	Refund	Integer (5)
apRefundReply_responseCode	Affirm response code. See Reason Codes and Affirm Response Codes (on page 45).	Refund	String (5)
apRefundReply_status	Affirm refund status. Possible values: • `REFUNDED`: Payment successfully refunded. • `FAILED`: Request failed.	Refund	String (15)

Reply Fields (continued)

Field	Description	Returned By	Data Type & Length
apSessionsReply_amount	Total amount charged from the payer to the payee. Ten characters max with support for two decimal places.	Sessions	String (15)
apSessionsReply_merchantURL	Affirm URL. Direct the customer to this URL after the transaction is completed.	Sessions	String (2048)
apSessionsReply_reasonCode	Numeric value corresponding to the result of the Sessions request.See Reason Codes and Affirm Response Codes (on page 45).	Sessions	Integer (5)
apSessionsReply_responseCode	Affirm response code. See Reason Codes and Affirm Response Codes (on page 45).	Sessions	String (5)
apSessionsReply_status	Status of the sessions request. Possible values: • `COMPLETED`: Sessions request successfully completed. • `FAILED`: Request failed.	Sessions	String (15)
decision	Summarizes the result of the overall request. Possible values: • `ACCEPT` • `ERROR` • `REJECT` For details about these values, see the information about handling replies in Getting Started with Cybersource Advanced for the Simple Order API.	All services	String (6)
merchantReferenceCode	Merchant-generated transaction number 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	All services	String (50)

Reply Fields (continued)

Field	Description	Returned By	Data Type & Length
	tracking orders and transactions, see Getting Started with Cybersource Advanced for the Simple Order API.		
reasonCode	Numeric value corresponding to the result of the overall request. See Reason Codes and Affirm Response Codes (on page 45).	All services	Integer (5)
requestID	Identifier for the request.	All services	String (26)
requestToken	Request token data created by Cybersource for each reply. The field is an encoded string that contains no confidential information such as an account or card verification number. The string can contain a maximum of 256 characters.	All services	String (256)

Product Codes

The following table lists the values you can use for the product code in the **item_#_productCode request field**.

Product Codes

Product Code	Definition
adult_content	Adult content.
coupon	Coupon applied to the entire order.
default	Default value for the product code. Cybersourceuses default when a request message does not include a value for the product code.
electronic_good	Electronic product other than software.
electronic_software	Software distributed electronically rather than on disks or other media.
gift_certificate	Gift certificate.
handling_only	Fee that you charge your customer to cover your administrative selling costs.
service	Service that you perform for your customer.
shipping_and_handling	The shipping portion is the charge for shipping the product to your customer. The handling portion is the fee you charge your customer to cover your administrative selling costs.
shipping_only	Charge for transporting tangible personal property from your location to your customer. You must maintain documentation that clearly establishes the location where the title to the property passed from you to your customer.
subscription	Subscription to a website or other content.

Reason Codes and Affirm Response Codes

> ⚠️ **Important:** Cybersource recommends using the reason code value and the Affirm response code to determine the transaction result.

Reason Codes and Affirm Response Codes

Reason Code	Affirm Response Codes	Description
100	• 00000—status: completed. • 00001—status: pending. • 00002—status: abandoned. • 00003—status: authorized. • 00004—status: settled. • 00006—status: refunded.	Successful transaction.
102	10000—status: failed.	One or more fields in the request contain invalid data.
150	• 20000—status: failed. • 20001—status: failed. • 20002—status: failed. • 30000—status: failed. • 30100—status: failed.	Possible reasons: • The signature was not included in the HTTP header. • The signature in the HTTP header has expired, or is not a valid signature. The API version in the HTTP header was missing or is not supported.

Reason Codes and Affirm Response Codes (continued)

Reason Code	Affirm Response Codes	Description
203	• 30200—status: failed. • 30400—status: failed. • 30500—status: failed.	Affirm declined the transaction because of funding source problems, or the transaction was flagged as high risk.
204	30350—status: failed.	Payment declined because of insufficient funds in the account.
233	• 30600—status: failed. • 30700—status: failed.	Affirm declined the transaction because of tax errors or government compliance errors.