

Dynamic Currency Conversion

For First Data
Using the Simple Order API

April 2018

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the power of payment

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Recent Revisions to This Document

Release	Changes
April 2018	This revision contains only editorial changes and no technical updates.
March 2018	Initial release.

About This Guide

Audience and Purpose

This guide is written for application developers who want to use the CyberSource Simple Order API to integrate dynamic currency conversion (DCC) for First Data into an order management system.

Implementing the CyberSource DCC services requires software development skills. You must write code that uses the API request and reply fields to integrate the DCC services into an existing order management system.

Conventions

The following special statements are used in this document:



Note

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



Important

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

The following text conventions are used in this document:

Table 1 Text Conventions

Convention	Meaning
boldface	Boldface type indicates API field names, API service names, and graphical user interface elements that you must act upon.
monospace	Monospace type indicates code in examples or possible values for API fields.

Related Documentation

- *Getting Started with CyberSource Advanced for the Simple Order API* ([PDF](#) | [HTML](#))
- *Credit Card Services Using the Simple Order API* ([PDF](#) | [HTML](#)) describes how to integrate CyberSource payment processing services into your business.
- The *Classic Reporting Developer Guide* ([PDF](#) | [HTML](#)) describes how to download reports.

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>

Working with DCC

The CyberSource DCC solution described in this document works with the CyberSource credit card services, which are described in [Credit Card Services Using the Simple Order API](#). This DCC solution is supported on the following processors and card types:

- FDC Nashville Global—Visa and Mastercard
- FDMS South—Visa and Mastercard

The DCC service converts a foreign cardholder's purchase from your local currency to the cardholder's billing currency. This service can help you improve or create business relationships with customers who prefer to make purchases in their own currency.

Requirements

The requirements for using the DCC service are:

- Your local currency must be USD.
- You must contact CyberSource Customer Support to have your account configured for this feature.
- You must provide the customer with a receipt showing the USD amount, the foreign currency amount, and the rate of exchange used to convert the order amount. You must also have the customer sign an acknowledgement that the customer had a choice to pay in USD and that the choice of currency is final.

Limitations

When requesting the DCC service, do not request any of these CyberSource services in the same request message:

- Tax calculation
- Authorization
- Capture
- Credit

Do not use Level II or Level III processing with DCC.

Do not enable partial authorizations for orders that use DCC.



Important

For DCC transactions, USD is the only supported currency for full authorization reversals. You can reverse an authorization if the DCC indicator is 2 or 3 because these values indicate that the transaction was in USD. If you request a full authorization reversal when the DCC indicator is 1, which indicates that the transaction was in a foreign currency, the reversed amount will be incorrect.

Terminology

Table 2 DCC Terminology

Term	Definition
Billing currency	Cardholder's currency in which their card is denominated and in which transactions are posted to the cardholder's account.
Converted amount	Amount of the transaction, denominated in the cardholder's billing currency.
DCC markup	Commission added to the transaction price at the time of the currency conversion.
DCC service	Service that enables you to offer foreign customers an active choice to pay in the billing currency associated with their card. This service is supported only for Visa and MasterCard.
Exchange rate	Conversion factor used to convert an amount in one currency to an equivalent amount in another currency.
Local currency	Your selling currency that you use for pricing your goods and in which you usually submit transactions for processing.
Margin rate percentage	DCC markup.
Original amount	Amount of the transaction denominated in your local currency.

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 for address data and expiration date, see [Relaxed Requirements for Address Data and Expiration Date page](#).

Using DCC for an Order

This section guides you through the process of calling the DCC service for a credit card transaction.



Note

For information about the CyberSource Simple Order API, see [Getting Started with CyberSource Advanced for the Simple Order API](#).

Step 1 Request the DCC service.

- a Include the statement `ccDCCService_run=true` in your request.
- b Include the required DCC fields in your request:
 - `card_accountNumber`: first 6 to 10 digits of the credit card number
 - `item_#_unitPrice`: original amount
 - `merchantID`
 - `merchantReferenceCode`
 - `purchaseTotals_currency`: local currency

For details about these fields, see ["Request Fields for the DCC Service," page 15](#).

- c Receive the DCC reply fields:
 - `ccDCCReply_dccSupported`: flag that indicates whether DCC is supported for this order
 - `ccDCCReply_marginRatePercentage`: DCC markup
 - `purchaseTotals_exchangeRate`: exchange rate
 - `purchaseTotals_exchangeRateTimeStamp`: exchange rate timestamp
 - `purchaseTotals_foreignAmount`: converted amount
 - `purchaseTotals_foreignCurrency`: converted currency code

For details about these fields, see ["Reply Fields for the DCC Service," page 17](#).

Step 2 If necessary, process the order without DCC.

If the purchase is not eligible for DCC, or DCC processing is not available, proceed with the order in your local currency. In your transaction requests (authorization, capture, credit), include the DCC indicator set to 2, which indicates that the order amount could not be converted.



Note

If you are using your local currency for the order, do not perform the rest of this DCC procedure.

Step 3 Query the customer.

If the purchase is eligible for DCC, you must get permission from the customer before you can proceed:

- a** Explain to your customer that the order is a candidate for DCC.
- b** Display the required DCC information to the customer. Contact your acquirer for these requirements.
- c** Ask your customer if they would like to complete the order in their billing currency.
- d** After your customer chooses a currency for the order, display a message about the DCC agreement in accordance with the payment card company rules. A typical message is, "I acknowledge that I was offered a choice of currencies in which to perform this transaction, and I understand that this choice is final."

**Important**

Before you can use DCC for a purchase, the cardholder must explicitly choose to have the purchases subjected to DCC. Because of this requirement, you cannot use DCC for recurring payments or a recurring subscription.

Step 4 If necessary, proceed in the local currency.

If the customer does not choose DCC, proceed with the order in your local currency:

- In your transaction requests (authorization, capture, credit), include the DCC indicator set to 3, which indicates that the cardholder declined the currency conversion.
- Continue with this procedure.

Step 5 Authorize the payment.

For information about creating an authorization request, see [Credit Card Services Using the Simple Order API](#).

The following table lists the DCC fields required for the authorization, capture, and credit services. These request field names are the same as the names of the DCC service reply fields. For details about these fields, see "[DCC Request Fields for Credit Card Services](#)," page 19.

Table 3 DCC Fields Required for the CyberSource Authorization, Capture, and Credit Services

Request Field Name for Authorization, Capture, and Credit Services	Reply Field Name for the DCC Service	Value
dcc_dcclndicator	No corresponding field.	DCC indicator: If the customer chose DCC, set the indicator to 1. If the customer did not choose DCC, set the indicator to 3.
purchaseTotals_exchangeRate	purchaseTotals_exchangeRate	Exchange rate.
purchaseTotals_exchangeRateTimeStamp	purchaseTotals_exchangeRateTimeStamp	Exchange rate timestamp.
purchaseTotals_foreignAmount	purchaseTotals_foreignAmount	Converted amount.
purchaseTotals_foreignCurrency	purchaseTotals_foreignCurrency	Converted currency code.

Step 6 Display DCC information.

If the customer chose DCC, notify your customer that the transaction was successfully authorized, and display required DCC information to the customer.

Step 7 Capture the authorization.

For information about creating a capture request, see [Credit Card Services Using the Simple Order API](#).

If DCC data was included in the authorization request, it must also be included in the capture request:

- If the capture amount is the same as the authorization amount, submit a capture request that includes the same DCC values that were included in the authorization request.
- If the capture amount is different from the authorization amount, call the DCC service with the capture amount, and then submit a capture request that includes the new DCC values.

Step 8 Optional: credit the payment.

For information about creating a credit request, see [Credit Card Services Using the Simple Order API](#).

If DCC data was included in the capture request, it must also be included in the credit request:

- For a follow-on credit with a credit amount that is the same as the capture amount, submit a credit request that includes the same DCC values that were included in the capture request.

- For a follow-on credit with a credit amount that is different from the capture amount, call the DCC service with the credit amount, and then submit a credit request that includes the new DCC values.
- For a stand-alone credit, call the DCC service with the credit amount, and then submit a credit request that includes the new DCC values.

**Note**

If the customer did not choose DCC, use the DCC values that you already obtained.

Step 9 View the transaction results.

If the customer chose DCC, the following DCC values are included in the transaction results that are displayed on the Business Center:

- Original amount
- Converted amount
- Exchange rate

The DCC values are also included in the XML version of the Payment Submission Detail Report. For a description of this report, see the [Classic Reporting Developer Guide](#).

**Important**

You must subscribe to the Payment Submission Detail Report in order to have access to it.

API Fields

Formatting Restrictions

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

**Note**

The values of the **item_#_** fields must not contain carets (^) or colons (:) because these characters are reserved for use by the CyberSource services.

Values for request-level and item-level fields must not contain new lines or carriage returns. However, they can contain embedded spaces and any other printable characters. CyberSource removes all leading and trailing spaces.

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 4 Data Type Definitions

Data Type	Description
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, if 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">
```

For the name-value pair field names, 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 1 Numbered XML Schema Element Names and Name-Value Pair Field Names

XML Schema Element Names	Corresponding Name-Value Pair Field Names
<pre><item id="0"> <unitPrice> <quantity> </item></pre>	<pre>item_0_unitPrice item_0_quantity</pre>
<pre><item id="1"> <unitPrice> <quantity> </item></pre>	<pre>item_1_unitPrice item_1_quantity</pre>



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">`.

Request Fields for the DCC Service

Table 5 Request Fields for the DCC Service

Field	Description	Required (R)/ Optional (O)	Data Type & Length
billTo_city	City of the billing address.	ccDCCService (O)	String (50)
billTo_country	Country of the billing address. Use the two-character ISO Standard Country Codes .	ccDCCService (O)	String (2)
billTo_email	Customer's email address.	ccDCCService (O)	String (255)
billTo_firstName	Customer's first name. For a credit card transaction, this name must match the name on the card.	ccDCCService (O)	String (60)
billTo_lastName	Customer's last name. For a credit card transaction, this name must match the name on the card.	ccDCCService (O)	String (60)
billTo_phoneNumber	Customer's phone number. CyberSource recommends that you include the country code when the order is from outside the U.S.	ccDCCService (O)	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] Example 12345-6789 When the billing country is Canada, the 6-digit postal code must follow this format: [alpha][numeric][alpha][space] [numeric][alpha][numeric] Example A1B 2C3	ccDCCService (O)	String (10)
billTo_state	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 .	ccDCCService (O)	String (2)
card_accountNumber	Customer's credit card number. For DCC, set this field to the first 6 to 10 digits of the credit card number.	ccDCCService (R)	String with numbers only (20)
card_expirationMonth	Two-digit month in which the credit card expires. Format: MM. Possible values: 01 through 12.	ccDCCService (O)	String (2)

Table 5 Request Fields for the DCC Service (Continued)

Field	Description	Required (R)/ Optional (O)	Data Type & Length
card_expirationYear	Four-digit year in which the credit card expires. Format: YYYY. For FDC Nashville Global and FDMS South, you can send 2 digits or 4 digits. If you send 2 digits, they must be the last 2 digits of the year.	ccDCCService (O)	See description
ccDCCService_run	Flag that indicates whether you are including ccDCCService in your request. Possible values: <ul style="list-style-type: none"> ■ <code>true</code>: The service is included in your request. ■ <code>false</code> (default): The service is not included in your request. 	ccDCCService (R)	String (5)
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 default value is <code>default</code> . For a list of the product codes, see Credit Card Services Using the Simple Order API .	ccDCCService (O)	String (255)
item_#_productName	Name of the product.	ccDCCService (O)	String (255)
item_#_productSKU	Identification code for the product.	ccDCCService (O)	String (255)
item_#_quantity	The default is 1.	ccDCCService (O)	Integer (10)
item_#_unitPrice	Original amount in your local currency. You must include this field. You cannot use purchaseTotals_grandTotalAmount . This value cannot be negative. You can include a decimal point (.) in this field, but you cannot include any other special characters. The amount will be truncated at the request level to the correct number of decimal places.	ccDCCService (R)	String (15)
merchantID	Your CyberSource merchant ID. Use the same merchant ID for evaluation, testing, and production.	ccDCCService (R)	String (30)
merchantReferenceCode	Merchant-generated order reference or tracking number. CyberSource recommends that you send a unique value for each transaction so that you can perform meaningful searches for the transaction. For information about tracking orders, see Getting Started with CyberSource Advanced for the Simple Order API .	ccDCCService (R)	String (50)
purchaseTotals_currency	Your local currency. For the possible values, see the ISO Standard Currency Codes .	ccDCCService (R)	String (5)

Reply Fields for the DCC Service

Table 6 Reply Fields for the DCC Service

Field	Description	Returned By	Data Type & Length
ccDCCReply_ dccSupported	Flag that indicates whether DCC can be used for the order. Possible values: <ul style="list-style-type: none"> ■ TRUE: DCC can be used. ■ FALSE: DCC cannot be used. 	ccDCCReply	String (5)
ccDCCReply_ marginRate Percentage	DCC markup that is applied to the wholesale exchange rate. Includes a decimal point and 4 decimal places.	ccDCCReply	String (7)
ccDCCReply_ reasonCode	Numeric value corresponding to the result of the DCC request.	ccDCCReply	Integer (5)
decision	Summarizes the result of the overall request. Possible values: <ul style="list-style-type: none"> ■ 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 .	ccDCCReply	String (6)
invalidField_0...N	Fields in the request that have invalid data. For information about missing or invalid fields, see Getting Started with CyberSource Advanced for the Simple Order API . <p>Note These fields are included as an aid to software developers only. Do not use these fields to interact with your customers.</p>	ccDCCReply	String (100)
merchantReference Code	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.	ccDCCReply	String (50)
missingField_0...N	Required fields that were missing from the request. For information about missing or invalid fields, see Getting Started with CyberSource Advanced for the Simple Order API . <p>Note These fields are included as an aid to software developers only. Do not use these fields to interact with your customers.</p>	ccDCCReply	String (100)

Table 6 Reply Fields for the DCC Service (Continued)

Field	Description	Returned By	Data Type & Length
purchaseTotals_ currency	Your local currency. For the possible values, see the ISO Standard Currency Codes .	ccDCCReply	String (5)
purchaseTotals_ exchangeRate	Exchange rate. Includes a decimal point and a maximum of 4 decimal places.	ccDCCReply	String (13)
purchaseTotals_ exchangeRateTime Stamp	Timestamp for the exchange rate. Format: YYYYMMDD~HH:MM where ~ denotes a space.	ccDCCReply	String (14)
purchaseTotals_ foreignAmount	Converted amount.	ccDCCReply	String (15)
purchaseTotals_ foreignCurrency	Billing currency. For the possible values, see the ISO Standard Currency Codes .	ccDCCReply	String (5)
reasonCode	Numeric value corresponding to the result of the overall request.	ccDCCReply	Integer (5)
requestID	Identifier for the request generated by the client.	ccDCCReply	String (26)

DCC Request Fields for Credit Card Services

The following table describes the DCC request fields to include in requests for authorizations, captures, and credits. When you send an authorization, capture, or credit request with DCC data, you must include the basic fields required for every authorization, capture, or credit request. For information about the non-DCC fields required for these requests, see [Credit Card Services Using the Simple Order API](#).

Table 7 DCC Request Fields for Credit Card Services

Field	Description	Required (R)/ Optional (O)	Data Type & Length
dcc_dcIndicator	Flag that indicates whether DCC is being used for the order. Possible values: <ul style="list-style-type: none"> ■ 1: Converted: DCC is being used. ■ 2: Nonconvertible: DCC cannot be used. ■ 3: Declined: DCC could be used, but the customer declined it. 	ccAuthService ccCaptureService ccCreditService Required if you called the DCC service for the purchase.	String (1)
purchaseTotals_ exchangeRate	Exchange rate that was returned by the DCC service. Includes a decimal point and a maximum of 4 decimal places.	ccAuthService ccCaptureService ccCreditService Required when the DCC indicator is 1 or 3.	String (13)
purchaseTotals_ exchangeRateTimeS tamp	Exchange rate timestamp that was returned by the DCC service. Format: YYYYMMDD~HH:MM where ~ denotes a space.	ccAuthService ccCaptureService ccCreditService Required when the DCC indicator is 1 or 3.	String (14)
purchaseTotals_ foreignAmount	Converted amount that was returned by the DCC service.	ccAuthService ccCaptureService ccCreditService Required when the DCC indicator is 1 or 3.	String (15)

Table 7 DCC Request Fields for Credit Card Services (Continued)

Field	Description	Required (R)/ Optional (O)	Data Type & Length
purchaseTotals_ foreignCurrency	Billing currency that was returned by the DCC service. For the possible values, see the ISO Standard Currency Codes .	ccAuthService ccCaptureService ccCreditService Required when the DCC indicator is 1 or 3.	String (5)

Examples

Name-Value Pair Examples

Example 1 DCC Request

```
merchantID=infodev
merchantReferenceCode=482046C3A7E94F5BD1FE3C66C
item_0_unitPrice=2.00
item_0_quantity=1
purchaseTotals_currency=USD
purchaseTotals_foreignCurrency=AUD
card_accountNumber=4111111111111111
card_expirationMonth=01
card_expirationYear=2010
ccDCCService_run=true
```

Example 2 DCC Reply

```
merchantReferenceCode=482046C3A7E94F5BD1FE3C66C
requestID=190899012345000132406
decision=ACCEPT
reasonCode=100
purchaseTotals_currency=USD
purchaseTotals_foreignAmount=3.14
purchaseTotals_foreignCurrency=AUD
purchaseTotals_exchangeRate=1.5715
purchaseTotals_exchangeRateTimeStamp=20070826 12:00
ccDCCReply_reasonCode=100
ccDCCReply_marginRatePercentage=03.0000
```

Example 3 Credit Card Authorization Request with DCC Data

```

merchantID=infodev
merchantReferenceCode=482046C3A7E94F5BD1FE3C66C
billTo_firstName=Jane
billTo_lastName=Smith
billTo_street1=1295 Charleston Road
billTo_city=Mountain View
billTo_state=CA
billTo_postalCode=94043
billTo_country=US
billTo_email=jsmith@example.com
card_accountNumber=4111111111111111
card_expirationMonth=01
card_expirationYear=2010
purchaseTotals_currency=USD
purchaseTotals_foreignCurrency=AUD
purchaseTotals_exchangeRateTimeStamp=20070826 12:00
purchaseTotals_exchangeRate=1.5715
purchaseTotals_foreignAmount=3.14
dcc_dccIndicator=1
item_0_unitPrice=2.00
item_0_quantity=1
ccAuthService_run=true

```

Example 4 Credit Card Authorization Reply

```

merchantReferenceCode=482046C3A7E94F5BD1FE3C66C
requestID=190894820000132406
decision=ACCEPT
reasonCode=100
purchaseTotals_currency=USD
ccAuthReply_reasonCode=100
ccAuthReply_amount=2.00
ccAuthReply_authorizationCode=888668
ccAuthReply_avsCode=X
ccAuthReply_avsCodeRaw=I1
ccAuthReply_processorResponse=100
ccAuthReply_reconciliationID=RYZPS2F735UJHS

```

Example 5 Credit Card Capture Request with DCC Data

```

merchantID=infodev
merchantReferenceCode=482046C3A7E94F5BD1FE3C66C
item_0_unitPrice=2.00
item_0_quantity=1
purchaseTotals_currency=USD
purchaseTotals_foreignCurrency=AUD
purchaseTotals_exchangeRateTimeStamp=20070826 12:00
purchaseTotals_exchangeRate=1.5715
purchaseTotals_foreignAmount=3.14
dcc_dccIndicator=1
ccCaptureService_run=true
ccCaptureService_authRequestID=190894820000132406

```

Example 6 Credit Card Capture Reply

```

merchantReferenceCode=482046C3A7E94F5BD1FE3C66C
requestID=1019827520348290570293
decision=ACCEPT
reasonCode=100
purchaseTotals_currency=USD
ccCaptureReply_reasonCode=100
ccCaptureReply_amount=2.00
ccCaptureReply_reconciliationID=02850840187309570

```

Example 7 Credit Card Follow-On Credit Request with DCC Data

```

merchantID=infodev
merchantReferenceCode=482046C3A7E94F5BD1FE3C66C
item_0_unitPrice=2.00
item_0_quantity=1
purchaseTotals_currency=USD
purchaseTotals_foreignCurrency=AUD
purchaseTotals_exchangeRateTimeStamp=20070826 12:00
purchaseTotals_exchangeRate=1.5715
purchaseTotals_foreignAmount=3.14
dcc_dccIndicator=1
ccCreditService_run=true
ccCreditService_captureRequestID=1019827520348290570293

```

Example 8 Credit Card Follow-On Credit Reply

```

merchantReferenceCode=482046C3A7E94F5BD1FE3C66C
requestID=1909006968670000132406
decision=ACCEPT
reasonCode=100
purchaseTotals_currency=USD
ccCreditReply_reasonCode=100
ccCreditReply_amount=2.00
ccCreditReply_reconciliationID=02PS2F735UJHK

```

XML Examples

Example 9 DCC Request

```

<requestMessage xmlns="urn:schemas-cybersource-com:transaction-data-1.32">
  <merchantID>infodev</merchantID>
  <merchantReferenceCode>482046C3A7E94F5BD13C66C</merchantReferenceCode>
  <item id="0">
    <unitPrice>2.00</unitPrice>
    <quantity>1</quantity>
  </item>
  <purchaseTotals>
    <currency>USD</currency>
    <foreignCurrency>AUD</foreignCurrency>
  </purchaseTotals>
  <card>
    <accountNumber>4111111111111111</accountNumber>
    <expirationMonth>01</expirationMonth>
    <expirationYear>2010</expirationYear>
  </card>
  <ccDCCService run="true"/>
</requestMessage>

```

Example 10 DCC Reply

```
<c:replyMessage xmlns:c="urn:schemas-cybersource-com:transaction-data-1.32">
  <c:merchantReferenceCode>482046C3A7E94F5BD1F6C</c:merchantReferenceCode>
  <c:requestID>190899012345000132406</c:requestID>
  <c:decision>ACCEPT</c:decision>
  <c:reasonCode>100</c:reasonCode>
  <c:purchaseTotals>
    <c:currency>USD</c:currency>
    <c:foreignAmount>3.14</c:foreignAmount>
    <c:foreignCurrency>AUD</c:foreignCurrency>
    <c:exchangeRate>1.5715</c:exchangeRate>
    <c:exchangeRateTimeStamp>20070826 12:00</c:exchangeRateTimeStamp>
  </c:purchaseTotals>
  <c:ccDCCReply>
    <c:reasonCode>100</c:reasonCode>
    <c:marginRatePercentage>03.0000</c:marginRatePercentage>
  </c:ccDCCReply>
</c:replyMessage>
```

Example 11 Credit Card Authorization Request with DCC Data

```

<requestMessage xmlns="urn:schemas-cybersource-com:transaction-data-1.32">
  <merchantID>infodev</merchantID>
  <merchantReferenceCode>482046C3A7E94F5BD166C</merchantReferenceCode>
  <billTo>
    <firstName>Jane</firstName>
    <lastName>Smith</lastName>
    <street1>1295 Charleston Road</street1>
    <city>Mountain View</city>
    <state>CA</state>
    <postalCode>94043</postalCode>
    <country>US</country>
    <email>jsmith@example.com</email>
  </billTo>
  <item id="0">
    <unitPrice>2.00</unitPrice>
    <quantity>1</quantity>
  </item>
  <purchaseTotals>
    <currency>USD</currency>
    <foreignAmount>3.14</foreignAmount>
    <foreignCurrency>AUD</foreignCurrency>
    <exchangeRate>1.5715</exchangeRate>
    <exchangeRateTimeStamp>20070826 12:00</exchangeRateTimeStamp>
  </purchaseTotals>
  <dcc>
    <dccIndicator>1</dccIndicator>
  </dcc>
  <card>
    <accountNumber>4111111111111111</accountNumber>
    <expirationMonth>01</expirationMonth>
    <expirationYear>2010</expirationYear>
  </card>
  <ccAuthService run="true"/>
</requestMessage>

```

Example 12 Credit Card Authorization Reply

```

<c:replyMessage xmlns:c="urn:schemas-cybersource-com:transaction-data-1.32">
  <c:merchantReferenceCode>482046C3A7E94F5BD166C</c:merchantReferenceCode>
  <c:requestID>190894820000132406</c:requestID>
  <c:decision>ACCEPT</c:decision>
  <c:reasonCode>100</c:reasonCode>
  <c:purchaseTotals>
    <c:currency>USD</c:currency>
  </c:purchaseTotals>
  <c:ccAuthReply>
    <c:reasonCode>100</c:reasonCode>
    <c:amount>2.00</c:amount>
    <c:authorizationCode>888668</c:authorizationCode>
    <c:avsCode>X</c:avsCode>
    <c:avsCodeRaw>I1</c:avsCodeRaw>
    <c:processorResponse>100</c:processorResponse>
    <c:reconciliationID>RYZPS2F735UJHD</c:reconciliationID>
  </c:ccAuthReply>
</c:replyMessage>

```

Example 13 Credit Card Capture Request with DCC Data

```

<requestMessage xmlns="urn:schemas-cybersource-com:transaction-data-1.37">
  <merchantID>infodev</merchantID>
  <merchantReferenceCode>482046C3A7E94F5BDC66C</merchantReferenceCode>
  <item id="0">
    <unitPrice>2.00</unitPrice>
    <quantity>1</quantity>
  </item>
  <purchaseTotals>
    <currency>USD</currency>
    <foreignAmount>3.14</foreignAmount>
    <foreignCurrency>AUD</foreignCurrency>
    <exchangeRate>1.5715</exchangeRate>
    <exchangeRateTimeStamp>20070826 12:00</exchangeRateTimeStamp>
  </purchaseTotals>
  <dcc>
    <dccIndicator>1</dccIndicator>
  </dcc>
  <ccCaptureService run="true">
    <authRequestID>190894820000132406</authRequestID>
  </ccCaptureService>
</requestMessage>

```

Example 14 Credit Card Capture Reply

```

<c:replyMessage xmlns:c="urn:schemas-cybersource-com:transaction-data-1.37">
  <c:merchantReferenceCode>482046C3A75BD1FE3C66C</c:merchantReferenceCode>
  <c:requestID>1019827520348290570293</c:requestID>
  <c:decision>ACCEPT</c:decision>
  <c:reasonCode>100</c:reasonCode>
  <c:purchaseTotals>
    <c:currency>USD</c:currency>
  </c:purchaseTotals>
  <c:ccCaptureReply>
    <c:reasonCode>100</c:reasonCode>
    <c:amount>2.00</c:amount>
    <c:reconciliationID>02850840187309570</c:reconciliationID>
  </c:ccCaptureReply>
</c:replyMessage>

```

Example 15 Credit Card Follow-On Credit Request with DCC Data

```

<requestMessage xmlns="urn:schemas-cybersource-com:transaction-data-1.37">
  <merchantID>infodev</merchantID>
  <merchantReferenceCode>482047E94F5BD1FE3C66C</merchantReferenceCode>
  <item id="0">
    <unitPrice>2.00</unitPrice>
    <quantity>1</quantity>
  </item>
  <purchaseTotals>
    <currency>USD</currency>
    <foreignAmount>3.14</foreignAmount>
    <foreignCurrency>AUD</foreignCurrency>
    <exchangeRate>1.5715</exchangeRate>
    <exchangeRateTimeStamp>20070826 12:00</exchangeRateTimeStamp>
  </purchaseTotals>
  <dcc>
    <dccIndicator>1</dccIndicator>
  </dcc>
  <ccCreditService run="true">
    <captureRequestID>1019827520348290570293</captureRequestID>
  </ccCreditService>
</requestMessage>

```

Example 16 Credit Card Follow-On Credit Reply

```
<c:replyMessage xmlns:c="urn:schemas-cybersource-com:transaction-data-1.37">
  <c:merchantReferenceCode>482046C3A7E91FE3C66C</c:merchantReferenceCode>
  <c:requestID>1908958128620000132406</c:requestID>
  <c:decision>ACCEPT</c:decision>
  <c:reasonCode>100</c:reasonCode>
  <c:purchaseTotals>
    <c:currency>USD</c:currency>
  </c:purchaseTotals>
  <c:ccCreditReply>
    <c:reasonCode>100</c:reasonCode>
    <c:amount>2.00</c:amount>
    <c:reconciliationID>02PS2F735UJHK</c:reconciliationID>
  </c:ccCreditReply>
</c:replyMessage>
```
