

# Offline Transaction File Submission Implementation Guide

August 2020



**cybersource**  
A Visa Solution

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# Contents

## **Recent Revisions to this Document 5**

## **About This Guide 6**

- Note, Important, and Warning Statements 6
- Text and Command Conventions 7

---

<b>Chapter 1</b>	<b>Processing Transaction Batch Files</b>	<b>8</b>
	API Fields	8
	Eligible Batch Upload Transaction Types	9
	Download Templates to Upload Batch Files	9
	Creating a Batch File	10
	Upload Batch Transaction Requests	11
	Creating a Custom Template	13
	Viewing the Status of Your Batch File Submissions	14
	Elements	14
	<Batch>	14
	<ValidationErrors>	16
	<Error>	17
	Error Codes	17
	DTD	20
	Examples	20
	Viewing the Results of Your Batch File Requests	22
	Reports	22
	Response Files	23
	File Header	23
	Data Records	24

---

## **Chapter 2 Batch File Reports 25**

- Transaction Request Report 25
  - XML Format 26
    - Elements 26
    - DTD 33

Example	34
CSV Format	36
Records	36
Example	38
Batch Submission Detail Report	39
DTD	39
Example	41

---

<b>Chapter 3</b>	<b>Using Java Sample Code to Upload Files</b>	<b>43</b>
	Using Sample Code for Basic Authentication	43
	Sample Code for Basic Authentication	47

---

<b>Appendix A</b>	<b>API Field Mapping</b>	<b>51</b>
	Reply-Level Fields	52
	Request-Level Fields	52
	Offer-Level Fields	62
	Reply Fields	64

# Recent Revisions to this Document

Release Date	Changes
August 2020	<ul style="list-style-type: none"><li>■ Added CSV file format sample of Batch Submission Detail Report.</li><li>■ Updated spelling of Cybersource.</li><li>■ Added endpoints and Business Center URLs for transactions in India.</li></ul>
January 2020	<ul style="list-style-type: none"><li>■ Updated Java sample code.</li></ul>
July 2019	<ul style="list-style-type: none"><li>■ Removed instructions for Classic Business Center.</li><li>■ Added instructions for New Business Center.</li></ul>
August 2018	<ul style="list-style-type: none"><li>■ Updated targetAPIVersion. See <a href="#">"File Header," page 23</a>.</li></ul>
July 2018	<ul style="list-style-type: none"><li>■ Updated Java sample code.</li></ul>
September 2017	<ul style="list-style-type: none"><li>■ Updated information about header requirements in batch files.</li></ul>

# About This Guide

## Audience

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This guide is written for users of the Business Center who are using batch files to process order requests.

## Scope

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The Offline Transaction File Submission system uses fields from the Simple Order API, not from the SCMP API. If you use the SCMP API to process individual transactions, you will need to know which Simple Order API fields correspond to the SCMP API fields with which you are familiar.

## Note, Important, and Warning Statements



**Note**

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



**Important**

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



**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.

## Text and Command Conventions

Convention	Usage
<b>bold</b>	<ul style="list-style-type: none"> <li>Field and service names in text; for example: Include the <b>ics_applications</b> field.</li> <li>Items that you are instructed to act upon; for example: Click <b>Save</b>.</li> </ul>
<i>italic</i>	<ul style="list-style-type: none"> <li>Filenames and pathnames. For example: Add the filter definition and mapping to your <i>web.xml</i> file.</li> <li>Placeholder variables for which you supply particular values.</li> </ul>
monospace	<ul style="list-style-type: none"> <li>XML elements.</li> <li>Code examples and samples.</li> <li>Text that you enter in an API environment; for example: Set the <b>davService_run</b> field to <code>true</code>.</li> </ul>

## Related Documents

To use a batch file to process credit card transactions, see [Credit Card Services with the Simple Order API](#) for information about the Simple Order API fields available with Credit Card Services.

To use a batch file to process electronic checks, see the Simple Order API chapter in the [Electronic Check Services for the Simple Order API](#) for information about the Simple Order API fields available with Electronic Check Services.

To use a batch file to process transactions that use any other service, see the chapter about the Simple Order API in the implementation guide that describes that service.

Refer to the Support Center for complete Cybersource technical documentation:

[https://www.cybersource.com/developers/getting\\_started/technical\\_documentation.html](https://www.cybersource.com/developers/getting_started/technical_documentation.html)

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# Processing Transaction Batch Files

Batch file submission enables you to send a single file, called a batch file or batch transaction file, that contains a set (batch) of transaction requests instead of sending individual requests. The information you provide for each request in the batch file is the same information you provide for an individual service request.

In one file, you can include transactions that use different services, currencies, countries, merchant IDs, and card types, thus eliminating the burden of handling these values separately. However, each template provided through the Business Center covers only one type of transaction.

Most Cybersource services can be accessed in a batch file. However, the following services cannot be requested in a batch file:

- Payer authentication enrollment check (**payerAuthEnrollService**)
- Bank transfer (**bankTransferService**)
- PayPal button creation (**paypalButtonCreateService**)

PayPal credit (**paypalCreditService**)

To use batch files in the Business Center, you must:

- 1 Download the appropriate template.
- 2 Create the batch file.
- 3 Upload the batch file.



**Important**

We do not recommend this feature for TID-based processors or APACS-based processors because batch files for these kinds of processors can cause time outs and errors. For more information, contact your Cybersource Technical Account Manager.

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## API Fields

The Offline Transaction File Submission system uses API fields from the Simple Order API; it does not use fields from the SCMP API. For the mapping between the SCMP API fields and the Simple Order API fields, see [Appendix A, "API Field Mapping," on page 51](#).

# Eligible Batch Upload Transaction Types

---

You need to use the appropriate CSV template to upload your requests successfully. After successfully uploading the file, you can review the processing status for both the file and the transactions within.

The following types of transactions can be uploaded in batch. Each type has an associated template containing the appropriate fields needed to successfully upload batch files.

**Table 1 Available Batch Templates**

Transaction Type	Available Templates
Card Transactions	Authorizations
Sales	<ul style="list-style-type: none"> <li>■ Sales</li> <li>■ Sales with Level III</li> </ul>
Captures	<ul style="list-style-type: none"> <li>■ Captures</li> <li>■ Captures with Level III</li> </ul>
Credits	<ul style="list-style-type: none"> <li>■ Credits</li> <li>■ Original Credit Transactions</li> </ul>
Check Transactions	<ul style="list-style-type: none"> <li>■ Electronic Check Debits</li> <li>■ Electronic Check Credits</li> </ul>
Subscriptions	<ul style="list-style-type: none"> <li>■ Create Subscriptions</li> <li>■ Update Subscriptions</li> <li>■ Cancel Subscriptions</li> </ul>

## Download Templates to Upload Batch Files

---

To successfully process multiple transactions at once, download the corresponding template for batch files in CSV format. Add transaction data to the template, then upload on the Batch Transaction Upload page.

- Step 1** On the left navigation pane, click **Virtual Terminal**.
- Step 2** Click **Batch Transaction Upload**. The Batch Transaction Upload page displays.
- Step 3** Click **Templates**. The Download Templates panel opens.
- Step 4** In the Templates drop down, select the type of template you want to save.

**Step 5** Click **Download**.

**Step 6** Follow your browser's settings to save and open the file.



**Important**

Depending on the services you have enabled, you may not be able to successfully upload files for some transaction types. Contact Customer Support if you have questions about which templates to use.

## Creating a Batch File

**Step 1** Make a copy of the template you downloaded.

**Step 2** Open the copy, which is in CSV format. We recommend that you use Excel or a similar program. If you use Excel, you must *import* the file. If you *open* the file, Excel will not process the CSV formatting correctly.

**Step 3** Enter a batch ID in the file header. This value is a file (batch) identifier that you assign. The batch ID must be unique. Format: alphanumeric with a maximum of 8 characters.



**Important**

You can enter up to 10 elements in the header of the batch file.

**Step 4** Load your transaction data into the file starting in row 4.

The information that you provide for each request in the batch file is the same information that you would provide for an individual service request. The template specifies the required and optional fields for the batch file's transaction type. For a description of each field, see the template descriptions:

[http://apps.cybersource.com/library/documentation/sbc/SB\\_Batch\\_Submission\\_UG/ Batched\\_Template\\_Guides.pdf](http://apps.cybersource.com/library/documentation/sbc/SB_Batch_Submission_UG/Batched_Template_Guides.pdf)

Page through the template descriptions to find the pertinent information for your transaction type.

**Step 5** You can enter the data in one of three ways:

- Enter it manually.
- Copy and paste it.
- Write a program to load it into the template.



**Note**

Files that include non-ISO-8859-1 characters (letters with diacritical markings) will be processed, but the characters will appear as question marks when the transaction details are viewed in the Business Center and in the reports.

- Step 6** Count the number of records in the file and enter this value for the record count in the file header.

**Note**

The system will set the trailer record as well as additional fields in the file header.

- Step 7** Save the file.

## Upload Batch Transaction Requests

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Using any of the provided templates, you can upload a file containing multiple transactions requests. In one file, you can include transactions that use different services, currencies, countries, merchant IDs, and card types, thus eliminating the burden of handling these values separately.

**Important**

Each file can only contain one type of transaction. See Eligible Batch Upload Transaction Types for a list of available transactions.

You can then search for and review the processing status of your file.

- Step 1** On the left navigation pane, click **Virtual Terminal**.
- Step 2** Click **Batch Transaction Upload**. The Batch Transaction Upload page displays.
- Step 3** Click **Batch Upload**. The Batch Upload panel opens.
- Step 4** Enter any notes related to this batch of transactions.
- Step 5** Enter any email address to receive file upload status updates.
- Step 6** Click **Browse** to attach the file that you want to upload.

**Note**

Files must be in CSV format and cannot be larger than 20 MB. Use the provided templates to ensure the file is formatted properly.

- Step 7** Click **Save**. While the file is being processed, the status will change several times until processing is completed.

If the batch file contains a "Template=Custom" column, the OLP engine performs batch validations.

**Table 2 Status Values**

Status	Description
<b>Validating</b>	<p>After the file is uploaded, the system displays <b>Validating</b> in the status grid. Cybersource will usually update the status in the grid and send a batch status alert within 30 minutes of receiving the file. However, actual timing depends on the system load and the number of files ahead of yours.</p> <p>Cybersource will not process any of the requests in the file if there is any type of syntax error. If multiple records in the file have errors, Cybersource will send only one email with the line number of the first failed record. Typical errors are:</p> <ul style="list-style-type: none"> <li>■ The recordCount you specified in the file header does not match the number of data records in the file.</li> <li>■ A data record in the file does not have the correct number of fields as specified in the data header. The batch status alert will indicate the line number of the problem data record.</li> </ul>
<b>Rejected</b>	<p>If the validation fails, the system displays <b>Rejected</b> in the status grid. To handle a failed validation, follow the suggested remedy in the batch status alert. If you need to resend the file, use the same batchID that you used for the original file unless otherwise instructed in the batch status alert.</p>
<b>Processing</b>	<p>If the validation succeeds, the system displays <b>Processing</b> in the status grid and Cybersource begins processing the transactions. The transaction processing time depends on the time of day and the size of your file. You need to submit the batch file early enough in the day to allow plenty of time for validation and processing before your batch cutoff time.</p>
<b>Completed</b>	<p>When the processing has been completed, the system displays <b>Completed</b> in the status grid and the date in the <b>Uploaded</b> column becomes a link to a Batch Files Daily Summary report, which is described in <a href="#">Chapter 2, "Batch File Reports,"</a> on page 25.</p>

**Step 8** Receive the batch status alerts.

The system sends you an email when batch file validation succeeds or fails and when batch file processing is complete.



**Note**

You can also view validation files as described in "[Viewing the Status of Your Batch File Submissions,](#)" page 14.

- Step 9** View the reports and response files for your transaction requests:
- After all the requests in a batch file are processed, Cybersource creates the batch reports:
    - Batch Files Detail Report**—Shows details of the batched transactions.
    - Batch Submission Detail Report**—Shows real-time detailed status information of the batched transactions.

See [Chapter 2, "Batch File Reports," on page 25](#).
  - **Payment Batch Detail Report**—Daily transaction level report that surfaces all of sales and refunds that have been submitted to your payment processor. You can download the report daily. If the batch file has an error, the file is not processed and so the file's requests are not included in the report. See the [Reporting User Guide](#).
  - **Response files**—After Cybersource processes all of the requests in the batch file, Cybersource creates two types of CSV response files that you can use to determine the results of the requests. See ["Response Files," page 23](#).

## Creating a Custom Template

---

Custom templates enable you to send batch files that contain information for other transaction services not included with the standard template, such as direct debit and direct debit refunds. When you create a custom template from a standard template, request fields do not have to be in a specific order.

- 
- Step 1** Follow the file formatting rules in ["Creating a Batch File," page 9](#) to generate a batch file for upload.
  - Step 2** At the end of the file header, add another comma and type "Template=custom".
  - Step 3** Save the file.
- 

### Example File Header

```
merchantID=infodev,batchID=12345,creationDate=2007-06-12,recordCount=3,purchaseTotals_
currency=EUR,statusEmail=nobody@example.com,targetAPIVersion=1.90,
Template=custom
```

**Important**

You must generate two transaction security keys—one for the CyberSource production environment and one for the test environment. For information about generating and using security keys, see *Creating and Using Security Keys* ([PDF](#) | [HTML](#)).

---

## Viewing the Status of Your Batch File Submissions

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Before processing the requests in your batch file, Offline Transaction File Submission validates the batch file. After attempting to validate your batch file, Cybersource creates the following types of XML-formatted response files that indicate whether the validation succeeded or failed:

- **Successful validation file**—This file indicates that your batch file is valid.  
Filename format:  
`<merchantID>.<batchID>.validate.Success.xml`  
Example filename:  
`CyberVacations.39762.validate.Success.xml`
- **Failed validation file**—This file indicates that your batch file is invalid and provides information about why the file failed validation.  
Filename format:  
`<merchantID>.<batchID>.validate.xml`  
Example filename:  
`CyberVacations.39768.validate.xml`

The response files are available in the **Reports** area on the [Business Center](#). For transactions in India, go to <https://ebc2.in.cybersource.com/ebc2/>. You can download them the same way you download Cybersource reports, which is explained in the [Reporting User Guide](#).

**Note**

These validation files are an optional feature. Contact Customer Support to have your account configured for these files.

## Elements

### <Batch>

The <Batch> element is the root of the response file.

---

```

<Batch BatchID=CDATA
    MerchantID=CDATA
    Name=CDATA
    Version=NMTOKEN>
    (ValidationStatus)
    (ValidatedRecords)
    (ValidationTime)
    (ValidationErrors)

</Batch>

```

---

**Table 3 Attributes of <Batch>**

Attribute Name	Description	Data Type & Length
BatchID	Batch file identifier that you assigned.	Alphanumeric (8)
MerchantID	Your Cybersource merchant ID.	Alphanumeric (30)
Name	Name of the report. This value will always be OLP Validation Report.	Alphanumeric (25)
Version	Version number of the report. The current version number is 1.0.	Numeric (10)

**Table 4 Child Elements of <Batch>**

Element Name	Description	Data Type & Length
ValidationStatus	Status of the attempted validation. Possible values: <ul style="list-style-type: none"> <li>■ Failed</li> <li>■ Success</li> <li>■ OnHold</li> <li>■ ToBeResolved</li> </ul>	Alphanumeric (10)
ValidatedRecords	Number of records validated. This value is present only if the validation was successful.	Numeric (10)
ValidationTime	Timestamp for the validation process. Format: yyyy-MM-ddTHH:mm:ss	DateTime (25)
ValidationErrors	List of the errors in the batch file. This element is present only if the validation failed. See "<ValidationErrors>," page 16.	Element

## <ValidationErrors>

The <ValidationErrors> element contains the errors associated with the batch file.

```
<ValidationErrors>
  (Error)*
</ValidationErrors>
```

**Table 5 Child Element of <ValidationErrors>**

Element Name	Description	Data Type & Length
Error	Information about an error. See "<Error>," page 17.	Element

## <Error>

The <Error> element contains information about an error.

```
<Error>

    (RecordNumber)

    (ErrorCode)

    (ErrorMessage)

    (ErrorRemedy)

</Error>
```

**Table 6 Child Elements of <Error>**

Element Name	Description	Data Type & Length
RecordNumber	Number of the record that has an error.	Numeric (10)
ErrorCode	Code that identifies the error. See " <a href="#">Error Codes</a> ," page 17.	Numeric (10)
ErrorMessage	Message that describes the error.	Alphanumeric (250)
ErrorRemedy	Message that describes the remedy for the error.	Alphanumeric (250)

## Error Codes

These error codes, messages, and remedies are included in the "<Error>" element. In the following table, the %s in the error messages will be replaced with dynamic values, such as batch IDs and record numbers, in the actual error messages.

**Table 7 Error Codes, Messages, and Remedies**

Error Code	Error Message	Remedy
101	Missing required field in File Header record: %s.	Include the required field in the file and try again.
102	MerchantID (%s) is not in our database.	Check to make sure merchantID is valid.
103	MerchantID (%s) does not match with the ID used to log in for uploading the file.	Check merchantID and try again.
104	batchID exceeds max length of %s.	Generate a shorter batchID and try again.

**Table 7 Error Codes, Messages, and Remedies (Continued)**

<b>Error Code</b>	<b>Error Message</b>	<b>Remedy</b>
105	%s had already passed validation stage.	batchID has previously been submitted. If this is a new batch, generate a new batchID and send the file again.
106	Invalid recordCount value: %s.	Check recordCount to make sure it is numeric and try again.
107	The file does not contain any data records.	The file must contain at least one data record. Correct and try again.
108	The recordCount exceeds the maximum number of records allowed per batch (%s).	Generate a smaller batch file and try again.
109	Invalid creationDate format: %s.	Correct the date format and try again (use yyyy-mm-dd).
110	Unsupported service: %s.	The service is not supported through batching. You may only request that service directly online.
111	Missing required field in Data Header record: %s.	Include the missing required field in the file and try again.
112	Missing required field in Data Record: %s.	Include the required field in the file and try again.
113	merchantID '%s' is not valid or has not been configured correctly.	Contact Cybersource to confirm that the MerchantID you are using is valid or is configured to be submitted by another merchantID.
114	SUM in Trailer record (%s) does not match with actual total (%s).	Make sure the SUM in the Trailer record matches with the actual sum of all data records.
115	SUM in Trailer record is invalid (%s).	Check to make sure the SUM value is numeric.
116	Missing required field in File Trailer record: %s.	Pass in required field and try again.
117	Duplicate file (batchID: %s).	Make sure that the batchID is unique.
118	Duplicate file. The data content in this file seems to have been submitted in batchID=%s.	Make sure the content of the file has not been previously submitted.
119	File Trailer record is missing.	Correct file format and try again.
120	There was a problem reading the input file.	Contact Cybersource to verify that file %s was received and is readable.
121	Found Data Header record but missing File Header record.	Correct file format and try again.
122	Found Data record but missing Data Header record.	Correct file format and try again.

**Table 7 Error Codes, Messages, and Remedies (Continued)**

<b>Error Code</b>	<b>Error Message</b>	<b>Remedy</b>
123	Number of fields (%s) does not match with number of field names (%s).	Correct file format and try again.
124	Found trailer record but missing File/Data Header record.	Correct file format and try again.
201	There was a problem inserting the batch status in the database.	Contact Cybersource.
202	Problem updating: batchID: %s, status: %s"	Contact Cybersource.
203	There was a problem retrieving the merchant configuration from the database.	Contact Cybersource.
204	There was a problem validating the batchID against the database.	Contact Cybersource.
205	There was a database problem while doing the checksum.	Contact Cybersource.
301	There was an internal error while validating the file.	Contact Cybersource.

## DTD

---

```

<!ELEMENT Batch (ValidationStatus, ValidatedRecords, ValidationTime,
                ValidationErrors)>

<!ATTLIST Batch BatchID CDATA #REQUIRED
                MerchantID CDATA #REQUIRED
                Name CDATA #REQUIRED
                Version NMTOKEN #REQUIRED>

<!ELEMENT ValidationStatus (#PCDATA)>
<!ELEMENT ValidatedRecords (#PCDATA)>
<!ELEMENT ValidationTime (#PCDATA)>
<!ELEMENT ValidationErrors (Error)*>
<!ELEMENT Error (RecordNumber, ErrorCode, ErrorMessage, ErrorRemedy)>
<!ELEMENT RecordNumber (#PCDATA)>
<!ELEMENT ErrorCode (#PCDATA)>
<!ELEMENT ErrorMessage (#PCDATA)>
<!ELEMENT ErrorRemedy (#PCDATA)>

```

---

## Examples

### Example Success

---

```

<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE Batch SYSTEM "olp_validation_report_1_0.dtd">
<Batch BatchID="11111" MerchantID="gpntest" Name="OLP Validation
Report" Version="1.0">
    <ValidationStatus>Success</ValidationStatus>
    <ValidatedRecords>15</ValidatedRecords>
    <ValidationTime>2009-07-31T14:41:12</ValidationTime>
</Batch>

```

---

**Example Failure Scenario 1**

---

```
<?xml version="1.0" encoding="UTF-8"?>

<!DOCTYPE Batch SYSTEM "olp_validation_report_1_0.dtd">

<Batch BatchID="22222" MerchantID="gpntest" Name="OLP Validation
Report" Version="1.0">

    <ValidationStatus>Failed</ValidationStatus>

    <ValidationTime>2009-07-31T14:40:14</ValidationTime>

    <ValidationErrors>

        <Error>

            <RecordNumber>3</RecordNumber>

            <ErrorCode>123</ErrorCode>

            <ErrorMessage>Number of fields (17) does not match with
                number of field names (18).</ErrorMessage>

            <ErrorRemedy>Correct file format and try again.
                </ErrorRemedy>

        </Error>

    </ValidationErrors>

</Batch>
```

---

**Example Failure Scenario 2**


---

```

<?xml version="1.0" encoding="UTF-8"?>

<!DOCTYPE Batch SYSTEM "olp_validation_report_1_0.dtd">

<Batch BatchID="33333" MerchantID="gpntest" Name="OLP Validation Report"
Version="1.0">

    <ValidationStatus>Failed</ValidationStatus>

    <ValidationTime>2009-07-31T14:40:36</ValidationTime>

    <ValidationErrors>

        <Error>

            <RecordNumber>0</RecordNumber>

            <ErrorCode>114</ErrorCode>

            <ErrorMessage>SUM in Trailer record (14.00) does not match
                with actual total (15.00).</ErrorMessage>

            <ErrorRemedy>Make sure the SUM in the Trailer record matches
                with the actual sum of all data records.</ErrorRemedy>

        </Error>

    </ValidationErrors>

</Batch>

```

---

## Viewing the Results of Your Batch File Requests

---

Reports and response files provide information about the requests in your batch files.

### Reports

The following reports provide information about your batch file requests:

- Transaction Request Report—Replaces the Batch File Detail Report.** Provides details about the transactions that were batched using the upload process. See ["Transaction Request Report," page 25.](#)

- **Payment Batch Detail Report**—Daily transaction level report that surfaces all of sales and refunds that have been submitted to your payment processor. You can download the report daily. If the batch file has an error, the file is not processed and so the file's requests are not included in the report. See the [Reporting User Guide](#).
- **Batch Submission Detail Report**—Provides similar information as the Batch File Detail Report, but returns a real-time response with details about the transactions that were batched using the upload process. See "[Batch Submission Detail Report](#)," page 44.

## Response Files

After Cybersource processes all the requests in the batch file, Cybersource creates the following types of CSV-formatted response files that you can use to determine the results of the requests in the file:

- **Full file**—This file includes the results for all the requests in the batch file.

Filename format:

```
<merchantID>.<batchID>.reply.all
```

Filename example: CyberVacations.12345.reply.all

- **Exception file**—This file includes the results for the failed requests.

Filename format:

```
<merchantID>.<batchID>.reply.rejected
```

Filename example: CyberVacations.12345.reply.rejected

The response files are available in the **Reports** area on the [Business Center](#). For transactions in India, go to <https://ebc2.in.cybersource.com/ebc2/>. You can download them the same way you download Cybersource reports, which is explained in the [Reporting User Guide](#).

The format for these files is:

- A "[File Header](#)" followed by a blank line
- One or more "[Data Records](#)", each on a separate line

## File Header

The file header consists of a list of comma-separated name-value pairs, including:

- merchantID
- batchID

### Example Response File Header

```
merchantID=infodev,batchID=12345
```

## Data Records

The data records provide the API reply information for the requests in the batch file. Each data record consists of a comma-separated list of name-value pairs containing the API reply information for a single request. The name-value pairs can be in any order.



**Note**

The order of the data records in the response file might not correspond to the order of the requests in your file. Use the value of the **merchantReferenceCode** field to link the result in the response file to the corresponding request from the batch file.

### Example Response File

This example shows a full file, including two successful requests and one failed request. The failed request is the second data record in the example.

---

```
merchantID=infodev,batchID=12345

merchantReferenceCode=ABC12320398,ccCaptureReply_reasonCode=100,
reasonCode=100,decision=ACCEPT,ccCaptureReply_reconciliationID=
1018546244150167904178,requestID=1018546244150167904178,ccCaptureReply_
amount=327.49,ccCaptureReply_requestDateTime=2007-06-13T22:43:53Z,
purchaseTotals_currency=EUR

merchantReferenceCode=ABC141854,ccCaptureReply_reasonCode=241,
reasonCode=241,decision=REJECT,requestID=1018546227570167904150

merchantReferenceCode=ABC39882097,ccCreditReply_reasonCode=100,
reasonCode=100,decision=ACCEPT,ccCreditReply_reconciliationID=
1018546230720167904150,requestID=1018546230720167904150,ccCreditReply_
amount=14.99,ccCreditReply_requestDateTime=2005-09-23T22:44:33Z,
purchaseTotals_currency=CAD
```

---

# Batch File Reports

There are two reports for batch files: the Transaction Request Report with the Batch Upload connection filter shows details of the transactions that were batched using the upload process, and the Batch Submission Detail Report returns a real-time response with details about the transactions that were batched using the upload process.

**Note**

If you request a report too soon after submitting a batch, you may receive an error because the batch has not finished processing. Try the report request again later.

## Transaction Request Report

The Transaction Request Report (previously called the Batch File Detail Report) provides detailed information about the transactions that were batched when you filter by the Batch Upload connection method. See the [Reporting User Guide](#) for information about creating and downloading this report.

# XML Format

## Elements

### <Report>

The <Report> element is the root element of the report.

---

```

<Report Name=CDATA
    Version=NMTOKEN
    xmlns=CDATA
    MerchantID=CDATA
    ReportStartDate=CDATA
    ReportEndDate=CDATA>
    (BatchFiles)
</Report>

```

---

**Table 8 Attributes of <Report>**

Attribute Name	Description	Data Type & Length
Name	Name of the report. This element always contains the text <code>Batch Files Detail Report</code> .	Alphanumeric (100)
Version	Version number of the report. The current version number is 1.0.	Numeric (10)
xmlns	XML namespace for the report. The namespace for the current version is <code>http://reports.cybersource.com/reports/bfdr/1.0</code> . For transactions in India, <code>http://reports.in.cybersource.com/reports/bfdr/1.0</code> .	Alphanumeric (100)
MerchantID	Cybersource merchant ID used for the transactions in the report.	Alphanumeric (30)
ReportStartDate	First date included in the report.	DateTime (25)
ReportEndDate	Last date included in the report.	DateTime (25)

**Table 9 Child Elements of <Report>**

Element Name	Description
<BatchFiles>	Batch files that are included in the report. See " <a href="#">&lt;BatchFiles&gt;</a> ," page 27 for a list of child elements.

**Example <Report> Element**

```
<Report Name="Batch Files Detail Report"
  Version="1.0"
  xmlns="http://reports.cybersource.com/reports/bfdr/1.0"
  MerchantID="pcpawnshop"
  ReportStartDate="2006-09-29T05:00:00-05:00"
  ReportEndDate="2006-09-30T05:00:00-05:00">
  <BatchFiles>
    ...
  </BatchFiles>
</Report>
```

**<BatchFiles>**

The <BatchFiles> element contains all of the batch files that are included in the report.

```
<BatchFiles>
  (BatchFile)*
</BatchFiles>
```

**Table 10 Child Elements of <BatchFiles>**

Element Name	Description
<BatchFile>	Payment processors for the transactions in the batch file. See " <a href="#">&lt;BatchFile&gt;</a> ," page 28 for a list of attributes and child elements.

**Example** <BatchFiles> Element

---

```

<BatchFiles>

    <BatchFile BatchFileID="123">

        ...

    </BatchFile>

</BatchFiles>

```

---

**<BatchFile>**

The <BatchFile> element contains the payment processors for the transactions in the batch file.

---

```

<BatchFile BatchFileID=CDATA>

    (PaymentProcessor)*

</BatchFile>

```

---

**Table 11** Attributes of <BatchFile>

Attribute Name	Description	Data Type & Length
BatchFileID	Cybersource batch file in which the transactions were sent.	Numeric (39)

**Table 12** Child Elements of <BatchFile>

Element Name	Description
<PaymentProcessor>	Requests associated with the payment processor. See " <a href="#">&lt;PaymentProcessor&gt;</a> ," page 29 for a list of attributes and child elements.

**Example** <BatchFile> Element

---

```

<BatchFile BatchFileID="10101">
    <PaymentProcessor PaymentProcessorName="vital">
        ...
    </PaymentProcessor>
</BatchFile>

```

---

**<PaymentProcessor>**

The <PaymentProcessor> element contains the requests associated with a payment processor.

---

```

<PaymentProcessor PaymentProcessorName=CDATA>
    (Request)*
</PaymentProcessor>

```

---

**Table 13** Attributes of <PaymentProcessor>

Attribute Name	Description	Data Type & Length
PaymentProcessorName	Name of a payment processor.	Alphanumeric (30)

**Table 14** Child Elements of <PaymentProcessor>

Element Name	Description
<Request>	Information about a payment transaction. See " <a href="#">&lt;Request&gt;</a> ," page 30 for a list of attributes.

**Example** <PaymentProcessor> Element

---

```

<PaymentProcessor PaymentProcessorName="vital">
    <Request>
        ...
    </Request>
</PaymentProcessor>

```

---

**<Request>**

The <Request> element contains information about a payment transaction.

---

```

<Request RequestID=CDATA>
    (TransactionReferenceNumber)
    (MerchantReferenceNumber)
    (TransactionStatus)
    (Amount)
    (CurrencyCode)
    (PaymentStatus)
</Request>

```

---

**Table 15** Attributes of <Request>

Attribute Name	Description	Data Type & Length
RequestID	Unique identifier generated by Cybersource for the transaction.	Numeric (26)

**Table 16** Child Elements of <Request>

Element Name	Description	Data Type & Length
Transaction Reference Number	Reference number that you use to reconcile your Cybersource reports with your processor reports. This field corresponds to the <b>&lt;service&gt;_reconciliationID</b> (Simple Order API) and to the <b>&lt;service&gt;_trans_ref_no</b> (SCMP API) reply fields.	Alphanumeric (60)

**Table 16 Child Elements of <Request> (Continued)**

<b>Element Name</b>	<b>Description</b>	<b>Data Type &amp; Length</b>
Merchant Reference Number	Merchant-generated order reference or tracking number.	Alphanumeric (50)
Transaction Status	One-word description of the result of the transaction request.	Alphanumeric (50)
Amount	Amount of the transaction.	Amount (19)
CurrencyCode	ISO currency code used for the transaction.	Alphanumeric (5)
PaymentStatus	One-word description of the current status of the transaction. Possible values: <ul style="list-style-type: none"> <li>■ BATCH_ERROR</li> <li>■ BATCH_RESET</li> <li>■ BATCHED</li> <li>■ CANCELED_REVERS</li> <li>■ CANCELLED</li> <li>■ DENIED</li> <li>■ FAILED</li> <li>■ PENDING</li> <li>■ REFUNDED</li> <li>■ REVERSED</li> <li>■ TRXN_ERROR</li> <li>■ VOIDED</li> </ul>	Alphanumeric (50)

**Example** <Request> Element

---

```
<Request RequestID="1580782287420174065733">  
  
    <TransactionReferenceNumber>5533830406</  
TransactionReferenceNumber>  
  
    <MerchantReferenceNumber>1158078228539</MerchantReferenceNumber>  
  
    <TransactionStatus>SOK</TransactionStatus>  
  
    <Amount>25.00</Amount>  
  
    <CurrencyCode>USD</CurrencyCode>  
  
    <PaymentStatus>PENDING</PaymentStatus>  
  
</Request>
```

---

## DTD

---

```

<!ELEMENT Report (BatchFiles)>

<!ATTLIST Report Name CDATA #REQUIRED

                Version NMTOKEN #REQUIRED

                xmlns CDATA #REQUIRED

                MerchantID CDATA #REQUIRED

                ReportStartDate CDATA #REQUIRED

                ReportEndDate CDATA #REQUIRED>

<!ELEMENT BatchFiles (BatchFile)*>

<!ELEMENT BatchFile (PaymentProcessor)*>

<!ATTLIST BatchFile BatchFileID CDATA #REQUIRED>

<!ELEMENT PaymentProcessor (Request)*>

<!ATTLIST PaymentProcessor PaymentProcessorName CDATA #REQUIRED>

<!ELEMENT Request (TransactionReferenceNumber, MerchantReferenceNumber,
                TransactionStatus, Amount, CurrencyCode, PaymentStatus)>

<!ATTLIST Request RequestID CDATA #REQUIRED>

<!ELEMENT TransactionReferenceNumber (#PCDATA)>

<!ELEMENT MerchantReferenceNumber (#PCDATA)>

<!ELEMENT TransactionStatus (#PCDATA)>

<!ELEMENT Amount (#PCDATA)>

<!ELEMENT CurrencyCode (#PCDATA)>

<!ELEMENT PaymentStatus (#PCDATA)>

```

---

## Example

The following example shows a report that contains two batch files. The first batch file contains three requests and the second batch file contains one request.

---

```

<?xml version="1.0" encoding="utf-8"?>

<!DOCTYPE Report SYSTEM "https://ebctest.cybersource.com/ebctest/
reports/dtd/bfdr.dtd">

<Report Name="Batch Files Detail Report"

    Version="1.0"

    xmlns="https://ebctest.cybersource.com/ebctest/reports/dtd/
bfdr.dtd"

    MerchantID="pcpawshop"

    ReportStartDate="2006-09-29T05:00:00-05:00"

    ReportEndDate="2006-09-30T05:00:00-05:00">

  <BatchFiles>

    <BatchFile BatchFileID="127788">

      <PaymentProcessor PaymentProcessorName="vital">

        <Request RequestID="1595558344253232243215">

          <TransactionReferenceNumber>7242635150</
TransactionReferenceNumber>

          <MerchantReferenceNumber>1158078228539</
MerchantReferenceNumber>

          <TransactionStatus>SOK</TransactionStatus>

          <Amount>25.00</Amount>

          <CurrencyCode>USD</CurrencyCode>

          <PaymentStatus>PENDING</PaymentStatus>

        </Request>

        <Request RequestID="1595558354743232243215">

          <TransactionReferenceNumber>7242636613</
TransactionReferenceNumber>

          <MerchantReferenceNumber>1158078892610</
MerchantReferenceNumber>

          <TransactionStatus>SOK</TransactionStatus>

          <Amount>100.00</Amount>

```

---

---

```

        <CurrencyCode>USD</CurrencyCode>

        <PaymentStatus>PENDING</PaymentStatus>

    </Request>

    <Request RequestID="1595558364563232243215">

        <TransactionReferenceNumber>7242637653</
TransactionReferenceNumber>

        <MerchantReferenceNumber>1158079157035</
MerchantReferenceNumber>

        <TransactionStatus>SOK</TransactionStatus>

        <Amount>99.00</Amount>

        <CurrencyCode>USD</CurrencyCode>

        <PaymentStatus>VOIDED</PaymentStatus>

    </Request>

</PaymentProcessor>

</BatchFile>

<BatchFile BatchFileID="123987">

    <PaymentProcessor PaymentProcessorName="smartfdc">

        <Request RequestID="1595564779663232243215">

            <TransactionReferenceNumber>7243278653
            </TransactionReferenceNumber>

            <MerchantReferenceNumber>1159429157035
            </MerchantReferenceNumber>

            <TransactionStatus>SOK</TransactionStatus>

            <Amount>4.00</Amount>

            <CurrencyCode>USD</CurrencyCode>

            <PaymentStatus>PENDING</PaymentStatus>

        </Request>

    </PaymentProcessor>

</BatchFile>

</BatchFiles>

</Report>

```

---

## CSV Format

### Records

#### First Header Record

The first header record describes the name and version of the report and indicates which dates are included in the report.

#### Example First Header Record

---

```
Batch Files Detail Report,1,2006-09-29 to 2006-09-30,,,,,,,,
```

---

**Table 17 Fields in the First Header Record**

Position	Field Name	Description	Data Type & Length
1 (A)	<b>report_name</b>	Name of the report. This field always contains the text <i>Batch Files Detail Report</i> .	Alphanumeric (100)
2 (B)	<b>version_number</b>	Version number of the report. The current version number is 1.	Numeric (10)
3 (C)	<b>date_range</b>	Dates included in the report in the format <i>YYYY-MM-DD to YYYY-MM-DD</i> . The first date is the start date; the second date is the end date.	Alphanumeric (100)

#### Second Header Record

The second header record indicates the name of each field in the report. The fields in the second header record follow these rules:

- The content of each field is the same as the field name.
- The data type and length of each field is alphanumeric (100).

#### Example Second Header Record

---

```
merchant_id,txn_batch_id,payment_processor,request_id,trans_ref_  
no,merchant_ref_number,ics_rflag,amount,currency,action
```

---

## Transaction Record

Each transaction record contains information about a Cybersource payment transaction.

### Example Transaction Record

---

```
pcpawshop,127788,vital,9979040000003515181891,7242635150,1158078228539
,SOK,25.00,USD,PENDING
```

---

**Table 18 Fields in the Transaction Record**

Position	Field Name	Description	Data Type & Length
1	<b>merchant_id</b>	Cybersource merchant ID used for the transaction.	Alphanumeric (30)
2	<b>txn_batch_id</b>	Cybersource batch file in which the transactions were sent.	Numeric (39)
3	<b>payment_processor</b>	Name of a payment processor.	Alphanumeric (30)
4	<b>request_id</b>	Identifier for the transaction.	Numeric (26)
5	<b>trans_ref_no</b>	Reference number that you use to reconcile your Cybersource reports with your processor reports. This field corresponds to the <b>&lt;service&gt;_reconciliationID</b> (Simple Order API) and to the <b>&lt;service&gt;_trans_ref_no</b> (SCMP API) reply fields.	Alphanumeric (60)
6	<b>merchant_ref_number</b>	Merchant-generated order reference or tracking number.	Alphanumeric (50)
7	<b>ics_rflag</b>	One-word description of the result of the transaction request.	Alphanumeric (50)
8	<b>amount</b>	Amount of the transaction.	Amount (19)
9	<b>currency</b>	<a href="#">ISO currency code</a> used for the transaction.	Alphanumeric (5)

**Table 18 Fields in the Transaction Record (Continued)**

Position	Field Name	Description	Data Type & Length
10	<b>action</b>	One-word description of the current status of the transaction. Possible values: <ul style="list-style-type: none"> <li>■ BATCH_ERROR</li> <li>■ BATCH_RESET</li> <li>■ BATCHED</li> <li>■ CANCELED_REVERS</li> <li>■ CANCELLED</li> <li>■ DENIED</li> <li>■ FAILED</li> <li>■ PENDING</li> <li>■ REFUNDED</li> <li>■ REVERSED</li> <li>■ TRXN_ERROR</li> <li>■ VOIDED</li> </ul>	Alphanumeric (50)

## Example

The following example shows a report that contains two batch files. The first batch file contains three requests and the second batch file contains one request.

```

Batch Files Detail Report,1,2006-09-29 to 2006-09-30,,,,,,
merchant_id,txn_batch_id,payment_processor,request_id,trans_ref_no,
merchant_ref_number,ics_rflag,amount,currency,action
pcpawncshop,127788,vital,1598344253232243215,7242635150,1158078228539,SO
K,25.00,USD,PENDING
pcpawncshop,127788,vital,1598354743232243226,7242636613,1158078892610,SO
K,100.00,USD,PENDING
pcpawncshop,127788,vital,1598364563232243237,7242637653,1158079157035,SO
K,99.00,USD,VOIDED
pcpawncshop,123987,smartfdc,1594779663232243248,7243278653,1159429157035
,SOK,4.00,USD,PENDING

```

# Batch Submission Detail Report

---

The Batch Submission Detail Report provides real-time detailed status information about the transactions that you previously uploaded in the Business Center or processed with the Offline Transaction File Submission service.

This report can be downloaded from the Business Center. See the [Reporting User Guide](#) for more information about downloading this report.

## DTD

---

```
<!ELEMENT Report (Transaction)*>

<!ATTLIST Report MerchantID CDATA #REQUIRED

                Name CDATA #REQUIRED

                SubmissionFileID CDATA #REQUIRED

                SubmissionDateTime CDATA #REQUIRED

                Version NMTOKEN #REQUIRED>

<!ELEMENT Transaction (LinkToRequest?, RequestID, TransactionDate,
CybsMID, ProcessorMID?, HierarchyID?, TransRefNumber?, MerchantRefNumber?,
TransactionType?, Amount?, TransactionAmountCurrency?, PaymentMethod?,
PaymentType?, AccountSuffix?, Decision?, ReasonCode?, Auth?,
MerchantDefinedData1?, MerchantDefinedData2?, MerchantDefinedData3?,
MerchantDefinedData4?)>

<!ELEMENT LinkToRequest (#PCDATA)>

<!ELEMENT RequestID (#PCDATA)>

<!ELEMENT TransactionDate (#PCDATA)>

<!ELEMENT CybsMID (#PCDATA)>

<!ELEMENT ProcessorMID (#PCDATA)>

<!ELEMENT HierarchyID (#PCDATA)>

<!ELEMENT TransRefNumber (#PCDATA)>

<!ELEMENT MerchantRefNumber (#PCDATA)>

<!ELEMENT TransactionType (#PCDATA)>

<!ELEMENT Amount (#PCDATA)>

<!ELEMENT TransactionAmountCurrency (#PCDATA)>
```

```
<!ELEMENT PaymentMethod (#PCDATA)>
<!ELEMENT PaymentType (#PCDATA)>
<!ELEMENT AccountSuffix (#PCDATA)>
<!ELEMENT Decision (#PCDATA)>
<!ELEMENT ReasonCode (#PCDATA)>
<!ELEMENT Auth (TransRefNumber?, TransactionDate?, RequestID?, Amount?,
Currency?, AuthCode?, ReasonCode?, RCode?)>
<!ELEMENT TransRefNumber (#PCDATA)>
<!ELEMENT TransactionDate (#PCDATA)>
<!ELEMENT RequestID (#PCDATA)>
<!ELEMENT Amount (#PCDATA)>
<!ELEMENT Currency (#PCDATA)>
<!ELEMENT AuthCode (#PCDATA)>
<!ELEMENT ReasonCode (#PCDATA)>
<!ELEMENT RCode (#PCDATA)>
<!ELEMENT MerchantDefinedData1 (#PCDATA)>
<!ELEMENT MerchantDefinedData2 (#PCDATA)>
<!ELEMENT MerchantDefinedData3 (#PCDATA)>
<!ELEMENT MerchantDefinedData4 (#PCDATA)>
```

---

## Example

The following example shows a report in XML format that contains one batch file.

---

```

<?xml version="1.0" encoding="utf-8"?>

<!DOCTYPE Report SYSTEM "https://ebctest.cybersource.com/ebctest/
reports/dtd/bsd.dtd">

<Report Name="Batch Submission Detail Report"

    Version="1.0"

    xmlns="https://ebctest.cybersource.com/ebctest/reports/dtd/
bsd.dtd"

    Name="Batch Submission Detail Report"

    SubmissionFileID="12345678"

    SubmissionDateTime="2010-03-18 15:15:40 GMT"

    Version="1.0">

<Transaction>

    <LinkToRequest>2689254011060008415089</LinkToRequest>

    <RequestID>2689254011060008415089</RequestID>

    <TransactionDate>2010-03-18 15:16:41 GMT</TransactionDate>

    <CybsMID>examplemerchantid</CybsMID>

    <TransRefNumber>81389795F6RU7QH0</TransRefNumber>

    <MerchantRefNumber>12345-8569-8794654</MerchantRefNumber>

    <TransactionType>ics_bill,ics_auth</TransactionType>

    <Amount>1.00</Amount>

    <TransactionAmountCurrency>USD</TransactionAmountCurrency>

    <PaymentMethod>credit card</PaymentMethod>

    <PaymentType>MasterCard</PaymentType>

    <AccountSuffix>1234</AccountSuffix>

    <ReasonCode>231</ReasonCode>

    <Auth>

        <RequestID>2689254011060008415089</RequestID>

    </Auth>

</Transaction>

</Report>

```

---

This example shows a report in CSV format that contains one batch file consisting of four transaction files.

---

```
Submission Date/Time,Submission File ID,link_to_request,request_
id,transaction_date,cybs_mid,processor_mid,hierarchy_id,trans_ref_
number,merchant_ref_number,transaction_type,amount,transaction_amount_
currency,payment_method,payment_type,account_suffix,decision,reason_
code,reserved,auth_trans_ref_number,auth_date,auth_request_id,auth_
amount,auth_currency,auth_code,auth_reason_code,auth_rcode,merchant_
defined_data1,merchant_defined_data2,merchant_defined_data3,merchant_
defined_data4 2020-02-06 23:50:41 GMT,10100019,9.99E+21,5.81E+21,2020-02-
06 23:50:56 GMT,example_
renewal,exampleCYBS,CS000000196682612120020707470300001,"ics_bill,ics_
auth",684.18,SGD,credit card,Visa,1625,100,2CYBS,2020-02-06 23:50:56
GMT,9.99E+21,684.18,SGD,34521,1 2020-02-06 23:50:41
GMT,10100019,9.99E+21,5.81E+21,2020-02-06 23:50:56 GMT,example_
renewal,exampleCYBS,CS000000197045901520020707470300005,"ics_bill,ics_
auth",111.37,SGD,credit card,Visa,5246,100,2CYBS,2020-02-06 23:50:56
GMT,9.99E+21,111.37,SGD,698141,1 2020-02-06 23:50:41
GMT,10100019,9.99E+21,5.81E+21,2020-02-06 23:50:56 GMT,example_
renewal,exampleCYBS,CS000000197194803220020707470300006,"ics_auth,ics_
bill",140.02,SGD,credit card,Visa,7315,100,2CYBS,2020-02-06 23:50:56
GMT,9.99E+21,140.02,SGD,42372,1 2020-02-06 23:50:41
GMT,10100019,9.99E+21,5.81E+21,2020-02-06 23:50:56 GMT,example_
renewal,exampleCYBS,CS000000194267014620020707470300007,"ics_bill,ics_
auth",74.13SGD,credit card,MasterCard,782,100,2CYBS,2020-02-06 23:50:56
GMT,9.99E+21,74.13,SGD,T87562,1
```

---

# Using Java Sample Code to Upload Files

## Requirements

---

- J2SE 8 or higher
- Unlimited Strength Jurisdiction Policy files from Oracle (`US_export_policy.jar` and `local_policy.jar`), available at <http://www.oracle.com/technetwork/java/javase/downloads/index.html>

## Using Sample Code for Basic Authentication

---

**Note**

The sample code was developed and tested on a Solaris platform.

- Step 1** Replace your Java installation's existing security policy files with the new ones you downloaded from Oracle's site:
- Find your existing `US_export_policy.jar` and `local_policy.jar` files in the `$JAVA_HOME/jre/lib/security` directory.
  - Rename or move your existing files to another directory.
  - Copy the new `US_export_policy.jar` and `local_policy.jar` files that you downloaded from Oracle to the `$JAVA_HOME/jre/lib/security` directory.
- Step 2** Edit the `$JAVA_HOME/jre/lib/security/java.security` file and insert the security provider right after the Oracle provider. Make sure to increment the numbers of the other providers in the list. Your list of security providers will now look similar to this:
- ```
security.provider.1=sun.security.provider.Sun
security.provider.3=com.sun.net.ssl.internal.ssl.Provider
```

```
security.provider.4=com.sun.rsa.jca.Provider
security.provider.5=com.sun.crypto.provider.SunJCE
security.provider.6=sun.security.jgss.SunProvider
```

**Step 3** Import your Cybersource Simple Order API .p12 security key into Internet Explorer.

- a** Open an Internet Explorer Web browser, go to **Tools > Internet Options...**, and click the **Content** tab.
- b** Click **Certificates...**
- c** Click **Import...** to open the Certificate Import Wizard and click **Next** to start the Wizard.
- d** Browse to the location of your .p12 security key and click **Next**.  
For the password for the private key, enter your Cybersource merchant ID. For example, if your key is infodev.p12, enter `infodev` as the password.
- e** On this page, click the check box for **Mark this key as exportable** and then click **Next**.
- f** Click **Next** on the Certificate Store page.
- g** Click **Finish** and you will see a confirmation that the import was successful.

**Step 4** Create a key store file to contain your Cybersource Simple Order API .p12 security key:

- a** In a Web browser, go to one of the following URLs:

If you are in test mode and have not gone live with Cybersource:  
**<https://batchtest.cybersource.com/upload/UploadBatchFile>**

If you have gone live with Cybersource:  
**<https://batch.cybersource.com/upload/UploadBatchFile>**

For live transactions in India, **<https://batch.in.cybersource.com/upload/UploadBatchFile>**

- b** Go to File > Properties.
- c** Click **Certificates**.
- d** Click the **Certification Path** tab.
- e** Select **Entrust.net Secure Server Certification Authority**.
- f** Click **View Certificate**.
- g** Click the **Details** tab.
- h** Click **Copy to File** and then **Next**.
- i** Click Browse and navigate to where you want to save the file.
- j** Enter the name you want to use for the file, such as `MyCert`. Click **Save** and click **Next**.
- k** Click Finish.  
Your file, for example `MyCert.cer`, has been created in the location you specified.
- l** Go to `$JAVA_HOME/bin/keytool` and use the J2SE keytool program to create a keystore file that contains this newly created certificate. You will need to provide a pass phrase for the keystore. You **MUST** use the same password that you used in

Step d on [page 44](#), which is part of [Step 3](#) above. For example, if your p12 key is infodev.p12, the pass phrase must be infodev.

To create the keystore, type the following command:

```
$JAVA_HOME/bin/keytool -import -file <path to certificate>/
<name of certificate file> -keystore <name of keystore
file>.jks -storepass <pass phrase of keystore>
```

For example:

```
$JAVA_HOME/bin/keytool -import -file /home/bluu/MyCert.cer -
keystore MyKeystore.jks -storepass myMerchantID
```

If successful, the output will be similar to this:

```
Owner: CN=batchtest.cybersource.com, OU=Operations,
O=Cybersource Corporation, L=Mountain View, ST=California, C=US
Issuer: CN=Entrust.net Secure Server Certification Authority,
OU=(c) 1999 Entrust.net Limited, OU=www.entrust.net/CPS incorp.
by ref. (limits liab.), O=Entrust.net, C=US
Serial number: 374e1b7b
Valid from: Thu Nov 18 17:15:34 PST 2004 until: Tue Jan 31
17:51:24 PST 2006
Certificate fingerprints:
    MD5:  BE:BF:B0:91:69:C4:7B:10:45:EC:D6:0F:16:AA:3D:77
    SHA1: 07:F8:41:DC:B2:FC:F5:DA:FC:EE:09:7A:33:B8:29:15:31:18
Trust this certificate? [no]: yes
Certificate was added to keystore
```

**Step 5** Modify the `SSLFileTransfer.props` file with your settings. The file is part of the Cybersource download package and looks similar to this:

```
# Upload host
host=batchtest.cybersource.com

# Upload port
port=<Upload port>

# Username to log into the Business Center
bcUserName=<Business Center login name>

# Password to log into the Business Center
bcPassword=<Business Center login password>

# File to upload
uploadFile=<path to your file>/<file name>

# Path where to upload it to (provided by Cybersource)
path=/upload/UploadBatchFile
```

```
# Your Cybersource security key
key=<key location path>/<key file name>

# New key store you just created that contains the certificate
keyStore=<key store location>/<new key store name>

# Pass phrase is the string you used in -storepass option when you
# created the key store file earlier
passPhrase=<pass phrase>
```

**Step 6** Set the `JAVA_HOME` environment variable to where you installed J2SE. For example:

```
JAVA_HOME=/home/j2se
```

**Step 7** Include `$JAVA_HOME/bin` in the `PATH`.

**Step 8** Compile and run the sample:

**a** Change to the directory where you stored the Cybersource sample files.

**b** Type the following:

```
javac SSLFileTransfer.java
```

```
java SSLFileTransfer <path to props file>/SSLFileTransfer.props
```

If the upload is successful, the output should look similar to this:

```
HTTP/1.1 200 OK
Date: Wed, 26 Jan 2020 17:26:31 GMT
Server: Apache Coyote/1.0
Content-Type: text/plain
Content-Length: 0
X-Cache: MISS from <your host>
Connection: close
UPLOAD FILE SUCCESSFUL
```

# Sample Code for Basic Authentication

---

The sample below shows how you can upload a batch file to a batch server using Basic Authentication.

```
import java.util.*;
import java.io.*;
import javax.net.ssl.*;
import java.security.*;

public class SSLFileTransfer {
    Properties props = new Properties(); // stores properties from
    property file
    /**
     * Default constructor
     */
    public SSLFileTransfer() {}
    /**
     * Initialize program by reading properties file.
     *
     * @param propsFile needed for file transfer
     */
    public void init(String propsFile) {
        try {
            props.load(new BufferedInputStream(new
    FileInputStream(new File(propsFile))));
        } catch (Exception e) {
            e.printStackTrace();
            System.exit(-1);
        }
    }
    /**
     * Error message if incorrect arguments are passed.
     */
    public static void usage() {
        System.out.println("USAGE: java SSLFileTransfer <full path
    property file name>");
        System.exit(-1);
    }
    /**
     * Get factory for authentication
     *
     * @throws IOException if exception occurs
     */
    private SSLSocketFactory getFactory() throws IOException {
```

```

    try {
        SSLContext ctx;
        KeyManagerFactory kmf;
        KeyStore ks, ks1;
        char[] passphrase =
props.getProperty("passPhrase").toCharArray();
        ctx = SSLContext.getInstance("TLSv1.2");
        kmf = KeyManagerFactory.getInstance("SunX509");
        ks = KeyStore.getInstance("PKCS12");
        ks1 = KeyStore.getInstance("JKS");
        ks.load(new FileInputStream(props.getProperty("key")),
passphrase);
        ks1.load(new
FileInputStream(props.getProperty("keyStore")), passphrase);
        kmf.init(ks, passphrase);
        TrustManagerFactory tmf =
TrustManagerFactory.getInstance("SunX509");
        tmf.init(ks1);
        ctx.init(kmf.getKeyManagers(), tmf.getTrustManagers(),
null);
        return ctx.getSocketFactory();
    } catch (Exception e) {
        e.printStackTrace();
        throw new IOException(e.getMessage());
    }
}
/**
 * Get host from property file
 */
private String getHost() {
    return props.getProperty("host", "localhost");
}
/**
 * Get port from property file
 */
private int getPort() {
    return Integer.parseInt(props.getProperty("port"));
}
/**
 * Send request (file) to the server.
 *
 * @param out outstream to send the data to the server
 * @throws Exception if an error occurs.
 */
private void sendRequest(PrintWriter out) throws Exception {
    final String CRLF = "\r\n";
    String path = props.getProperty("path");
    out.print("POST " + path + " HTTP/1.1" + CRLF);
    final String BOUNDARY = "7d03135102b8";

```

```

        out.print("Host: " + props.getProperty("host") + CRLF);
        out.print("Content-Type: multipart/form-data;
boundary="+BOUNDARY+CRLF);
        String uploadFile = props.getProperty("uploadFile");
        String authString = props.getProperty("bcUserName") + ":" +
props.getProperty("bcPassword");
        String encodedAuthString = "Basic " + new
sun.misc.BASE64Encoder().encode(authString.getBytes ());
        out.print("Authorization: " + encodedAuthString+CRLF);
        StringBuffer sbuf = new StringBuffer();
        sbuf.append("--"+BOUNDARY+CRLF);
        sbuf.append("Content-Disposition: form-data;
name=\"upfile\"; filename=\"\" + uploadFile + "\""+CRLF);
        sbuf.append("Content-Type: text/plain"+CRLF+CRLF);
        char[] buf;
        int cnt;
        FileReader fi = new FileReader(uploadFile);
        try {
            buf = new char[1024000];
            cnt = fi.read(buf);
        } finally {
            fi.close();
        }
        sbuf.append(buf, 0, cnt);
        sbuf.append(CRLF);
        sbuf.append("--"+BOUNDARY+"--"+CRLF);
        int sz = sbuf.length();
        out.print("Content-Length: "+ sz+CRLF);
        out.print(CRLF);
        out.print(sbuf);
        out.flush();
        // Make sure there were no surprises
        if (out.checkError()) {
            System.out.println("SSLFileTransfer: java.io.PrintWriter
error");
        }
    }
    /**
     * Reads the response from the server.
     * @param in instream to get the data from the server
     * @throws Exception if an error occurs.
     */
    private void readResponse(BufferedReader in) throws Exception {
        boolean successful = false;
        String inputLine;
        while ((inputLine = in.readLine()) != null) {
            if (inputLine.startsWith("HTTP") &&
inputLine.indexOf("200") >= 0) {
                successful = true;
            }
        }
    }

```

```

        }
        System.out.println(inputLine);
    }

    System.out.println("UPLOAD FILE " + (successful?
"SUCCESSFUL" : "FAILED") + "!!!\n");
    }

    /**
     * Upload file to the server.
     * @throws Exception if an error occurs.
     */
    public void upload() throws Exception {
        try {
            SSLSocketFactory factory = getFactory();
            SSLSocket socket =
(SSLSocket)factory.createSocket(getHost(), getPort());
            PrintWriter out = new PrintWriter(new BufferedWriter(new
OutputStreamWriter(socket.getOutputStream())));
            BufferedReader in = new BufferedReader(new
InputStreamReader(socket.getInputStream()));
            socket.startHandshake();
            sendRequest(out);
            readResponse(in);
            out.close();
            in.close();
            socket.close();
        } catch (Exception e) {
            e.printStackTrace();
            throw e;
        }
    }
    /**
     * Main method to start file transfer
     * @param args command line arguments (property file, see
usage())
     * @throws Exception if an error occurs.
     */
    public static void main(String[] args) throws Exception {
        if (args == null || args.length != 1) {
            usage();
        }
        SSLFileTransfer fileXfer = new SSLFileTransfer();
        fileXfer.init(args[0]);
        fileXfer.upload();
    }
}

```

# API Field Mapping

The Offline Transaction File Submission system uses fields from the Cybersource Simple Order API, not from the SCMP API. If you use the SCMP API to process individual transactions, you will need to know which Simple Order API fields correspond to the SCMP API fields with which you are familiar. This appendix provides an alphabetical list of the SCMP API field names and the corresponding Simple Order API field names.

The tables include a comprehensive list of the SCMP API fields that have corresponding Simple Order API fields. Some of the fields might be for Cybersource services that you are not allowed to request in a batch file. See ["Processing Transaction Batch Files," page 8](#) for a list of those services.

To request Cybersource services in the SCMP API, set the **ics\_applications** field to a comma-separated list of the services you want to run. For example, if you want to request a credit card authorization and capture, you set the requests for the services that you want as follows:

- SCMP API: **ics\_applications=ics\_auth,ics\_bill**
- Simple Order API: set **ccAuthService\_run=true** and **ccCaptureService\_run=true**

Note also that the core reply fields for the SCMP API and the Simple Order API are different. The following table describes the fields. For more information about interpreting each API reply, see [Credit Card Services with the Simple Order API](#) and [Credit Card Services with the SCMP API](#).

See ["Examples," page 20](#) to help you understand how to use the Simple Order API fields in the requests in a batch file.

## Reply-Level Fields

**Table 1 Core Reply Fields for the SCMP API and the Simple Order API**

| SCMP API Reply Field and Possible Values                                                                                                                                                                                                                                                                                                                                                                                                              | SO API Reply Field and Possible Values                                                                                                                                                                                                                                                                                                                                                                                             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>ics_rcode</b> and <b>&lt;service&gt;_rcode</b></p> <ul style="list-style-type: none"> <li>■ -1 (error)</li> <li>■ 0 (declined)</li> <li>■ 1 (accepted)</li> </ul>                                                                                                                                                                                                                                                                               | <p><b>decision</b></p> <ul style="list-style-type: none"> <li>■ ERROR</li> <li>■ REJECT</li> <li>■ ACCEPT</li> </ul>                                                                                                                                                                                                                                                                                                               |
| <p><b>ics_rflag</b> and <b>&lt;service&gt;_rflag</b></p> <ul style="list-style-type: none"> <li>■ SOK</li> <li>■ DINVALIDDATA</li> <li>■ ESYSTEM</li> <li>■ and so on...</li> </ul> <p>This field returns a one-word description that gives a general reason for a decline or error. The implementation guide for the ICS service that you are implementing contains the list and description of the flags that can be returned for that service.</p> | <p><b>reasonCode</b> and <b>&lt;service&gt;_reasonCode</b></p> <ul style="list-style-type: none"> <li>■ 100</li> <li>■ 101</li> <li>■ and so on...</li> </ul> <p>This field returns a 3-digit number that gives the reason for a REJECT or ERROR decision. The implementation guide for the ICS service that you are implementing contains the list and description of the reason codes that can be returned for that service.</p> |
| <p><b>ics_rmsg</b> and <b>&lt;service&gt;_rmsg</b></p> <p>This field gives more information about why you received the particular rflag.</p>                                                                                                                                                                                                                                                                                                          | <p>No corresponding field returned in the Simple Order API, although you can see the information in the transaction details screen on the <a href="#">Business Center</a>. For transactions in India: <a href="https://ebc2.in.cybersource.com/ebc2/">https://ebc2.in.cybersource.com/ebc2/</a></p>                                                                                                                                |

## Request-Level Fields

**Table 2 Request-Level Fields**

| SCMP API                         | SO API                                                                                                   |
|----------------------------------|----------------------------------------------------------------------------------------------------------|
| <b>account_encoder_id</b>        | <b>check_accountEncoderID</b> (for electronic checks)<br><b>card_accountEncoderID</b> (for credit cards) |
| <b>airline_agent_code</b>        | <b>airlineData_agentCode</b>                                                                             |
| <b>airline_agent_name</b>        | <b>airlineData_agentName</b>                                                                             |
| <b>airline_booking_reference</b> | <b>airlineData_bookingReference</b>                                                                      |
| <b>airline_carrier_name</b>      | <b>airlineData_carrierName</b>                                                                           |

Table 2 Request-Level Fields (Continued)

| SCMP API                              | SO API                                   |
|---------------------------------------|------------------------------------------|
| airline_charge_details                | airlineData_chargeDetails                |
| airline_check_digit                   | airlineData_checkDigit                   |
| airline_customer_code                 | airlineData_customerCode                 |
| airline_document_number               | airlineData_documentNumber               |
| airline_document_number_of_parts      | airlineData_documentNumberOfParts        |
| airline_document_type                 | airlineData_documentType                 |
| airline_extended_payment_code         | airlineData_extendedPaymentCode          |
| airline_invoice_number                | airlineData_invoiceNumber                |
| airline_leg#_carrier_code             | airlineData_leg_#_carrierCode            |
| airline_leg#_class                    | airlineData_leg_#_class                  |
| airline_leg#_depart_tax               | airlineData_leg_#_departTax              |
| airline_leg#_destination              | airlineData_leg_#_destination            |
| airline_leg#_fare_basis               | airlineData_leg_#_fareBasis              |
| airline_leg#_flight_number            | airlineData_leg_#_flightNumber           |
| airline_leg#_leg_departure_date       | airlineData_leg_#_departureDate          |
| airline_leg#_originating_airport_code | airlineData_leg_#_originatingAirportCode |
| airline_leg#_stopover_code            | airlineData_leg_#_stopoverCode           |
| airline_passenger_name                | airlineData_passengerName                |
| airline_restricted_ticket_indicator   | airlineData_restrictedTicketIndicator    |
| airline_ticket_issuer_city            | airlineData_ticketIssuerCity             |
| airline_ticket_issuer_code            | airlineData_ticketIssuerCode             |
| airline_ticket_issuer_country         | airlineData_ticketIssuerCountry          |
| airline_ticket_issuer_name            | airlineData_ticketIssuerName             |
| airline_ticket_issuer_postal_code     | airlineData_ticketIssuerPostalCode       |
| airline_ticket_issuer_state           | airlineData_ticketIssuerState            |
| airline_ticket_number                 | airlineData_ticketNumber                 |
| airline_transaction_type              | airlineData_transactionType              |
| alternate_tax_amount                  | otherTax_alternateTaxAmount              |
| alternate_tax_amount_indicator        | otherTax_alternateTaxIndicator           |
| alternate_tax_id                      | otherTax_alternateTaxID                  |
| amexdata_taa1                         | invoiceHeader_amexDataTAA1               |
| amexdata_taa2                         | invoiceHeader_amexDataTAA2               |
| amexdata_taa3                         | invoiceHeader_amexDataTAA3               |
| amexdata_taa4                         | invoiceHeader_amexDataTAA4               |

Table 2 Request-Level Fields (Continued)

| SCMP API                   | SO API                                                                                                                                        |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| auth_code                  | ccAuthService_verbalAuthCode (for credit card authorization)<br>ccCaptureService_verbalAuthCode (for credit card capture)                     |
| auth_request_id            | ccCaptureService_authRequestID (for credit card capture)<br>ccAuthReversalService_authRequestID (for credit card full authorization reversal) |
| auth_type                  | ccAuthService_authType (for credit card authorization)<br>ccCaptureService_authType (for credit card capture)                                 |
| authorization_id           | directDebitService_authorizationID                                                                                                            |
| avs                        | afsService_avsCode                                                                                                                            |
| avs_level                  | ccAuthService_avsLevel                                                                                                                        |
| bank_account_name          | fundTransfer_accountName                                                                                                                      |
| bank_account_number        | fundTransfer_accountNumber                                                                                                                    |
| bank_address               | bankInfo_address                                                                                                                              |
| bank_city                  | bankInfo_city                                                                                                                                 |
| bank_code                  | bankInfo_bankCode                                                                                                                             |
| bank_country               | bankInfo_country                                                                                                                              |
| bank_name                  | bankInfo_name                                                                                                                                 |
| bank_sortcode              | bankInfo_sortCode                                                                                                                             |
| bank_swiftcode             | bankInfo_swiftCode                                                                                                                            |
| bank_transfer_request_id   | bankTransferRefundService_bankTransferRequestID                                                                                               |
| bank_transfer_trans_ref_no | bankTransferRefundService_reconciliationID                                                                                                    |
| batch_id                   | batch_batchID                                                                                                                                 |
| batch_record_id            | batch_recordID                                                                                                                                |
| bill_address1              | billTo_street1                                                                                                                                |
| bill_address2              | billTo_street2                                                                                                                                |
| bill_address3              | billTo_street3                                                                                                                                |
| bill_address4              | billTo_street4                                                                                                                                |
| bill_city                  | billTo_city                                                                                                                                   |
| bill_company_tax_id        | billTo_companyTaxID                                                                                                                           |
| bill_country               | billTo_country                                                                                                                                |
| bill_county                | billTo_county                                                                                                                                 |

Table 2 Request-Level Fields (Continued)

| SCMP API                            | SO API                                                                                                            |
|-------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| bill_payment                        | ccAuthService_billPayment (for credit card authorization)<br>ccCreditService_billPayment (for credit card credit) |
| bill_request_id                     | ccCreditService_captureRequestID                                                                                  |
| bill_state                          | billTo_state                                                                                                      |
| bill_zip                            | billTo_postalCode                                                                                                 |
| bml_customer_billing_address_change | bml_customerBillingAddressChange                                                                                  |
| bml_customer_email_change           | bml_customerEmailChange                                                                                           |
| bml_customer_has_checking_account   | bml_customerHasCheckingAccount                                                                                    |
| bml_customer_has_savings_account    | bml_customerHasSavingsAccount                                                                                     |
| bml_customer_password_change        | bml_customerPasswordChange                                                                                        |
| bml_customer_phone_change           | bml_customerPhoneChange                                                                                           |
| bml_customer_registration_date      | bml_customerRegistrationDate                                                                                      |
| bml_customer_type_flag              | bml_customerTypeFlag                                                                                              |
| bml_gross_household_income          | bml_grossHouseholdIncome                                                                                          |
| bml_household_income_currency       | bml_householdIncomeCurrency                                                                                       |
| bml_item_category                   | bml_itemCategory                                                                                                  |
| bml_merchant_promotion_code         | bml_merchantPromotionCode                                                                                         |
| bml_preapprovalNumber               | bml_preapprovalNumber                                                                                             |
| bml_product_delivery_type_indicator | bml_productDeliveryTypeIndicator                                                                                  |
| bml_residence_status                | bml_residenceStatus                                                                                               |
| bml_tc_version                      | bml_tcVersion                                                                                                     |
| bml_years_at_current_residence      | bml_yearsAtCurrentResidence                                                                                       |
| bml_years_with_current_employer     | bml_yearsWithCurrentEmployer                                                                                      |
| branch_check_digit                  | fundTransfer_bankCheckDigit                                                                                       |
| branch_code                         | bankInfo_branchCode                                                                                               |
| button_type                         | paypalButtonCreateService_buttonType                                                                              |
| buyer_registration                  | taxService_buyerRegistration                                                                                      |
| card_present                        | pos_cardPresent                                                                                                   |
| card_type                           | card_cardType                                                                                                     |
| cat_level                           | pos_catLevel                                                                                                      |
| cavv                                | ccAuthService_cavv                                                                                                |
| cc_bin                              | card_bin                                                                                                          |

Table 2 Request-Level Fields (Continued)

| SCMP API                  | SO API                                        |
|---------------------------|-----------------------------------------------|
| comments                  | comments                                      |
| company_name              | billTo_company                                |
| cost_center               | invoiceHeader_costCenter                      |
| currency                  | purchaseTotals_currency                       |
| customer_account_id       | billTo_customerID                             |
| customer_cc_cv_indicator  | card_cvIndicator                              |
| customer_cc_cv_number     | card_cvNumber                                 |
| customer_cc_expmo         | card_expirationMonth                          |
| customer_cc_expyr         | card_expirationYear                           |
| customer_cc_issue_number  | card_issueNumber                              |
| customer_cc_number        | card_accountNumber                            |
| customer_cc_startmo       | card_startMonth                               |
| customer_cc_startyr       | card_startYear                                |
| customer_cookies_accepted | billTo_httpBrowserCookiesAccepted             |
| customer_email            | billTo_email                                  |
| customer_firstname        | billTo_firstName                              |
| customer_gift_wrap        | invoiceHeader_isGift                          |
| customer_hostname         | billTo_hostname                               |
| customer_ipaddress        | billTo_ipAddress                              |
| customer_lastname         | billTo_lastName                               |
| customer_phone            | billTo_phoneNumber                            |
| customer_phone_type       | bml_billToPhoneType                           |
| customer_pin              | card_pin                                      |
| customer_ssn              | billTo_ssn                                    |
| cv_result                 | afsService_cvCode                             |
| date_collect              | directDebitService_dateCollect                |
| date_of_birth             | billTo_dateOfBirth                            |
| decision_manager_enabled  | decisionManager_enabled                       |
| decision_manager_profile  | decisionManager_profile                       |
| decline_avs_flags         | businessRules_declineAVSFlags                 |
| direct_debit_request_id   | directDebitRefundService_directDebitRequestID |
| direct_debit_text         | directDebitService_directDebitText            |
| direct_debit_trans_ref_no | directDebitRefundService_reconciliationID     |
| direct_debit_type         | directDebitService_directDebitType            |
| disable_avs               | afsService_disableAVSScoring                  |

Table 2 Request-Level Fields (Continued)

| SCMP API               | SO API                                                                                                                                                                                            |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| domain                 | billTo_domainName                                                                                                                                                                                 |
| driver_license_no      | billTo_driversLicenseNumber                                                                                                                                                                       |
| driver_license_state   | billTo_driversLicenseState                                                                                                                                                                        |
| duty_amount            | purchaseTotals_dutyAmount                                                                                                                                                                         |
| e_commerce_indicator   | ccAuthService_commerceIndicator (for credit card authorization)<br>ccCreditService_commerceIndicator (for credit card credit)<br>pinlessDebitService_commerceIndicator (for PIN-less debit cards) |
| eci_raw                | ccAuthService_eciRaw                                                                                                                                                                              |
| ecp_account_no         | check_accountNumber                                                                                                                                                                               |
| ecp_account_type       | check_accountType                                                                                                                                                                                 |
| ecp_check_no           | check_checkNumber                                                                                                                                                                                 |
| ecp_debit_request_id   | ecCreditService_debitRequestID                                                                                                                                                                    |
| ecp_payment_key        | ecDebitService_transactionToken (for electronic check debit)<br>ecCreditService_transactionToken (for electronic check credit)                                                                    |
| ecp_payment_mode       | ecDebitService_paymentMode                                                                                                                                                                        |
| ecp_rdfi               | check_bankTransitNumber                                                                                                                                                                           |
| ecp_ref_no             | ecDebitService_referenceNumber (for electronic check debit)<br>ecCreditService_referenceNumber (for electronic check credit)                                                                      |
| ecp_settlement_method  | ecDebitService_settlementMethod (for electronic check debit)<br>ecCreditService_settlementMethod (for electronic check credit)                                                                    |
| ecp_verification_level | ecDebitService_verificationLevel                                                                                                                                                                  |
| employer_address1      | bml_employerStreet1                                                                                                                                                                               |
| employer_address2      | bml_employerStreet2                                                                                                                                                                               |
| employer_city          | bml_employerCity                                                                                                                                                                                  |
| employer_company_name  | bml_employerCompanyName                                                                                                                                                                           |
| employer_country       | bml_employerCountry                                                                                                                                                                               |
| employer_phone         | bml_employerPhoneNumber                                                                                                                                                                           |
| employer_phone_type    | bml_employerPhoneType                                                                                                                                                                             |
| employer_state         | bml_employerState                                                                                                                                                                                 |

Table 2 Request-Level Fields (Continued)

| SCMP API                    | SO API                                                                                                                   |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------|
| employer_zip                | bml_employerPostalCode                                                                                                   |
| export_address_operator     | exportService_addressOperator                                                                                            |
| export_address_weight       | exportService_addressWeight                                                                                              |
| export_company_weight       | exportService_companyWeight                                                                                              |
| export_name_weight          | exportService_nameWeight                                                                                                 |
| freight_amount              | purchaseTotals_freightAmount                                                                                             |
| fxrates_funding_currency    | fundingTotals_currency                                                                                                   |
| fxrates_quote_id            | ccAuthService_fxQuoteID                                                                                                  |
| gecc_line1...7              | gecc_line_0...6                                                                                                          |
| gecc_plan_number            | gecc_planNumber                                                                                                          |
| gecc_promotion_end_date     | gecc_promotionEndDate                                                                                                    |
| gecc_promotion_plan         | gecc_promotionPlan                                                                                                       |
| gecc_sale_type              | gecc_saleType                                                                                                            |
| gecc_sequence_number        | gecc_sequenceNumber                                                                                                      |
| grand_total_amount          | purchaseTotals_grandTotalAmount                                                                                          |
| http_browser_email          | billTo_httpBrowserEmail                                                                                                  |
| http_browser_type           | billTo_httpBrowserType                                                                                                   |
| ics_applications            | <serviceName>_run                                                                                                        |
| ignore_avs                  | businessRules_ignoreAVSResult                                                                                            |
| ignore_bad_cv               | businessRules_ignoreCVResult                                                                                             |
| ignore_dav_result           | businessRules_ignoreDAVResult                                                                                            |
| ignore_export_result        | businessRules_ignoreExportResult                                                                                         |
| ignore_validate_result      | businessRules_ignoreValidateResult                                                                                       |
| industry_datatype           | ccCaptureService_industryDatatype (for credit card capture)<br>ccCreditService_industryDatatype (for credit card credit) |
| invoice_date                | invoiceHeader_invoiceDate                                                                                                |
| local_tax                   | otherTax_localTaxAmount                                                                                                  |
| local_tax_indicator         | otherTax_localTaxIndicator                                                                                               |
| merchant_defined_data1      | merchantDefinedData_field1                                                                                               |
| merchant_defined_data2      | merchantDefinedData_field2                                                                                               |
| merchant_defined_data3      | merchantDefinedData_field3                                                                                               |
| merchant_defined_data4      | merchantDefinedData_field4                                                                                               |
| merchant_descriptor         | invoiceHeader_merchantDescriptor                                                                                         |
| merchant_descriptor_contact | invoiceHeader_merchantDescriptorContact                                                                                  |

Table 2 Request-Level Fields (Continued)

| SCMP API                         | SO API                                                                                                                                                                                                                                                                             |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| merchant_id                      | merchantID                                                                                                                                                                                                                                                                         |
| merchant_ref_number              | merchantReferenceCode                                                                                                                                                                                                                                                              |
| merchant_vat_registration_number | invoiceHeader_<br>merchantVATRegistrationNumber                                                                                                                                                                                                                                    |
| middleman_registration           | taxService_middlemanRegistration                                                                                                                                                                                                                                                   |
| national_tax                     | otherTax_nationalTaxAmount                                                                                                                                                                                                                                                         |
| national_tax_indicator           | otherTax_nationalTaxIndicator                                                                                                                                                                                                                                                      |
| nexus                            | taxService_nexus                                                                                                                                                                                                                                                                   |
| no_nexus                         | taxService_noNexus                                                                                                                                                                                                                                                                 |
| order_acceptance_city            | taxService_orderAcceptanceCity                                                                                                                                                                                                                                                     |
| order_acceptance_country         | taxService_orderAcceptanceCountry                                                                                                                                                                                                                                                  |
| order_acceptance_county          | taxService_orderAcceptanceCounty                                                                                                                                                                                                                                                   |
| order_acceptance_state           | taxService_orderAcceptanceState                                                                                                                                                                                                                                                    |
| order_acceptance_zip             | taxService_orderAcceptancePostalCode                                                                                                                                                                                                                                               |
| order_discount_amount            | purchaseTotals_discountAmount                                                                                                                                                                                                                                                      |
| order_origin_city                | taxService_orderOriginCity                                                                                                                                                                                                                                                         |
| order_origin_country             | taxService_orderOriginCountry                                                                                                                                                                                                                                                      |
| order_origin_county              | taxService_orderOriginCounty                                                                                                                                                                                                                                                       |
| order_origin_state               | taxService_orderOriginState                                                                                                                                                                                                                                                        |
| order_origin_zip                 | taxService_orderOriginPostalCode                                                                                                                                                                                                                                                   |
| pa_http_accept                   | payerAuthEnrollService_httpAccept                                                                                                                                                                                                                                                  |
| pa_http_user_agent               | payerAuthEnrollService_httpUserAgent                                                                                                                                                                                                                                               |
| pa_merchant_name                 | payerAuthEnrollService_merchantName                                                                                                                                                                                                                                                |
| pa_merchant_url                  | payerAuthEnrollService_merchantURL                                                                                                                                                                                                                                                 |
| pa_purchase_description          | payerAuthEnrollService_purchaseDescription                                                                                                                                                                                                                                         |
| pa_purchase_time                 | payerAuthEnrollService_purchaseTime                                                                                                                                                                                                                                                |
| pa_signedpares                   | payerAuthValidateService_signedPAREs                                                                                                                                                                                                                                               |
| partial_payment_id               | ccCaptureService_partialPaymentID (for credit<br>card capture)<br><br>ccCreditService_partialPaymentID (for credit card<br>credit)<br><br>ecDebitService_partialPaymentID (for electronic<br>check debit)<br><br>ecCreditService_partialPaymentID (for electronic<br>check credit) |
| payment_method                   | subscription_paymentMethod                                                                                                                                                                                                                                                         |

Table 2 Request-Level Fields (Continued)

| SCMP API                            | SO API                                                                                                                                               |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| payment_request_id                  | paySubscriptionCreateService_paymentRequestID                                                                                                        |
| payment_type                        | invoiceHeader_tenderType                                                                                                                             |
| paypal_mp_id                        | paypalPreapprovedPaymentService_mpID (for PayPal preapproved payment)<br>paypalPreapprovedUpdateService_mpID (for PayPal preapproved payment update) |
| paypal_payment_request_id           | paypalCreditService_payPalPaymentRequestID                                                                                                           |
| pos_condition_code                  | pos_conditionCode                                                                                                                                    |
| pos_entry_mode                      | pos_entryMode                                                                                                                                        |
| pos_transaction_security            | pos_transactionSecurity                                                                                                                              |
| purchaser_code                      | invoiceHeader_purchaserCode                                                                                                                          |
| purchaser_order_date                | invoiceHeader_purchaserOrderDate                                                                                                                     |
| purchaser_vat_registration_number   | invoiceHeader_purchaserVATRegistrationNumber                                                                                                         |
| purchasing_level                    | ccCaptureService_purchasingLevel (for credit card capture)<br>ccCreditService_purchasingLevel (for credit card credit)                               |
| record_id                           | riskUpdateService_recordID                                                                                                                           |
| record_name                         | riskUpdateService_recordName                                                                                                                         |
| recurring_approval_required         | recurringSubscriptionInfo_approvalRequired                                                                                                           |
| recurring_automatic_renew           | recurringSubscriptionInfo_automaticRenew                                                                                                             |
| recurring_frequency                 | recurringSubscriptionInfo_frequency                                                                                                                  |
| recurring_number_of_payments        | recurringSubscriptionInfo_numberOfPayments                                                                                                           |
| recurring_number_of_payments_to_add | recurringSubscriptionInfo_numberOfPaymentsToAdd                                                                                                      |
| recurring_payment_amount            | recurringSubscriptionInfo_amount                                                                                                                     |
| recurring_payment_event_action      | paySubscriptionEventUpdateService_action                                                                                                             |
| recurring_payment_event_amount      | recurringSubscriptionInfo_event_amount                                                                                                               |
| recurring_payment_event_approved_by | recurringSubscriptionInfo_event_approvedBy                                                                                                           |
| recurring_payment_event_number      | recurringSubscriptionInfo_event_number                                                                                                               |
| recurring_start_date                | recurringSubscriptionInfo_startDate                                                                                                                  |
| returns_accepted                    | invoiceHeader_returnsAccepted                                                                                                                        |
| seller_registration                 | taxService_sellerRegistration                                                                                                                        |
| ship_from_city                      | shipFrom_city                                                                                                                                        |

Table 2 Request-Level Fields (Continued)

| SCMP API                 | SO API                                   |
|--------------------------|------------------------------------------|
| ship_from_country        | shipFrom_country                         |
| ship_from_county         | shipFrom_county                          |
| ship_from_state          | shipFrom_state                           |
| ship_from_zip            | shipFrom_postalCode                      |
| ship_to_address1         | shipTo_street1                           |
| ship_to_address2         | shipTo_street2                           |
| ship_to_address3         | shipTo_street3                           |
| ship_to_address4         | shipTo_street4                           |
| ship_to_city             | shipTo_city                              |
| ship_to_country          | shipTo_country                           |
| ship_to_county           | shipTo_county                            |
| ship_to_email            | shipTo_email                             |
| ship_to_firstname        | shipTo_firstName                         |
| ship_to_lastname         | shipTo_lastName                          |
| ship_to_phone            | shipTo_phoneNumber                       |
| ship_to_phone_type       | bml_shipToPhoneType                      |
| ship_to_state            | shipTo_state                             |
| ship_to_zip              | shipTo_postalCode                        |
| shipping_method          | shipTo_shippingMethod                    |
| subscription_end_date    | recurringSubscriptionInfo_endDate        |
| subscription_id          | recurringSubscriptionInfo_subscriptionID |
| subscription_status      | recurringSubscriptionInfo_status         |
| subscription_title       | subscription_title                       |
| summary_commodity_code   | invoiceHeader_summaryCommodityCode       |
| supplier_order_reference | invoiceHeader_supplierOrderReference     |
| tax_indicator            | invoiceHeader_taxable                    |
| terminal_capability      | pos_terminalCapability                   |
| terminal_id              | pos_terminalID                           |
| terminal_location        | pos_terminalLocation                     |
| terminal_type            | pos_terminalType                         |
| total_funding_amount     | fundingTotals_grandTotalAmount           |
| total_tax_amount         | purchaseTotals_taxAmount                 |
| track_data               | pos_trackData                            |
| transaction_type         | directDebitService_transactionType       |
| ucaf_authentication_data | ucaf_authenticationData                  |

Table 2 Request-Level Fields (Continued)

| SCMP API                  | SO API                                  |
|---------------------------|-----------------------------------------|
| ucaf_collection_indicator | ucaf_collectionIndicator                |
| user_po                   | invoiceHeader_userPO                    |
| vat_invoice_ref_number    | invoiceHeader_vatInvoiceReferenceNumber |
| vat_tax_amount            | otherTax_vatTaxAmount                   |
| vat_tax_rate              | otherTax_vatTaxRate                     |
| void_request_id           | voidService_voidRequestID               |
| xid                       | ccAuthService_xid                       |

## Offer-Level Fields

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Table 3 Offer-Level Fields

| SCMP API                 | SO API                        |
|--------------------------|-------------------------------|
| alternate_tax_id         | item_#_alternateTaxID         |
| amount                   | item_#_unitPrice              |
| buyer_registration       | item_#_buyerRegistration      |
| city_override_amount     | item_#_cityOverrideAmount     |
| city_override_rate       | item_#_cityOverrideRate       |
| commodity_code           | item_#_commodityCode          |
| country_override_amount  | item_#_countryOverrideAmount  |
| country_override_rate    | item_#_countryOverrideRate    |
| county_override_amount   | item_#_countyOverrideAmount   |
| county_override_rate     | item_#_countyOverrideRate     |
| discount_amount          | item_#_discountAmount         |
| discount_indicator       | item_#_discountIndicator      |
| discount_rate            | item_#_discountRate           |
| district_override_amount | item_#_districtOverrideAmount |
| district_override_rate   | item_#_districtOverrideRate   |
| export                   | item_#_export                 |
| gross_net_indicator      | item_#_grossNetIndicator      |
| merchant_product_sku     | item_#_productSKU             |
| middleman_registration   | item_#_middlemanRegistration  |
| national_tax             | item_#_nationalTax            |

Table 3 Offer-Level Fields (Continued)

| SCMP API                 | SO API                                                                                                                                                                        |
|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| no_export                | item_#_noExport                                                                                                                                                               |
| order_acceptance_city    | item_#_orderAcceptanceCity                                                                                                                                                    |
| order_acceptance_country | item_#_orderAcceptanceCountry                                                                                                                                                 |
| order_acceptance_county  | item_#_orderAcceptanceCounty                                                                                                                                                  |
| order_acceptance_state   | item_#_orderAcceptanceState                                                                                                                                                   |
| order_acceptance_zip     | item_#_orderAcceptancePostalCode                                                                                                                                              |
| order_origin_city        | item_#_orderOriginCity                                                                                                                                                        |
| order_origin_country     | item_#_orderOriginCountry                                                                                                                                                     |
| order_origin_county      | item_#_orderOriginCounty                                                                                                                                                      |
| order_origin_state       | item_#_orderOriginState                                                                                                                                                       |
| order_origin_zip         | item_#_orderOriginPostalCode                                                                                                                                                  |
| point_of_title_transfer  | item_#_pointOfTitleTransfer                                                                                                                                                   |
| product_code             | item_#_productCode                                                                                                                                                            |
| product_name             | item_#_productName                                                                                                                                                            |
| product_risk             | item_#_productRisk                                                                                                                                                            |
| quantity                 | item_#_quantity                                                                                                                                                               |
| score_category_time      | item_#_timeCategory                                                                                                                                                           |
| score_category_gift      | item_#_giftCategory                                                                                                                                                           |
| score_host_hedge         | item_#_hostHedge                                                                                                                                                              |
| score_threshold          | <b>businessRules_scoreThreshold</b> (score_threshold is an offer-level field in the SCMP API; <b>businessRules_scoreThreshold</b> is a request field in the Simple Order API) |
| score_time_hedge         | item_#_timeHedge                                                                                                                                                              |
| score_velocity_hedge     | item_#_velocityHedge                                                                                                                                                          |
| seller_registration      | item_#_sellerRegistration                                                                                                                                                     |
| ship_from_city           | item_#_shipFromCity                                                                                                                                                           |
| ship_from_country        | item_#_shipFromCountry                                                                                                                                                        |
| ship_from_county         | item_#_shipFromCounty                                                                                                                                                         |
| ship_from_state          | item_#_shipFromState                                                                                                                                                          |
| ship_from_zip            | item_#_shipFromPostalCode                                                                                                                                                     |
| state_override_amount    | item_#_stateOverrideAmount                                                                                                                                                    |
| state_override_rate      | item_#_stateOverrideRate                                                                                                                                                      |
| tax_amount               | item_#_taxAmount                                                                                                                                                              |
| tax_rate                 | item_#_taxRate                                                                                                                                                                |
| tax_type_applied         | item_#_taxTypeApplied                                                                                                                                                         |

Table 3 Offer-Level Fields (Continued)

| SCMP API        | SO API               |
|-----------------|----------------------|
| total_amount    | item_#_totalAmount   |
| unit_of_measure | item_#_unitOfMeasure |
| vat_rate        | item_#_vatRate       |

## Reply Fields

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Table 4 Reply Fields

| SCMP API                      | SO API                                |
|-------------------------------|---------------------------------------|
| auth_auth_amount              | ccAuthReply_amount                    |
| auth_auth_avs                 | ccAuthReply_avsCode                   |
| auth_auth_code                | ccAuthReply_authorizationCode         |
| auth_auth_record              | ccAuthReply_authRecord                |
| auth_auth_response            | ccAuthReply_processorResponse         |
| auth_auth_time                | ccAuthReply_authorizedDateTime        |
| auth_avs_raw                  | ccAuthReply_avsCodeRaw                |
| auth_customer_cc_number       | ccAuthReply_bmlAccountNumber          |
| auth_cv_result                | ccAuthReply_cvCode                    |
| auth_cv_result_raw            | ccAuthReply_cvCodeRaw                 |
| auth_factor_code              | ccAuthReply_authFactorCode            |
| auth_fxrates_funding_currency | ccAuthReply_fundingTotals_currency    |
| auth_fxrates_quote_exp        | ccAuthReply_fxQuoteExpirationDateTime |
| auth_fxrates_quote_id         | ccAuthReply_fxQuoteID                 |
| auth_fxrates_quote_rate       | ccAuthReply_fxQuoteRate               |
| auth_fxrates_quote_type       | ccAuthReply_fxQuoteType               |
| auth_rcode                    | N/A                                   |
| auth_reversal_amount          | ccAuthReversalReply_amount            |
| auth_reversal_auth_code       | ccAuthReversalReply_authorizationCode |
| auth_reversal_auth_response   | ccAuthReversalReply_processorResponse |
| auth_reversal_rcode           | N/A                                   |
| auth_reversal_request_time    | ccAuthReversalReply_requestDateTime   |
| auth_reversal_rflag           | N/A                                   |
| auth_reversal_rmsg            | N/A                                   |

Table 4 Reply Fields (Continued)

| SCMP API                           | SO API                                     |
|------------------------------------|--------------------------------------------|
| auth_rflag                         | N/A                                        |
| auth_rmsg                          | N/A                                        |
| auth_total_funding_amount          | ccAuthReply_fundingTotals_grandTotalAmount |
| auth_trans_ref_no                  | ccAuthReply_reconciliationID               |
| bank_transfer_account_holder       | bankTransferReply_accountHolder            |
| bank_transfer_account_number       | bankTransferReply_accountNumber            |
| bank_transfer_amount               | bankTransferReply_amount                   |
| bank_transfer_bank_city            | bankTransferReply_bankCity                 |
| bank_transfer_bank_country         | bankTransferReply_bankCountry              |
| bank_transfer_bank_name            | bankTransferReply_bankName                 |
| bank_transfer_payment_reference    | bankTransferReply_paymentReference         |
| bank_transfer_rcode                | N/A                                        |
| bank_transfer_refund_amount        | bankTransferRefundReply_amount             |
| bank_transfer_refund_rcode         | N/A                                        |
| bank_transfer_refund_response_code | bankTransferRefundReply_processorResponse  |
| bank_transfer_refund_rflag         | N/A                                        |
| bank_transfer_refund_rmsg          | N/A                                        |
| bank_transfer_refund_time          | bankTransferRefundReply_requestDateTime    |
| bank_transfer_refund_trans_ref_no  | bankTransferRefundReply_reconciliationID   |
| bank_transfer_response_code        | bankTransferReply_processorResponse        |
| bank_transfer_rflag                | N/A                                        |
| bank_transfer_rmsg                 | N/A                                        |
| bank_transfer_special_id           | bankTransferReply_bankSpecialID            |
| bank_transfer_swiftcode            | bankTransferReply_bankSwiftCode            |
| bank_transfer_time                 | bankTransferReply_requestDateTime          |
| bank_transfer_trans_ref_no         | bankTransferReply_reconciliationID         |
| bill_bill_amount                   | ccCaptureReply_amount                      |
| bill_bill_request_time             | ccCaptureReply_requestDateTime             |
| bill_enhanced_data_enabled         | ccCaptureReply_enhancedDataEnabled         |
| bill_fxrates_funding_currency      | ccCaptureReply_fundingTotals_currency      |
| bill_fxrates_quote_exp             | ccCaptureReply_fxQuoteExpirationDateTime   |
| bill_fxrates_quote_id              | ccCaptureReply_fxQuoteID                   |
| bill_fxrates_quote_rate            | ccCaptureReply_fxQuoteRate                 |
| bill_fxrates_quote_type            | ccCaptureReply_fxQuoteType                 |

Table 4 Reply Fields (Continued)

| SCMP API                         | SO API                                        |
|----------------------------------|-----------------------------------------------|
| bill_purchasing_level3_enabled   | ccCaptureReply_purchasingLevel3Enabled        |
| bill_rcode                       | N/A                                           |
| bill_rflag                       | N/A                                           |
| bill_rmsg                        | N/A                                           |
| bill_total_funding_amount        | ccCaptureReply_fundingTotals_grandTotalAmount |
| bill_trans_ref_no                | ccCaptureReply_reconciliationID               |
| credit_credit_amount             | ccCreditReply_amount                          |
| credit_credit_request_time       | ccCreditReply_requestDateTime                 |
| credit_enhanced_data_enabled     | ccCreditReply_enhancedDataEnabled             |
| credit_purchasing_level3_enabled | ccCreditReply_purchasingLevel3Enabled         |
| credit_rcode                     | N/A                                           |
| credit_rflag                     | N/A                                           |
| credit_rmsg                      | N/A                                           |
| credit_trans_ref_no              | ccCreditReply_reconciliationID                |
| currency                         | purchaseTotals_currency                       |
| dav_address_type                 | davReply_addressType                          |
| dav_apt_info                     | davReply_apartmentInfo                        |
| dav_bar_code                     | davReply_barCode                              |
| dav_bar_code_chkdigit            | davReply_barCodeCheckDigit                    |
| dav_ca_error_info                | davReply_caErrorInfo                          |
| dav_ca_info                      | davReply_caInfo                               |
| dav_careof                       | davReply_careOf                               |
| dav_city_info                    | davReply_cityInfo                             |
| dav_country_info                 | davReply_countyInfo                           |
| dav_directional_info             | davReply_directionalInfo                      |
| dav_intl_error_info              | davReply_intlErrorInfo                        |
| dav_intl_info                    | davReply_intlInfo                             |
| dav_lvr_info                     | davReply_lvrInfo                              |
| dav_match_score                  | davReply_matchScore                           |
| dav_overall_info                 | davReply_overallInfo                          |
| dav_rcode                        | N/A                                           |
| dav_rflag                        | N/A                                           |
| dav_rmsg                         | N/A                                           |
| dav_standard_address             | davReply_standardizedAddress1                 |

Table 4 Reply Fields (Continued)

| SCMP API                                  | SO API                                                                      |
|-------------------------------------------|-----------------------------------------------------------------------------|
| dav_standard_address_noapt                | davReply_standardizedAddressNoApt                                           |
| dav_standard_address2                     | davReply_standardizedAddress2                                               |
| dav_standard_address3                     | davReply_standardizedAddress3                                               |
| dav_standard_address4                     | davReply_standardizedAddress4                                               |
| dav_standard_city                         | davReply_standardizedCity                                                   |
| dav_standard_country                      | davReply_standardizedCountry                                                |
| dav_standard_county                       | davReply_standardizedCounty                                                 |
| dav_standard_csz                          | davReply_standardizedCSP                                                    |
| dav_standard_iso_country                  | davReply_standardizedISOCountry                                             |
| dav_standard_state                        | davReply_standardizedState                                                  |
| dav_standard_zip                          | davReply_standardizedPostalCode                                             |
| dav_state_info                            | davReply_stateInfo                                                          |
| dav_street_info                           | davReply_streetInfo                                                         |
| dav_suffix_info                           | davReply_suffixInfo                                                         |
| dav_us_error_info                         | davReply_usErrorInfo                                                        |
| dav_us_info                               | davReply_usInfo                                                             |
| dav_zip_info                              | davReply_postalCodeInfo                                                     |
| decision_active_profile                   | decisionReply_activeProfileReply_name                                       |
| decision_active_profile_destination_queue | decisionReply_activeProfileReply_destinationQueue                           |
| decision_active_profile_rule_#_decision   | decisionReply_activeProfileReply_rulesTriggered_ruleResultItem_#_decision   |
| decision_active_profile_rule_#_evaluation | decisionReply_activeProfileReply_rulesTriggered_ruleResultItem_#_evaluation |
| decision_active_profile_rule_#_id         | decisionReply_activeProfileReply_rulesTriggered_ruleResultItem_#_ruleID     |
| decision_active_profile_rule_#_name       | decisionReply_activeProfileReply_rulesTriggered_ruleResultItem_#_name       |
| decision_active_profile_selector_rule     | decisionReply_activeProfileReply_selectedBy                                 |
| direct_debit_refund_response_code         | directDebitRefundReply_processorResponse                                    |
| direct_debit_amount                       | directDebitReply_amount                                                     |
| direct_debit_rcode                        | N/A                                                                         |
| direct_debit_rcode                        | directDebitReply_reasonCode                                                 |
| direct_debit_refund_amount                | directDebitRefundReply_amount                                               |

Table 4 Reply Fields (Continued)

| SCMP API                         | SO API                                  |
|----------------------------------|-----------------------------------------|
| direct_debit_refund_rcode        | N/A                                     |
| direct_debit_refund_rflag        | N/A                                     |
| direct_debit_refund_rmsg         | N/A                                     |
| direct_debit_refund_time         | directDebitRefundReply_requestDateTime  |
| direct_debit_refund_trans_ref_no | directDebitRefundReply_reconciliationID |
| direct_debit_response_code       | directDebitReply_processorResponse      |
| direct_debit_rflag               | N/A                                     |
| direct_debit_rmsg                | N/A                                     |
| direct_debit_time                | directDebitReply_requestDateTime        |
| direct_debit_trans_ref_no        | directDebitReply_reconciliationID       |
| direct_debit_validate_rcode      | N/A                                     |
| direct_debit_validate_rflag      | N/A                                     |
| direct_debit_validate_rmsg       | N/A                                     |
| ecp_credit_processor_trans_id    | ecCreditReply_processorTransactionID    |
| ecp_credit_rcode                 | N/A                                     |
| ecp_credit_ref_no                | ecCreditReply_reconciliationID          |
| ecp_credit_result_code           | ecCreditReply_processorResponse         |
| ecp_credit_rflag                 | N/A                                     |
| ecp_credit_rmsg                  | N/A                                     |
| ecp_credit_settlement_method     | ecCreditReply_settlementMethod          |
| ecp_credit_submit_time           | ecCreditReply_requestDateTime           |
| ecp_credit_total_amount          | ecCreditReply_amount                    |
| ecp_debit_avs                    | ecDebitReply_avsCode                    |
| ecp_debit_avs_raw                | ecDebitReply_avsCodeRaw                 |
| ecp_debit_processor_trans_id     | ecDebitReply_processorTransactionID     |
| ecp_debit_rcode                  | N/A                                     |
| ecp_debit_ref_no                 | ecDebitReply_reconciliationID           |
| ecp_debit_result_code            | ecDebitReply_processorResponse          |
| ecp_debit_rflag                  | N/A                                     |
| ecp_debit_rmsg                   | N/A                                     |
| ecp_debit_settlement_method      | ecDebitReply_settlementMethod           |
| ecp_debit_submit_time            | ecDebitReply_requestDateTime            |
| ecp_debit_total_amount           | ecDebitReply_amount                     |
| ecp_debit_verification_level     | ecDebitReply_verificationLevel          |
| export_ip_country_confidence     | exportReply_ipCountryConfidence         |

Table 4 Reply Fields (Continued)

| SCMP API                  | SO API                                  |
|---------------------------|-----------------------------------------|
| export_match1_address1    | deniedPartiesMatch_0_address_0          |
| export_match1_address2    | deniedPartiesMatch_0_address_1          |
| export_match1_address3    | deniedPartiesMatch_0_address_2          |
| export_match1_list        | deniedPartiesMatch_0_list               |
| export_match1_name1       | deniedPartiesMatch_0_name_0             |
| export_match1_name2       | deniedPartiesMatch_0_name_1             |
| export_match2_address1    | deniedPartiesMatch_1_address_0          |
| export_match2_address2    | deniedPartiesMatch_1_address_1          |
| export_match2_address3    | deniedPartiesMatch_1_address_2          |
| export_match2_list        | deniedPartiesMatch_1_list               |
| export_match2_name1       | deniedPartiesMatch_1_name_0             |
| export_match2_name2       | deniedPartiesMatch_1_name_1             |
| export_match3_address1    | deniedPartiesMatch_2_address_0          |
| export_match3_address2    | deniedPartiesMatch_2_address_1          |
| export_match3_address3    | deniedPartiesMatch_2_address_2          |
| export_match3_list        | deniedPartiesMatch_2_list               |
| export_match3_name1       | deniedPartiesMatch_2_name_0             |
| export_match3_name2       | deniedPartiesMatch_2_name_1             |
| export_rcode              | N/A                                     |
| export_rflag              | N/A                                     |
| export_rmsg               | N/A                                     |
| fxrates_currency#         | fxRatesReply_quote_#_currency           |
| fxrates_funding_currency# | fxRatesReply_quote_#_fundingCurrency    |
| fxrates_quote_date#       | fxRatesReply_quote_#_receivedDateTime   |
| fxrates_quote_exp#        | fxRatesReply_quote_#_expirationDateTime |
| fxrates_quote_id#         | fxRatesReply_quote_#_id                 |
| fxrates_quote_rate#       | fxRatesReply_quote_#_rate               |
| fxrates_quote_type#       | fxRatesReply_quote_#_type               |
| fxrates_rcode             | N/A                                     |
| fxrates_rflag             | N/A                                     |
| fxrates_rmsg              | N/A                                     |
| ics_rcode                 | N/A                                     |
| ics_rflag                 | N/A                                     |
| ics_rmsg                  | N/A                                     |
| merchant_ref_number       | merchantReferenceCode                   |

Table 4 Reply Fields (Continued)

| SCMP API                                    | SO API                                             |
|---------------------------------------------|----------------------------------------------------|
| pa_enroll_acs_url                           | payerAuthEnrollReply_acsURL                        |
| pa_enroll_e_commerce_indicator              | payerAuthEnrollReply_commerceIndicator             |
| pa_enroll_pareq                             | payerAuthEnrollReply_paReq                         |
| pa_enroll_proofxml                          | payerAuthEnrollReply_proofXML                      |
| pa_enroll_proxypan                          | payerAuthEnrollReply_proxyPAN                      |
| pa_enroll_rcode                             | N/A                                                |
| pa_enroll_rflag                             | N/A                                                |
| pa_enroll_rmsg                              | N/A                                                |
| pa_enroll_ucaf_collection_indicator         | payerAuthEnrollReply_ucafCollectionIndicator       |
| pa_enroll_xid                               | payerAuthEnrollReply_xid                           |
| pa_validate_authentication_result           | payerAuthValidateReply_authenticationResult        |
| pa_validate_authentication_status_msg       | payerAuthValidateReply_authenticationStatusMessage |
| pa_validate_cavv                            | payerAuthValidateReply_cavv                        |
| pa_validate_e_commerce_indicator            | payerAuthValidateReply_commerceIndicator           |
| pa_validate_eci                             | payerAuthValidateReply_eci                         |
| pa_validate_eci_raw                         | payerAuthValidateReply_eciRaw                      |
| pa_validate_rcode                           | N/A                                                |
| pa_validate_rflag                           | N/A                                                |
| pa_validate_rmsg                            | N/A                                                |
| pa_validate_xid                             | payerAuthValidateReply_xid                         |
| pay_subscription_create_rcode               | N/A                                                |
| pay_subscription_create_rflag               | N/A                                                |
| pay_subscription_create_rmsg                | N/A                                                |
| pay_subscription_create_subscription_id     | paySubscriptionCreateReply_subscriptionID          |
| pay_subscription_retrieve_approval_required | paySubscriptionRetrieveReply_approvalRequired      |
| pay_subscription_retrieve_automatic_renew   | paySubscriptionRetrieveReply_automaticRenew        |
| pay_subscription_retrieve_bill_address1     | paySubscriptionRetrieveReply_street1               |
| pay_subscription_retrieve_bill_address2     | paySubscriptionRetrieveReply_street2               |
| pay_subscription_retrieve_bill_city         | paySubscriptionRetrieveReply_city                  |
| pay_subscription_retrieve_bill_country      | paySubscriptionRetrieveReply_country               |

Table 4 Reply Fields (Continued)

| SCMP API                                           | SO API                                              |
|----------------------------------------------------|-----------------------------------------------------|
| pay_subscription_retrieve_bill_state               | paySubscriptionRetrieveReply_state                  |
| pay_subscription_retrieve_bill_zip                 | paySubscriptionRetrieveReply_postalCode             |
| pay_subscription_retrieve_card_type                | paySubscriptionRetrieveReply_cardType               |
| pay_subscription_retrieve_comments                 | paySubscriptionRetrieveReply_comments               |
| pay_subscription_retrieve_company_name             | paySubscriptionRetrieveReply_companyName            |
| pay_subscription_retrieve_currency                 | paySubscriptionRetrieveReply_currency               |
| pay_subscription_retrieve_customer_account_id      | paySubscriptionRetrieveReply_customerAccountID      |
| pay_subscription_retrieve_customer_cc_expmo        | paySubscriptionRetrieveReply_cardExpirationMonth    |
| pay_subscription_retrieve_customer_cc_expyr        | paySubscriptionRetrieveReply_cardExpirationYear     |
| pay_subscription_retrieve_customer_cc_issue_number | paySubscriptionRetrieveReply_cardIssueNumber        |
| pay_subscription_retrieve_customer_cc_number       | paySubscriptionRetrieveReply_cardAccountnumber      |
| pay_subscription_retrieve_customer_cc_startmo      | paySubscriptionRetrieveReply_cardStartMonth         |
| pay_subscription_retrieve_customer_cc_startyr      | paySubscriptionRetrieveReply_cardStartYear          |
| pay_subscription_retrieve_customer_email           | paySubscriptionRetrieveReply_email                  |
| pay_subscription_retrieve_customer_firstname       | paySubscriptionRetrieveReply_firstname              |
| pay_subscription_retrieve_customer_lastname        | paySubscriptionRetrieveReply_lastname               |
| pay_subscription_retrieve_customer_phone           | paySubscriptionRetrieveReply_phoneNumber            |
| pay_subscription_retrieve_ecp_account_no           | paySubscriptionRetrieveReply_checkAccountNumber     |
| pay_subscription_retrieve_ecp_account_no           | paySubscriptionRetrieveReply_checkAccountType       |
| pay_subscription_retrieve_ecp_rdfi                 | paySubscriptionRetrieveReply_checkBankTransitNumber |
| pay_subscription_retrieve_end_date                 | paySubscriptionRetrieveReply_endDate                |
| pay_subscription_retrieve_frequency                | paySubscriptionRetrieveReply_frequency              |
| pay_subscription_retrieve_merchant_ref_number      | paySubscriptionRetrieveReply_merchantReferenceCode  |

Table 4 Reply Fields (Continued)

| SCMP API                                   | SO API                                         |
|--------------------------------------------|------------------------------------------------|
| pay_subscription_retrieve_payment_method   | paySubscriptionRetrieveReply_paymentMethod     |
| pay_subscription_retrieve_payments_left    | paySubscriptionRetrieveReply_paymentsRemaining |
| pay_subscription_retrieve_rcode            | N/A                                            |
| pay_subscription_retrieve_recurring_amount | paySubscriptionRetrieveReply_recurringAmount   |
| pay_subscription_retrieve_rflag            | N/A                                            |
| pay_subscription_retrieve_rmsg             | N/A                                            |
| pay_subscription_retrieve_setup_amount     | paySubscriptionRetrieveReply_setupAmount       |
| pay_subscription_retrieve_start_date       | paySubscriptionRetrieveReply_startDate         |
| pay_subscription_retrieve_status           | paySubscriptionRetrieveReply_status            |
| pay_subscription_retrieve_subscription_id  | paySubscriptionRetrieveReply_subscriptionID    |
| pay_subscription_retrieve_title            | paySubscriptionRetrieveReply_title             |
| pay_subscription_retrieve_total_payments   | paySubscriptionRetrieveReply_totalPayments     |
| pay_subscription_update_rcode              | paySubscriptionUpdateReply_reasonCode          |
| pay_subscription_update_subscription_id    | paySubscriptionUpdateReply_subscriptionID      |
| paypal_button_create_button_type           | paypalButtonCreateReply_buttonType             |
| paypal_button_create_encrypted_form_data   | paypalButtonCreateReply_encryptedFormData      |
| paypal_button_create_rcode                 | N/A                                            |
| paypal_button_create_rflag                 | N/A                                            |
| paypal_button_create_rmsg                  | N/A                                            |
| paypal_button_create_time                  | paypalButtonCreateReply_requestDateTime        |
| paypal_button_create_trans_ref_no          | paypalButtonCreateReply_reconciliationID       |
| paypal_button_create_unencrypted_form_data | paypalButtonCreateReply_unencryptedFormData    |
| paypal_credit_amount                       | paypalCreditReply_amount                       |
| paypal_credit_rcode                        | N/A                                            |
| paypal_credit_response_code                | paypalCreditReply_processorResponse            |
| paypal_credit_rflag                        | N/A                                            |
| paypal_credit_rmsg                         | N/A                                            |
| paypal_credit_time                         | paypalCreditReply_requestDateTime              |
| paypal_credit_trans_ref_no                 | paypalCreditReply_reconciliationID             |

Table 4 Reply Fields (Continued)

| SCMP API                                        | SO API                                           |
|-------------------------------------------------|--------------------------------------------------|
| paypal_preapproved_payment_desc                 | payPalPreapprovedPaymentReply_desc               |
| paypal_preapproved_payment_exchange_rate        | payPalPreapprovedPaymentReply_exchangeRate       |
| paypal_preapproved_payment_fee_amount           | payPalPreapprovedPaymentReply_feeAmount          |
| paypal_preapproved_payment_mp_max               | payPalPreapprovedPaymentReply_mpMax              |
| paypal_preapproved_payment_mp_status            | payPalPreapprovedPaymentReply_mpStatus           |
| paypal_preapproved_payment_payer                | payPalPreapprovedPaymentReply_payer              |
| paypal_preapproved_payment_payer_business       | payPalPreapprovedPaymentReply_payerBusiness      |
| paypal_preapproved_payment_payer_country        | payPalPreapprovedPaymentReply_payerCountry       |
| paypal_preapproved_payment_payer_id             | payPalPreapprovedPaymentReply_payerID            |
| paypal_preapproved_payment_payer_name           | payPalPreapprovedPaymentReply_payerName          |
| paypal_preapproved_payment_payer_status         | payPalPreapprovedPaymentReply_payerStatus        |
| paypal_preapproved_payment_payment_date         | payPalPreapprovedPaymentReply_paymentDate        |
| paypal_preapproved_payment_payment_gross_amount | payPalPreapprovedPaymentReply_paymentGrossAmount |
| paypal_preapproved_payment_payment_source_id    | payPalPreapprovedPaymentReply_paymentSourceID    |
| paypal_preapproved_payment_payment_status       | payPalPreapprovedPaymentReply_paymentStatus      |
| paypal_preapproved_payment_payment_type         | payPalPreapprovedPaymentReply_paymentType        |
| paypal_preapproved_payment_pending_reason       | payPalPreapprovedPaymentReply_pendingReason      |
| paypal_preapproved_payment_rcode                | N/A                                              |
| paypal_preapproved_payment_rflag                | N/A                                              |
| paypal_preapproved_payment_rmsg                 | N/A                                              |
| paypal_preapproved_payment_settle_amount        | payPalPreapprovedPaymentReply_settleAmount       |
| paypal_preapproved_payment_tax_amount           | payPalPreapprovedPaymentReply_taxAmount          |

Table 4 Reply Fields (Continued)

| SCMP API                                    | SO API                                         |
|---------------------------------------------|------------------------------------------------|
| paypal_preapproved_payment_time             | payPalPreapprovedPaymentReply_requestDateTime  |
| paypal_preapproved_payment_trans_ref_no     | payPalPreapprovedPaymentReply_reconciliationID |
| paypal_preapproved_payment_transaction_id   | payPalPreapprovedPaymentReply_transactionID    |
| paypal_preapproved_payment_transaction_type | payPalPreapprovedPaymentReply_transactionType  |
| paypal_preapproved_update_desc              | payPalPreapprovedUpdateReply_desc              |
| paypal_preapproved_update_mp_max            | payPalPreapprovedUpdateReply_mpMax             |
| paypal_preapproved_update_mp_status         | payPalPreapprovedUpdateReply_mpStatus          |
| paypal_preapproved_update_payer             | payPalPreapprovedUpdateReply_payer             |
| paypal_preapproved_update_payer_business    | payPalPreapprovedUpdateReply_payerBusiness     |
| paypal_preapproved_update_payer_country     | payPalPreapprovedUpdateReply_payerCountry      |
| paypal_preapproved_update_payer_id          | payPalPreapprovedUpdateReply_payerID           |
| paypal_preapproved_update_payer_name        | payPalPreapprovedUpdateReply_payerName         |
| paypal_preapproved_update_payer_status      | payPalPreapprovedUpdateReply_payerStatus       |
| paypal_preapproved_update_payment_source_id | payPalPreapprovedUpdateReply_paymentSourceID   |
| paypal_preapproved_update_rcode             | N/A                                            |
| paypal_preapproved_update_rflag             | N/A                                            |
| paypal_preapproved_update_rmsg              | N/A                                            |
| paypal_preapproved_update_time              | payPalPreapprovedUpdateReply_requestDateTime   |
| paypal_preapproved_update_trans_ref_no      | payPalPreapprovedUpdateReply_reconciliationID  |
| pinless_debit_amount                        | pinlessDebitReply_amount                       |
| pinless_debit_auth_code                     | pinlessDebitReply_authorizationCode            |
| pinless_debit_processor_response            | pinlessDebitReply_processorResponse            |
| pinless_debit_rcode                         | N/A                                            |
| pinless_debit_receipt_number                | pinlessDebitReply_receiptNumber                |
| pinless_debit_rflag                         | N/A                                            |

Table 4 Reply Fields (Continued)

| SCMP API                      | SO API                                    |
|-------------------------------|-------------------------------------------|
| pinless_debit_rmsg            | N/A                                       |
| pinless_debit_time            | pinlessDebitReply_requestDateTime         |
| pinless_debit_trans_ref_no    | pinlessDebitReply_reconciliationID        |
| pinless_debit_validate_rcode  | N/A                                       |
| pinless_debit_validate_rflag  | N/A                                       |
| pinless_debit_validate_rmsg   | N/A                                       |
| pinless_debit_validate_status | pinlessDebitValidateReply_status          |
| pinless_debit_validate_time   | pinlessDebitValidateReply_requestDateTime |
| request_id                    | requestID                                 |
| score_address_info            | afsReply_addressInfoCode                  |
| score_factors                 | afsReply_afsFactorCode                    |
| score_host_severity           | afsReply_hostSeverity                     |
| score_hotlist_info            | afsReply_hotlistInfoCode                  |
| score_internet_info           | afsReply_internetInfoCode                 |
| score_phone_info              | afsReply_phoneInfoCode                    |
| score_rcode                   | N/A                                       |
| score_rflag                   | N/A                                       |
| score_rmsg                    | N/A                                       |
| score_score_result            | afsReply_afsResult                        |
| score_suspicious_info         | afsReply_suspiciousInfoCode               |
| score_time_local              | afsReply_consumerLocalTime                |
| score_velocity_info           | afsReply_velocityInfoCode                 |
| tax_city_name                 | taxReply_city                             |
| tax_city_tax#                 | taxReply_item_#_cityTaxAmount             |
| tax_county_name               | taxReply_county                           |
| tax_county_tax#               | taxReply_item_#_countyTaxAmount           |
| tax_district_tax#             | taxReply_item_#_districtTaxAmount         |
| tax_rcode                     | N/A                                       |
| tax_rflag                     | N/A                                       |
| tax_rmsg                      | N/A                                       |
| tax_state_name                | taxReply_state                            |
| tax_state_tax#                | taxReply_item_#_stateTaxAmount            |
| tax_tax_amount#               | taxReply_item_#_totalTaxAmount            |
| tax_total_city_tax            | taxReply_totalCityTaxAmount               |
| tax_total_county_tax          | taxReply_totalCountyTaxAmount             |

Table 4 Reply Fields (Continued)

| SCMP API                  | SO API                                         |
|---------------------------|------------------------------------------------|
| tax_total_district_tax    | taxReply_totalDistrictTaxAmount                |
| tax_total_grand           | taxReply_grandTotalTaxAmount                   |
| tax_total_state_tax       | taxReply_totalStateTaxAmount                   |
| tax_total_tax             | taxReply_totalTaxAmount                        |
| tax_zip                   | taxReply_postalCode                            |
| ucaf_authentication_data  | payerAuthValidateReply_ucafAuthenticationData  |
| ucaf_collection_indicator | payerAuthValidateReply_ucafCollectionIndicator |
| void_rcode                | N/A                                            |
| void_rflag                | N/A                                            |
| void_rmsg                 | N/A                                            |
| void_void_amount          | voidReply_amount                               |
| void_void_currency        | voidReply_currency                             |
| void_void_request_time    | voidReply_requestDateTime                      |