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## **BE PAYMENT READY**

Java - North American API - Integration Guide

Version: 1.0.3

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## Security and Compliance

Your solution may be required to demonstrate compliance with the card associations' PCI/CISP/PABP requirements. For more information on how to make your application PCI-DSS compliant, contact the Moneris Sales Center and visit <https://developer.moneris.com> to download the PCI\_DSS Implementation Guide.

All Merchants and Service Providers that store, process, or transmit cardholder data must comply with PCI DSS and the Card Association Compliance Programs. However, certification requirements vary by business and are contingent upon your "Merchant Level" or "Service Provider Level".

The card association has some data security standards that define specific requirements for all organizations that store, process, or transmit cardholder data. As a Moneris client or partner using this method of integration, your solution must demonstrate compliance to the Payment Card Industry Data Security Standard (PCI DSS) and/or the Payment Application Data Security Standard (PA DSS). These standards are designed to help the cardholders and merchants in such ways as they ensure credit card numbers are encrypted when transmitted/stored in a database and that merchants have strong access control measures.

Non-compliant solutions may prevent merchant boarding with Moneris. A non-compliant merchant can also be subject to fines, fees, assessments or termination of processing services.

For further information on PCI DSS & PA DSS requirements, visit <http://www.pcisecuritystandards.org>.

## Confidentiality

You have a responsibility to protect cardholder and merchant related confidential account information. Under no circumstances should ANY confidential information be sent via email while attempting to diagnose integration or production issues. When sending sample files or code for analysis by Moneris staff, all references to valid card numbers, merchant accounts and transaction tokens should be removed and or obscured. Under no circumstances should live cardholder accounts be used in the test environment.

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# 1 About This Documentation

## 1.1 Purpose

This document describes the transaction information for using the Java API for sending credit card transactions. In particular, it describes the format for sending transactions and the corresponding responses you will receive.

This document contains information about the following features:

- Basic transactions
- MPI
- INTERAC® Online Payment
- ACH (Automated Clearing House)
- Vault
- MSR (Magnetic Swipe Reader) and Encrypted MSR
- Transaction Risk Management Tool
- Convenience fee
- Visa Checkout
- Level 2/3 Transactions

## 1.2 Who Is This Guide For?

The North American API - Integration Guide is intended for developers integrating with Moneris Payment Gateway.

This guide assumes that the system you are trying to integrate meets the requirements outlined below and that you have some familiarity with the Java programming language.

### System Requirements

- Java 1.6 or above
- Port 443 open for bi-directional communication
- Web server with a SSL certificate





## 2 Basic Transaction Set

- 2.1 Basic Transaction Type Definitions
- 2.2 Purchase
- 2.3 Pre-Authorization
- 2.4 Completion
- 2.5 Re-Authorization
- 2.6 Force Post
- 2.7 Purchase Correction
- 2.8 Refund
- 2.9 Independent Refund
- 2.10 Card Verification
- 2.11 Batch Close
- 2.12 Open Totals

### 2.1 Basic Transaction Type Definitions

The following is a list of basic transactions that are supported by the Java API.

#### **Purchase**

Verifies funds on the customer's card, removes the funds and prepares them for deposit into the merchant's account.

#### **Pre-Authorization**

Verifies and locks funds on the customer's credit card. The funds are locked for a specified amount of time based on the card issuer.

To retrieve the funds that have been locked by a Pre-Authorization transaction so that they may be settled in the merchant's account, a Completion transaction must be performed. A Pre-Authorization transaction may only be "completed" once.

#### **Completion**

Retrieves funds that have been locked (by either a Pre-Authorization or a Re-Authorization transaction), and prepares them for settlement into the merchant's account.

#### **Re-Authorization**

If a Pre-Authorization transaction has already taken place, and not all the locked funds were released by a Completion transaction, a Re-Authorization allows you to lock the remaining funds so that they can be released by another Completion transaction in the future.

Re-Authorization is necessary because funds that have been locked by a Pre-Authorization transaction can only be released by a Completion transaction **one** time. If the Completion amount is less than the Pre-Authorization amount, the remaining money cannot be "completed".

#### **Force Post**

Retrieves the locked funds and prepares them for settlement into the merchant's account.

This is used when a merchant obtains the authorization number directly from the issuer by a third-party authorization method (such as by phone).

#### **Purchase Correction**

Restores the full amount of a previous Purchase, Completion or Force Post transaction to the cardholder's card, and removes any record of it from the cardholder's statement.

This transaction is sometimes referred to as "void".

This transaction can be used against a Purchase or Completion transaction that occurred same day provided that the batch containing the original transaction remains open. When using the automated closing feature, Batch Close occurs daily between 10 and 11pm Eastern Time.

**Refund**

Restores all or part of the funds from a Purchase, Completion or Force Post transaction to the cardholder's card. Unlike a Purchase Correction, there is a record of both the initial charge and the refund on the cardholder's statement.

**Independent Refund**

Credits a specified amount to the cardholder's credit card. The credit card number and expiry date are mandatory.

It is not necessary for the transaction that you are refunding to have been processed via the Moneris Gateway

**Card Verification**

Verifies the validity of the credit card, expiry date and any additional details (such as the Card Verification Digits or Address Verification details). It does not verify the available amount or lock any funds on the credit card.

**Recur Update**

Alters characteristics of a previously registered Recurring Billing transaction.

This transaction is commonly used to update a customer's credit card information and the number of recurs to the account.

Recurring billing is explained in more detail in Appendix G (page 345). The Recur Update transaction is specifically discussed in G.2 (page 348).

**Batch Close**

Takes the funds from all Purchase, Completion, Refund and Force Post transactions so that they will be deposited or debited the following business day.

For funds to be deposited the following business day, the batch must close before 11pm Eastern Time.

**Open Totals**

Returns the details about the currently open batch.

This transaction is similar to the Batch Close. The difference is that it does not close the batch for settlement.

## 2.2 Purchase

### Purchase transaction object definition

```
Purchase purchase = new Purchase();
```

### HttpPostRequest object for Purchase transaction

```
HttpPostRequest mpgReq = new HttpPostRequest();
```

```
mpgReq.setTransaction(purchase);
```

### Purchase transaction values

For a full description of mandatory and optional values, see "Definition of Request Fields" on page 306

**Table 1: Purchase transaction object mandatory values**

Value	Type	Limits	Set method
Order ID	String	50-character alpha-numeric	<code>purchase.setOrderId(order_id);</code>
Amount	String	9-character decimal	<code>purchase.setAmount(amount);</code>
Credit card number	String	20-character alpha-numeric	<code>purchase.setPan(pan);</code>
Expiry date	String	4-character alpha-numeric (YYMM format)	<code>purchase.setExpdate(expdate);</code>
E-commerce indicator	String	1-character alpha-numeric	<code>purchase.setCryptType(crypt);</code>
Commcard invoice <sup>1</sup>	String	17-character alpha-numeric	<code>purchase.setCommcardInvoice(commcard_invoice);</code>
Commcard tax amount <sup>2</sup>	String	9-character decimal Must contain at least 3 digits, two of which must be penny values.	<code>purchase.setCommcardTaxAmount(commcard_tax_amount);</code>

<sup>1</sup>Available to US integrations only.

<sup>2</sup>Available to US integrations only.

**Table 1: Purchase transaction object mandatory values**

Value	Type	Limits	Set method
Customer information	Object	Not applicable. See Section Appendix D (page 330).	<code>purchase.setCustInfo(customer);</code>
AVS	Object	Not applicable. See Appendix E (page 336).	<code>purchase.setAvsInfo(avsCheck);</code>
CVD	Object	Not applicable. See Appendix F (page 342).	<code>purchase.setCvdInfo(cvdCheck);</code>
Convenience fee	Object	Not applicable. See Appendix H (page 352).	<code>purchase.setConvFeeInfo(convFeeInfo);</code>
Recurring billing	Object	Not applicable. See Section Appendix G (page 345).	<code>purchase.setRecur(recurring_cycle);</code>

**Table 2: Purchase transaction object optional values**

Value	Type	Limits	Set method
Status Check	Boolean	true/false	<code>mpgReq.setStatusCheck(status_check);</code>
Dynamic descriptor	String	20-character alphanumeric	<code>purchase.setDynamicDescriptor(dynamic_descriptor);</code>
Wallet indicator	String	3-character alphanumeric	<code>purchase.setWalletIndicator(wallet_indicator);</code>

Sample Purchase - CA	Sample Purchase - US
<pre>package Canada; import JavaAPI.*; public class TestCanadaPurchase {     public static void main(String[] args)     {         java.util.Date createDate = new java.util.Date();         String order_id = "Test"+createDate.getTime();         String store_id = "store5";     } }</pre>	<pre>package USA; import JavaAPI.*; public class TestUSAPurchase {     public static void main(String[] args)     {         String store_id = "monusqa002";         String api_token = "qatoken";         java.util.Date createDate = new java.util.Date();     } }</pre>

Sample Purchase - CA	Sample Purchase - US
<pre> String api_token = "yesguy"; String amount = "5.00"; String pan = "4242424242424242"; String expdate = "1901"; //YYMM format String crypt = "7"; String processing_country_code = "CA"; boolean status_check = false; Purchase purchase = new Purchase(); purchase.setOrderId(order_id); purchase.setAmount(amount); purchase.setPan(pan); purchase.setExpdate(expdate); purchase.setCryptType(crypt); //purchase.setDynamicDescriptor("2134565"); HttpPostRequest mpgReq = new HttpPostRequest (); mpgReq.setProcCountryCode(processing_country_ code); mpgReq.setTestMode(true); //false or comment out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(purchase); mpgReq.setStatusCheck(status_check); mpgReq.send(); try { Receipt receipt = mpgReq.getReceipt(); System.out.println("CardType = " + receipt.getCardType()); System.out.println("TransAmount = " + receipt.getTransAmount()); System.out.println("TxnNumber = " + receipt.getTxnNumber()); System.out.println("ReceiptId = " + receipt.getReceiptId()); System.out.println("TransType = " + receipt.getTransType()); System.out.println("ReferenceNum = " + receipt.getReferenceNum()); System.out.println("ResponseCode = " + receipt.getResponseCode()); System.out.println("ISO = " + receipt.getISO ()); System.out.println("BankTotals = " + receipt.getBankTotals()); System.out.println("Message = " + receipt.getMessage()); System.out.println("AuthCode = " + receipt.getAuthCode()); System.out.println("Complete = " + receipt.getComplete()); System.out.println("TransDate = " + receipt.getTransDate()); System.out.println("TransTime = " + receipt.getTransTime()); System.out.println("Ticket = " + receipt.getTicket()); System.out.println("TimedOut = " + </pre>	<pre> String order_id = "Test"+createDate.getTime(); String amount = "5.00"; String pan = "4242424242424242"; String expdate = "1602"; //YYMM format String crypt = "7"; String commcard_invoice = "INVC090"; String commcard_tax_amount = "1.00"; String processing_country_code = "US"; boolean status_check = false; Purchase purchase = new Purchase(); purchase.setOrderId(order_id); purchase.setAmount(amount); purchase.setPan(pan); purchase.setExpdate(expdate); purchase.setCryptType(crypt); purchase.setCommcardInvoice(commcard_invoice); purchase.setCommcardTaxAmount(commcard_tax_ amount); HttpPostRequest mpgReq = new HttpPostRequest (); mpgReq.setProcCountryCode(processing_country_ code); mpgReq.setTestMode(true); //false or comment out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(purchase); mpgReq.setStatusCheck(status_check); mpgReq.send(); try { Receipt receipt = mpgReq.getReceipt(); System.out.println("CardType = " + receipt.getCardType()); System.out.println("TransAmount = " + receipt.getTransAmount()); System.out.println("TxnNumber = " + receipt.getTxnNumber()); System.out.println("ReceiptId = " + receipt.getReceiptId()); System.out.println("TransType = " + receipt.getTransType()); System.out.println("ReferenceNum = " + receipt.getReferenceNum()); System.out.println("ResponseCode = " + receipt.getResponseCode()); System.out.println("Message = " + receipt.getMessage()); System.out.println("AuthCode = " + receipt.getAuthCode()); System.out.println("Complete = " + receipt.getComplete()); System.out.println("TransDate = " + receipt.getTransDate()); System.out.println("TransTime = " + receipt.getTransTime()); System.out.println("Ticket = " + receipt.getTicket()); System.out.println("TimedOut = " + </pre>

Sample Purchase - CA	Sample Purchase - US
<pre> receipt.getTimedOut(); System.out.println("IsVisaDebit = " +     receipt.getIsVisaDebit()); } catch (Exception e) { e.printStackTrace(); } } } </pre>	<pre> receipt.getTimedOut(); //System.out.println("CardLevelResult = " +     receipt.getCardLevelResult()); //System.out.println("StatusCode = " +     receipt.getStatusCode()); //System.out.println("StatusMessage = " +     receipt.getStatusMessage()); } catch (Exception e) { e.printStackTrace(); } } } </pre>

## 2.3 Pre-Authorization

### Things to Consider:

- If a Pre-Authorization transaction is not followed by a Completion transaction, it must be reversed via a Completion transaction for 0.00. See "Completion" on page 18
- A Pre-Authorization transaction may only be "completed" once . If the Completion transaction is for less than the original amount, a Re-Authorization transaction is required to collect the remaining funds by another Completion transaction. See Re-Authorization (page 21).
- For a process flow, see "Process Flow for Basic PreAuth, ReAuth and Completion Transactions" on page 376

### Pre-Authorization transaction object definition

```
PreAuth preauth = new PreAuth();
```

### HttpPostRequest object for Pre-Authorization transaction

```
HttpPostRequest mpgReq = new HttpPostRequest();
```

```
mpgReq.setTransaction(preauth);
```

### Pre-Authorization transaction values

For a full description of mandatory and optional values, see "Definition of Request Fields" on page 306

**Table 3: Pre-Authorization object mandatory values**

Value	Type	Limits	Set method
Order ID	String	50-character alpha-numeric	<code>preauth.setOrderId(order_id);</code>
Amount	String	9-character decimal	<code>preauth.setAmount(amount);</code>
Credit card number	String	20-character numeric	<code>preauth.setPan(pan);</code>
Expiry date	String	4-character numeric	<code>preauth.setExpDate(expdate);</code>
E-Commerce indicator	String	1-character alpha-numeric	<code>preauth.setCryptType(crypt_type);</code>

**Table 1: Pre-Authorization object optional values**

Value	Type	Limits	Set method
Status Check	Boolean	true/false	<code>mpgReq.setStatusCheck(status_check);</code>
Dynamic descriptor	String	20-character alpha-numeric	<code>preauth.setDynamicDescriptor(dynamic_descriptor);</code>
Customer information	Object	Not applicable. See Section Appendix D (page 330).	<code>preauth.setCustInfo(customer);</code>
AVS	Object	Not applicable. See Appendix E (page 336).	<code>preauth.setAvsInfo(avsCheck);</code>
CVD	Object	Not applicable. See Appendix F (page 342).	<code>preauth.setCvdInfo(cvdCheck);</code>
Customer ID	String	50-character alpha-numeric	<code>preauth.setCustId(custid);</code>
Wallet indicator	String	3-character alpha-numeric	<code>preauth.setWalletIndicator(wallet_indicator);</code>



Sample Pre-Authorization - CA	Sample Pre-Authorization - US
<pre> package Canada; import JavaAPI.*; public class TestCanadaPreauth {     public static void main(String[] args)     {         String store_id = "store5";         String api_token = "yesguy";         java.util.Date createDate = new java.util.Date             ();         String order_id = "Test"+createDate.getTime();         String amount = "5.00";         String pan = "4242424242424242";         String expdate = "1902";         String crypt = "7";         String processing_country_code = "CA";         boolean status_check = false;         PreAuth preauth = new PreAuth();         preauth.setOrderId(order_id);         preauth.setAmount(amount);         preauth.setPan(pan);         preauth.setExpdate(expdate);         preauth.setCryptType(crypt);         HttpsPostRequest mpgReq = new HttpsPostRequest             ();         mpgReq.setProcCountryCode(processing_country_             code);         mpgReq.setTestMode(true); //false or comment             out this line for production transactions         mpgReq.setStoreId(store_id);         mpgReq.setApiToken(api_token);         mpgReq.setTransaction(preauth);         mpgReq.setStatusCheck(status_check);         mpgReq.send();         try         {             Receipt receipt = mpgReq.getReceipt();             System.out.println("CardType = " +                 receipt.getCardType());             System.out.println("TransAmount = " +                 receipt.getTransAmount());             System.out.println("TxnNumber = " +                 receipt.getTxnNumber());             System.out.println("ReceiptId = " +                 receipt.getReceiptId());             System.out.println("TransType = " +                 receipt.getTransType());             System.out.println("ReferenceNum = " +                 receipt.getReferenceNum());             System.out.println("ResponseCode = " +                 receipt.getResponseCode());             System.out.println("ISO = " + receipt.getISO                 ());             System.out.println("BankTotals = " +                 receipt.getBankTotals());             System.out.println("Message = " +                 receipt.getMessage());             System.out.println("AuthCode = " +                 receipt.getAuthCode()); </pre>	<pre> package USA; import JavaAPI.*; public class TestUSAPreAuth {     public static void main(String[] args)     {         String store_id = "monusqa002";         String api_token = "qatoken";         java.util.Date createDate = new java.util.Date             ();         String order_id = "Test"+createDate.getTime();         String amount = "1.00";         String pan = "4242424242424242";         String expdate = "1902"; //YYMM format         String crypt = "7";         String processing_country_code = "US";         boolean status_check = false;         PreAuth preauth = new PreAuth();         preauth.setOrderId(order_id);         preauth.setAmount(amount);         preauth.setPan(pan);         preauth.setExpdate(expdate);         preauth.setCryptType(crypt);         preauth.setDynamicDescriptor("2134565");         HttpsPostRequest mpgReq = new HttpsPostRequest             ();         mpgReq.setProcCountryCode(processing_country_             code);         mpgReq.setTestMode(true); //false or comment             out this line for production transactions         mpgReq.setStoreId(store_id);         mpgReq.setApiToken(api_token);         mpgReq.setTransaction(preauth);         mpgReq.setStatusCheck(status_check);         mpgReq.send();         try         {             Receipt receipt = mpgReq.getReceipt();             System.out.println("CardType = " +                 receipt.getCardType());             System.out.println("TransAmount = " +                 receipt.getTransAmount());             System.out.println("TxnNumber = " +                 receipt.getTxnNumber());             System.out.println("ReceiptId = " +                 receipt.getReceiptId());             System.out.println("TransType = " +                 receipt.getTransType());             System.out.println("ReferenceNum = " +                 receipt.getReferenceNum());             System.out.println("ResponseCode = " +                 receipt.getResponseCode());             System.out.println("BankTotals = " +                 receipt.getBankTotals());             System.out.println("Message = " +                 receipt.getMessage());             System.out.println("AuthCode = " +                 receipt.getAuthCode());             System.out.println("Complete = " + </pre>

Sample Pre-Authorization - CA	Sample Pre-Authorization - US
<pre> System.out.println("Complete = " +     receipt.getComplete()); System.out.println("TransDate = " +     receipt.getTransDate()); System.out.println("TransTime = " +     receipt.getTransTime()); System.out.println("Ticket = " +     receipt.getTicket()); System.out.println("TimedOut = " +     receipt.getTimedOut()); System.out.println("IsVisaDebit = " +     receipt.getIsVisaDebit()); //System.out.println("StatusCode = " +     receipt.getStatusCode()); //System.out.println("StatusMessage = " +     receipt.getStatusMessage()); } catch (Exception e) {     e.printStackTrace(); } } } </pre>	<pre>     receipt.getComplete()); System.out.println("TransDate = " +     receipt.getTransDate()); System.out.println("TransTime = " +     receipt.getTransTime()); System.out.println("Ticket = " +     receipt.getTicket()); System.out.println("TimedOut = " +     receipt.getTimedOut()); //System.out.println("CardLevelResult = " +     receipt.getCardLevelResult()); //System.out.println("StatusCode = " +     receipt.getStatusCode()); //System.out.println("StatusMessage = " +     receipt.getStatusMessage()); } catch (Exception e) {     e.printStackTrace(); } } } </pre>

## 2.4 Completion

### Things to Consider:

- Completion is also known as "capture" or "pre-authorization completion".
- A Pre-Authorization or Re-Authorization transaction can only be completed once. Refer to the Re-Authorization transaction (page 21 for more information on how to perform multiple Completion transactions).
- To reverse the full amount of a Pre-Authorization transaction, use the Completion transaction with the amount set to 0.00.
- To process this transaction, you need the order ID and transaction number from the original Pre-Authorization transaction.
- For a process flow, see "Process Flow for Basic PreAuth, ReAuth and Completion Transactions" on page 376

### Completion transaction object

```
Completion completion = new Completion();
```

### HttpRequest object for Completion transaction

```
HttpRequest mpgReq = new HttpRequest();
```

```
mpgReq.setTransaction(completion);
```

## Completion transaction values

For a full description of mandatory and optional values, see "Definition of Request Fields" on page 306

**Table 4: Completion transaction object mandatory values**

Value	Type	Limits	Set method
Order ID	String	50-character alphanumeric	<code>completion.setOrderId(order_id);</code>
Completion Amount	String	9-character decimal	<code>completion.setAmount(comp_amount);</code>
Transaction number	String	255-character alphanumeric	<code>completion.setTxnNumber(txn_number);</code>
E-Commerce indicator	String	1-character alphanumeric	<code>completion.setCryptType(crypt_type);</code>

**Table 5: Completion transaction optional values**

Value	Type	Limits	Set method
Status Check	Boolean	true/false	<code>mpgReq.setStatusCheck(status_check);</code>
Customer ID	String	50-character alphanumeric	<code>completion.setCustId(custid);</code>
Dynamic descriptor	String	20-character alphanumeric	<code>completion.setDynamicDescriptor(dynamic_descriptor);</code>
Commcard invoice <sup>1</sup>	String	17-character alphanumeric	<code>completion.setCommcardInvoice(commcard_invoice);</code>
Commcard tax amount <sup>2</sup>	String	9-character decimal Must contain at least 3 digits, two of which must be penny values.	<code>completion.setCommcardTaxAmount(commcard_tax_amount);</code>

<sup>1</sup>Available to US integrations only.

<sup>2</sup>Available to US integrations only.

Sample Basic Completion - CA	Sample Basic Completion - US
<pre> package Canada; import JavaAPI.*; public class TestCanadaCompletion { public static void main(String[] args) { String store_id = "store5"; String api_token = "yesguy"; String order_id = "Test1436981327037"; String amount = "1.00"; String txn_number = "152900-0_10"; String crypt = "7"; String cust_id = "my customer id"; String dynamic_descriptor = "my descriptor"; String processing_country_code = "CA"; boolean status_check = false; Completion completion = new Completion(); completion.setOrderId(order_id); completion.setCompAmount(amount); completion.setTxnNumber(txn_number); completion.setCryptType(crypt); completion.setCustId(cust_id); completion.setDynamicDescriptor(dynamic_ descriptor); HttpPostRequest mpgReq = new HttpPostRequest (); mpgReq.setProcCountryCode(processing_country_ code); mpgReq.setTestMode(true); //false or comment out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(completion); mpgReq.setStatusCheck(status_check); mpgReq.send(); try { Receipt receipt = mpgReq.getReceipt(); System.out.println("CardType = " + receipt.getCardType()); System.out.println("TransAmount = " + receipt.getTransAmount()); System.out.println("TxnNumber = " + receipt.getTxnNumber()); System.out.println("ReceiptId = " + receipt.getReceiptId()); System.out.println("TransType = " + receipt.getTransType()); System.out.println("ReferenceNum = " + receipt.getReferenceNum()); System.out.println("ResponseCode = " + receipt.getResponseCode()); System.out.println("ISO = " + receipt.getISO ()); System.out.println("BankTotals = " + receipt.getBankTotals()); System.out.println("Message = " + receipt.getMessage()); </pre>	<pre> package USA; import JavaAPI.*; public class TestUSACompletion { public static void main(String[] args) { String store_id = "monusqa002"; String api_token = "qatoken"; String amount = "1.00"; String crypt = "7"; String commcard_invoice = "INVC090"; String commcard_tax_amount = "1.00"; String dynamic_descriptor = "123456"; String custid = "mycustomerid"; String order_id = "Test1437167057352"; String txn_number = "138748-0_25"; String processing_country_code = "US"; boolean status_check = false; Completion completion = new Completion(); completion.setOrderId(order_id); completion.setCompAmount(amount); completion.setTxnNumber(txn_number); completion.setCryptType(crypt); completion.setCommcardInvoice(commcard_ invoice); completion.setCommcardTaxAmount(commcard_tax_ amount); completion.setCustId(custid); completion.setDynamicDescriptor(dynamic_ descriptor); HttpPostRequest mpgReq = new HttpPostRequest (); mpgReq.setProcCountryCode(processing_country_ code); mpgReq.setTestMode(true); //false or comment out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(completion); mpgReq.setStatusCheck(status_check); mpgReq.send(); try { Receipt receipt = mpgReq.getReceipt(); System.out.println("CardType = " + receipt.getCardType()); System.out.println("TransAmount = " + receipt.getTransAmount()); System.out.println("TxnNumber = " + receipt.getTxnNumber()); System.out.println("ReceiptId = " + receipt.getReceiptId()); System.out.println("TransType = " + receipt.getTransType()); System.out.println("ReferenceNum = " + receipt.getReferenceNum()); System.out.println("ResponseCode = " + receipt.getResponseCode()); </pre>

Sample Basic Completion - CA	Sample Basic Completion - US
<pre> System.out.println("AuthCode = " +     receipt.getAuthCode()); System.out.println("Complete = " +     receipt.getComplete()); System.out.println("TransDate = " +     receipt.getTransDate()); System.out.println("TransTime = " +     receipt.getTransTime()); System.out.println("Ticket = " +     receipt.getTicket()); System.out.println("TimedOut = " +     receipt.getTimedOut()); System.out.println("IsVisaDebit = " +     receipt.getIsVisaDebit()); } catch (Exception e) { e.printStackTrace(); } } </pre>	<pre> System.out.println("ISO = " + receipt.getISO ()); System.out.println("Message = " +     receipt.getMessage()); System.out.println("AuthCode = " +     receipt.getAuthCode()); System.out.println("Complete = " +     receipt.getComplete()); System.out.println("TransDate = " +     receipt.getTransDate()); System.out.println("TransTime = " +     receipt.getTransTime()); System.out.println("Ticket = " +     receipt.getTicket()); System.out.println("TimedOut = " +     receipt.getTimedOut()); //System.out.println("CardLevelResult = " +     receipt.getCardLevelResult()); //System.out.println("StatusCode = " +     receipt.getStatusCode()); //System.out.println("StatusMessage = " +     receipt.getStatusMessage()); } catch (Exception e) { e.printStackTrace(); } } </pre>

## 2.5 Re-Authorization

For a process flow, Process Flow for Basic PreAuth, ReAuth and Completion Transactions (page 376).

### Re-Authorization transaction object definition

```
ReAuth reauth = new ReAuth();
```

### HttpPostRequest object for Re-Authorization transaction

```
HttpPostRequest mpgReq = new HttpPostRequest();
```

```
mpgReq.setTransaction(reauth);
```

### Re-Authorization transaction values

For a full description of mandatory and optional values, see "Definition of Request Fields" on page 306

**Table 6: Re-Authorization transaction object mandatory values**

Value	Type	Limits	Set method
Order ID	String	50-character alpha-numeric	<code>reauth.setOrderId(order_id);</code>
Original order ID	String	50-character alpha-numeric	<code>reauth.setOrigOrderId(orig_order_id);</code>
Amount	String	9-character decimal	<code>reauth.setAmount(amount);</code>
Transaction number	String	255-character variable character	<code>reauth.setTxnNumber(txn_number);</code>
E-Commerce indicator	String	1-character alpha-numeric	<code>reauth.setCryptType(crypt_type);</code>

**Table 1: Re-Authorization transaction optional values**

Value	Type	Limits	Set Method
Customer ID	String	50-character alpha-numeric	<code>reauth.setCustId(custid);</code>
Status check	Boolean	true/false	<code>mpgReq.setStatusCheck(status_check);</code>
Dynamic descriptor	String	20-character alpha-numeric	<code>reauth.setDynamicDescriptor(dynamic_descriptor);</code>
Customer information	Object	Not applicable. See Section Appendix D (page 330).	<code>reauth.setCustInfo(customer);</code>
AVS	Object	Not applicable. See Appendix E (page 336).	<code>reauth.setAvsInfo(avsCheck);</code>
CVD	Object	Not applicable. See Appendix F (page 342).	<code>reauth.setCvdInfo(cvdCheck);</code>

Sample Re-Authorization - CA	Sample Re-Authorization - US
<pre>package Canada; import JavaAPI.*; public class TestCanadaReauth {</pre>	<pre>package USA; import JavaAPI.*; public class TestUSAREauth {</pre>

Sample Re-Authorization - CA	Sample Re-Authorization - US
<pre> public static void main(String[] args) {     String store_id = "moneris";     String api_token = "hurgle";     String order_id =         "mvt271355ss7ssss839ssdfsdfsdf";     String orig_order_id = "mvt3213820409";     String amount = "4.00";     String txn_number = "200069-0_10";     String crypt = "8";     String dynamic_descriptor = "123456";     String cust_id = "my customer id";     String processing_country_code = "CA";     boolean status_check = false;     ReAuth reauth = new ReAuth();     reauth.setOrderId(order_id);     reauth.setCustId(cust_id);     reauth.setOrigOrderId(orig_order_id);     reauth.setTxnNumber(txn_number);     reauth.setAmount(amount);     reauth.setCryptType(crypt);     reauth.setDynamicDescriptor(dynamic_         descriptor);     HttpsPostRequest mpgReq = new         HttpsPostRequest();     mpgReq.setProcCountryCode(processing_country_         code);     mpgReq.setTestMode(true); //false or comment         out this line for production transactions     mpgReq.setStoreId(store_id);     mpgReq.setApiToken(api_token);     mpgReq.setTransaction(reauth);     mpgReq.setStatusCheck(status_check);     mpgReq.send();     try     {         Receipt receipt = mpgReq.getReceipt();         System.out.println("CardType = " +             receipt.getCardType());         System.out.println("TransAmount = " +             receipt.getTransAmount());         System.out.println("TxnNumber = " +             receipt.getTxnNumber());         System.out.println("ReceiptId = " +             receipt.getReceiptId());         System.out.println("TransType = " +             receipt.getTransType());         System.out.println("ReferenceNum = " +             receipt.getReferenceNum());         System.out.println("ResponseCode = " +             receipt.getResponseCode());         System.out.println("ISO = " + receipt.getISO             ());         System.out.println("BankTotals = " +             receipt.getBankTotals());         System.out.println("Message = " +             receipt.getMessage());         System.out.println("AuthCode = " + </pre>	<pre> public static void main(String[] args) {     String store_id = "monusqa002";     String api_token = "qatoken";     String orig_order_id = "mvt3213892328";     String order_id =         "orsas2dfssasSS3dssssd333faadfa";     String txn_number = "837958-0_25";     String amount = "1.00";     String crypt = "8";     String descriptor = "my descriptor";     String cust_id = "my customer id";     String processing_country_code = "US";     boolean status_check = false;     ReAuth reauth = new ReAuth();     reauth.setOrderId(order_id);     reauth.setCustId(cust_id);     reauth.setOrigOrderId(orig_order_id);     reauth.setTxnNumber(txn_number);     reauth.setAmount(amount);     reauth.setCryptType(crypt);     reauth.setDynamicDescriptor(descriptor);     HttpsPostRequest mpgReq = new HttpsPostRequest         ();     mpgReq.setProcCountryCode(processing_country_         code);     mpgReq.setTestMode(true); //false or comment         out this line for production transactions     mpgReq.setStoreId(store_id);     mpgReq.setApiToken(api_token);     mpgReq.setTransaction(reauth);     mpgReq.setStatusCheck(status_check);     mpgReq.send();     try     {         Receipt receipt = mpgReq.getReceipt();         System.out.println("CardType = " +             receipt.getCardType());         System.out.println("TransAmount = " +             receipt.getTransAmount());         System.out.println("TxnNumber = " +             receipt.getTxnNumber());         System.out.println("ReceiptId = " +             receipt.getReceiptId());         System.out.println("TransType = " +             receipt.getTransType());         System.out.println("ReferenceNum = " +             receipt.getReferenceNum());         System.out.println("ResponseCode = " +             receipt.getResponseCode());         System.out.println("ISO = " + receipt.getISO             ());         System.out.println("BankTotals = " +             receipt.getBankTotals());         System.out.println("Message = " +             receipt.getMessage());         System.out.println("AuthCode = " +             receipt.getAuthCode()); </pre>

Sample Re-Authorization - CA	Sample Re-Authorization - US
<pre> receipt.getAuthCode(); System.out.println("Complete = " +     receipt.getComplete()); System.out.println("TransDate = " +     receipt.getTransDate()); System.out.println("TransTime = " +     receipt.getTransTime()); System.out.println("Ticket = " +     receipt.getTicket()); System.out.println("TimedOut = " +     receipt.getTimedOut()); System.out.println("IsVisaDebit = " +     receipt.getIsVisaDebit()); } catch (Exception e) { e.printStackTrace(); } } } </pre>	<pre> System.out.println("Complete = " +     receipt.getComplete()); System.out.println("TransDate = " +     receipt.getTransDate()); System.out.println("TransTime = " +     receipt.getTransTime()); System.out.println("Ticket = " +     receipt.getTicket()); System.out.println("TimedOut = " +     receipt.getTimedOut()); } catch (Exception e) { e.printStackTrace(); } } } </pre>

## 2.6 Force Post

### Things to Consider:

- This transaction is an independent completion where the original Pre-Authorization transaction was not processed via the same Moneris Gateway merchant account.
- It is not required for the transaction that you are submitting to have been processed via the JavaMoneris Gateway. However, a credit card number, expiry date and original authorization number are required.

### ForcePost transaction object definition

```
ForcePost forcepost = new ForcePost();
```

### HttpPostRequest object for ForcePost transaction

```
HttpPostRequest mpgReq = new HttpPostRequest();
```

```
mpgReq.setTransaction(forcepost);
```

### Force Post transaction values

For a full description of mandatory and optional values, see "Definition of Request Fields" on page 306



**Table 7: Force Post transaction object mandatory values**

Value	Type	Limits	Set method
Order ID	String	50-character alpha-numeric	<code>forcepost.setOrderId(order_id);</code>
Amount	String	9-character decimal	<code>forcepost.setAmount(amount);</code>
Credit card number	String	20-character numeric	<code>forcepost.setPan(pan);</code>
Expiry date	String	4-character numeric	<code>forcepost.setExpDate(exp-date);</code>
Authorization code	String	8-character alpha-numeric	<code>forcepost.setAuthCode(auth_code);</code>
E-Commerce indicator	String	1-character alpha-numeric	<code>forcepost.setCryptType(crypt_type);</code>

**Table 8: Force Post transaction optional values**

Value	Type	Limits	Set method
Customer ID	String	50-character alpha-numeric	<code>forcepost.setCustId(custid);</code>
Dynamic descriptor	String	20-character alpha-numeric	<code>forcepost.setDynamicDescriptor(dynamic_descriptor);</code>
Status Check	Boolean	true/false	<code>mpgReq.setStatusCheck(status_check);</code>

Sample Basic Force Post - CA	Sample Basic Force Post - US
<pre> package Canada; import JavaAPI.*; public class TestCanadaForcePost {     public static void main(String[] args)     {         java.util.Date createDate = new java.util.Date             ();         String order_id = "Test"+createDate.getTime();         String cust_id = "my customer id";         String store_id = "moneris";         String api_token = "hurgle";         String amount = "1.00";         String pan = "4242424242424242"; </pre>	<pre> package USA; import JavaAPI.*; public class TestUSAForcePost {     public static void main(String[] args)     {         java.util.Date createDate = new java.util.Date             ();         String order_id = "Test"+createDate.getTime();         String store_id = "monusqa002";         String api_token = "qatoken";         String cust_id = "customer1";         String amount = "10.00";         String pan = "4242424242424242"; </pre>

Sample Basic Force Post - CA	Sample Basic Force Post - US
<pre> String expdate = "1901"; //YYMM format String auth_code = "88864"; String crypt = "7"; String dynamic_descriptor = "my descriptor"; String processing_country_code = "CA"; boolean status_check = false; ForcePost forcepost = new ForcePost(); forcepost.setOrderId(order_id); forcepost.setCustId(cust_id); forcepost.setAmount(amount); forcepost.setPan(pan); forcepost.setExpdate(expdate); forcepost.setAuthCode(auth_code); forcepost.setCryptType(crypt); forcepost.setDynamicDescriptor(dynamic_     descriptor); HttpPostRequest mpgReq = new HttpPostRequest (); mpgReq.setProcCountryCode(processing_country_     code); mpgReq.setTestMode(true); //false or comment     out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(forcepost); mpgReq.setStatusCheck(status_check); mpgReq.send(); try { Receipt receipt = mpgReq.getReceipt(); System.out.println("CardType = " +     receipt.getCardType()); System.out.println("TransAmount = " +     receipt.getTransAmount()); System.out.println("TxnNumber = " +     receipt.getTxnNumber()); System.out.println("ReceiptId = " +     receipt.getReceiptId()); System.out.println("TransType = " +     receipt.getTransType()); System.out.println("ReferenceNum = " +     receipt.getReferenceNum()); System.out.println("ResponseCode = " +     receipt.getResponseCode()); System.out.println("ISO = " + receipt.getISO ()); System.out.println("BankTotals = " +     receipt.getBankTotals()); System.out.println("Message = " +     receipt.getMessage()); System.out.println("AuthCode = " +     receipt.getAuthCode()); System.out.println("Complete = " +     receipt.getComplete()); System.out.println("TransDate = " +     receipt.getTransDate()); System.out.println("TransTime = " +     receipt.getTransTime()); </pre>	<pre> String expdate = "1602"; //YYMM format String auth_code = "AU4R6"; String crypt = "1"; String processing_country_code = "US"; boolean status_check = false; String dynamic_descriptor = "my descriptor"; ForcePost forcepost = new ForcePost(); forcepost.setOrderId(order_id); forcepost.setCustId(cust_id); forcepost.setAmount(amount); forcepost.setPan(pan); forcepost.setExpdate(expdate); forcepost.setAuthCode(auth_code); forcepost.setCryptType(crypt); forcepost.setDynamicDescriptor(dynamic_     descriptor); HttpPostRequest mpgReq = new HttpPostRequest (); mpgReq.setProcCountryCode(processing_country_     code); mpgReq.setTestMode(true); //false or comment     out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(forcepost); mpgReq.setStatusCheck(status_check); mpgReq.send(); try { Receipt receipt = mpgReq.getReceipt(); System.out.println("CardType = " +     receipt.getCardType()); System.out.println("TransAmount = " +     receipt.getTransAmount()); System.out.println("TxnNumber = " +     receipt.getTxnNumber()); System.out.println("ReceiptId = " +     receipt.getReceiptId()); System.out.println("TransType = " +     receipt.getTransType()); System.out.println("ReferenceNum = " +     receipt.getReferenceNum()); System.out.println("ResponseCode = " +     receipt.getResponseCode()); System.out.println("ISO = " + receipt.getISO ()); System.out.println("BankTotals = " +     receipt.getBankTotals()); System.out.println("Message = " +     receipt.getMessage()); System.out.println("AuthCode = " +     receipt.getAuthCode()); System.out.println("Complete = " +     receipt.getComplete()); System.out.println("TransDate = " +     receipt.getTransDate()); System.out.println("TransTime = " +     receipt.getTransTime()); </pre>

Sample Basic Force Post - CA	Sample Basic Force Post - US
<pre> System.out.println("Ticket = " +     receipt.getTicket()); System.out.println("TimedOut = " +     receipt.getTimedOut()); System.out.println("CorporateCard = " +     receipt.getCorporateCard()); //System.out.println("MessageId = " +     receipt.getMessageId()); } catch (Exception e) {     e.printStackTrace(); } } </pre>	<pre> System.out.println("Ticket = " +     receipt.getTicket()); System.out.println("TimedOut = " +     receipt.getTimedOut()); //System.out.println("CardLevelResult = " +     receipt.getCardLevelResult()); //System.out.println("StatusCode = " +     receipt.getStatusCode()); //System.out.println("StatusMessage = " +     receipt.getStatusMessage()); } catch (Exception e) {     e.printStackTrace(); } } </pre>

## 2.7 Purchase Correction

### Things to Consider:

- Purchase correction is also known as "void" or "correction".
- To process this transaction, you need the order ID and the transaction number from the original Completion, Purchase or Force Post transaction.

### Purchase Correction transaction object definition

```
PurchaseCorrection purchasecorrection = new PurchaseCorrection();
```

### HttpPostRequest object for Purchase Correction transaction

```
HttpPostRequest mpgReq = new HttpPostRequest();
```

```
mpgReq.setTransaction(purchasecorrection);
```

### Purchase Correction transaction object values

For a full description of mandatory and optional values, see "Definition of Request Fields" on page 306

**Table 9: Purchase Correction transaction object mandatory values**

Value	Type	Limits	Set method
Order ID	String	50-character alpha-numeric	<code>purchasecorrection.setOrderId(order_id);</code>
Transaction number	String	255-character variable character	<code>purchasecorrection.setTxnNumber(txn_number);</code>
E-Commerce indicator	String	1-character alpha-numeric	<code>purchasecorrection.setCryptType(crypt_type);</code>

**Table 10: Purchase Correction transaction optional values**

Value	Type	Limits	Set method
Status Check	Boolean	true/false	<code>mpgReq.setStatusCheck(status_check);</code>
Customer ID	String	50-character alpha-numeric	<code>purchasecorrection.setCustId(custid);</code>
Dynamic descriptor	String	20-character alpha-numeric	<code>purchasecorrection.setDynamicDescriptor(dynamic_descriptor);</code>

Sample Purchase Correction - CA	Sample Purchase Correction - US
<pre> package Canada; import JavaAPI.*; public class TestCanadaPurchaseCorrection {     public static void main(String[] args)     {         String store_id = "store5";         String api_token = "yesguy";         String order_id = "Test1432065003686";         String txn_number = "42014-0_10";         String crypt = "7";         String dynamic_descriptor = "123456";         String processing_country_code = "CA";         boolean status_check = false;         PurchaseCorrection purchasecorrection = new             PurchaseCorrection();         purchasecorrection.setOrderId(order_id);         purchasecorrection.setTxnNumber(txn_number);         purchasecorrection.setCryptType(crypt);         purchasecorrection.setDynamicDescriptor             (dynamic_descriptor);         purchasecorrection.setCustId("my customer             id"); </pre>	<pre> package USA; import JavaAPI.*; public class TestUSAPurchaseCorrection {     public static void main(String[] args)     {         String store_id = "monusqa002";         String api_token = "qatoken";         String order_id = "Test1432084583600";         String txn_number = "837839-0_25";         String crypt = "7";         String dynamic_descriptor = "123456";         String custid = "mycustomerid";         String processing_country_code = "US";         boolean status_check = false;         PurchaseCorrection purchasecorrection = new             PurchaseCorrection();         purchasecorrection.setOrderId(order_id);         purchasecorrection.setTxnNumber(txn_number);         purchasecorrection.setCryptType(crypt);         purchasecorrection.setCustId(custid);         purchasecorrection.setDynamicDescriptor             (dynamic_descriptor); </pre>

Sample Purchase Correction - CA	Sample Purchase Correction - US
<pre> HttpsPostRequest mpgReq = new HttpsPostRequest (); mpgReq.setProcCountryCode (processing_country_ code); mpgReq.setTestMode(true); //false or comment out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken (api_token); mpgReq.setTransaction (purchasecorrection); mpgReq.setStatusCheck (status_check); mpgReq.send(); try { Receipt receipt = mpgReq.getReceipt(); System.out.println("CardType = " + receipt.getCardType()); System.out.println("TransAmount = " + receipt.getTransAmount()); System.out.println("TxnNumber = " + receipt.getTxnNumber()); System.out.println("ReceiptId = " + receipt.getReceiptId()); System.out.println("TransType = " + receipt.getTransType()); System.out.println("ReferenceNum = " + receipt.getReferenceNum()); System.out.println("ResponseCode = " + receipt.getResponseCode()); System.out.println("ISO = " + receipt.getISO ()); System.out.println("BankTotals = " + receipt.getBankTotals()); System.out.println("Message = " + receipt.getMessage()); System.out.println("AuthCode = " + receipt.getAuthCode()); System.out.println("Complete = " + receipt.getComplete()); System.out.println("TransDate = " + receipt.getTransDate()); System.out.println("TransTime = " + receipt.getTransTime()); System.out.println("Ticket = " + receipt.getTicket()); System.out.println("TimedOut = " + receipt.getTimedOut()); System.out.println("IsVisaDebit = " + receipt.getIsVisaDebit()); } catch (Exception e) { e.printStackTrace(); } } </pre>	<pre> HttpsPostRequest mpgReq = new HttpsPostRequest (); mpgReq.setProcCountryCode (processing_country_ code); mpgReq.setTestMode(true); //false or comment out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken (api_token); mpgReq.setTransaction (purchasecorrection); mpgReq.setStatusCheck (status_check); mpgReq.send(); try { Receipt receipt = mpgReq.getReceipt(); System.out.println("CardType = " + receipt.getCardType()); System.out.println("TransAmount = " + receipt.getTransAmount()); System.out.println("TxnNumber = " + receipt.getTxnNumber()); System.out.println("ReceiptId = " + receipt.getReceiptId()); System.out.println("TransType = " + receipt.getTransType()); System.out.println("ReferenceNum = " + receipt.getReferenceNum()); System.out.println("ResponseCode = " + receipt.getResponseCode()); System.out.println("ISO = " + receipt.getISO ()); System.out.println("BankTotals = " + receipt.getBankTotals()); System.out.println("Message = " + receipt.getMessage()); System.out.println("AuthCode = " + receipt.getAuthCode()); System.out.println("Complete = " + receipt.getComplete()); System.out.println("TransDate = " + receipt.getTransDate()); System.out.println("TransTime = " + receipt.getTransTime()); System.out.println("Ticket = " + receipt.getTicket()); System.out.println("TimedOut = " + receipt.getTimedOut()); //System.out.println("StatusCode = " + receipt.getStatusCode()); //System.out.println("StatusMessage = " + receipt.getStatusMessage()); } catch (Exception e) { e.printStackTrace(); } } </pre>

## 2.8 Refund

To process this transaction, you need the order ID and transaction number from the original Completion, Purchase or Force Post transaction.

### Refund transaction object definition

```
Refund refund = new Refund();
```

### HttpPostRequest object for Refund transaction

```
HttpPostRequest mpgReq = new HttpPostRequest();
```

```
mpgReq.setTransaction(refund);
```

### Refund transaction object values

For a full description of mandatory and optional values, see "Definition of Request Fields" on page 306

**Table 11: Refund transaction object mandatory values**

Value	Type	Limits	Set method
Order ID	String	50-character alpha-numeric	<code>refund.setOrderId(order_id);</code>
Amount	String	9-character decimal	<code>refund.setAmount(amount);</code>
Transaction number	String	255-character variable character	<code>refund.setTxnNumber(txn_number);</code>
E-Commerce indicator	String	1-character alpha-numeric	<code>refund.setCryptType(crypt_type);</code>

**Table 12: Refund transaction optional values**

Value	Type	Limits	Set method
Status Check	Boolean	true/false	<code>mpgReq.setStatusCheck(status_check);</code>

Sample Refund - CA	Sample Refund - US
<pre>package Canada; import JavaAPI.*; public class TestCanadaRefund { public static void main(String[] args) { String store_id = "store1"; String api_token = "yesguy";</pre>	<pre>package USA; import JavaAPI.*; public class TestUSAREfund { public static void main(String[] args) { String store_id = "monusqa002"; String api_token = "qatoken";</pre>

Sample Refund - CA	Sample Refund - US
<pre> String amount = "1.00"; String crypt = "7"; String dynamic_descriptor = "123456"; String custid = "mycust9"; String order_id = "mvt2713618548"; String txn_number = "911464-0_10"; String processing_country_code = "CA"; boolean status_check = false; Refund refund = new Refund(); refund.setTxnNumber(txn_number); refund.setOrderId(order_id); refund.setAmount(amount); refund.setCryptType(crypt); refund.setCustId(custid); refund.setDynamicDescriptor(dynamic_     descriptor); HttpPostRequest mpgReq = new HttpPostRequest     (); mpgReq.setProcCountryCode(processing_country_     code); mpgReq.setTestMode(true); //false or comment     out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(refund); mpgReq.setStatusCheck(status_check); mpgReq.send(); try { Receipt receipt = mpgReq.getReceipt(); System.out.println("CardType = " +     receipt.getCardType()); System.out.println("TransAmount = " +     receipt.getTransAmount()); System.out.println("TxnNumber = " +     receipt.getTxnNumber()); System.out.println("ReceiptId = " +     receipt.getReceiptId()); System.out.println("TransType = " +     receipt.getTransType()); System.out.println("ReferenceNum = " +     receipt.getReferenceNum()); System.out.println("ResponseCode = " +     receipt.getResponseCode()); System.out.println("ISO = " + receipt.getISO     ()); System.out.println("BankTotals = " +     receipt.getBankTotals()); System.out.println("Message = " +     receipt.getMessage()); System.out.println("AuthCode = " +     receipt.getAuthCode()); System.out.println("Complete = " +     receipt.getComplete()); System.out.println("TransDate = " +     receipt.getTransDate()); System.out.println("TransTime = " +     receipt.getTransTime()); </pre>	<pre> String amount = "1.00"; String crypt = "7"; String dynamic_descriptor = "123456"; String custid = "mycustomerid"; String order_id = "mvt3213015453"; String txn_number = "837923-0_25"; String processing_country_code = "US"; boolean status_check = false; Refund refund = new Refund(); refund.setOrderId(order_id); refund.setTxnNumber(txn_number); refund.setAmount(amount); refund.setCryptType(crypt); refund.setCustId(custid); refund.setDynamicDescriptor(dynamic_     descriptor); HttpPostRequest mpgReq = new HttpPostRequest     (); mpgReq.setProcCountryCode(processing_country_     code); mpgReq.setTestMode(true); //false or comment     out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(refund); mpgReq.setStatusCheck(status_check); mpgReq.send(); try { Receipt receipt = mpgReq.getReceipt(); System.out.println("CardType = " +     receipt.getCardType()); System.out.println("TransAmount = " +     receipt.getTransAmount()); System.out.println("TxnNumber = " +     receipt.getTxnNumber()); System.out.println("ReceiptId = " +     receipt.getReceiptId()); System.out.println("TransType = " +     receipt.getTransType()); System.out.println("ReferenceNum = " +     receipt.getReferenceNum()); System.out.println("ResponseCode = " +     receipt.getResponseCode()); System.out.println("ISO = " + receipt.getISO     ()); System.out.println("BankTotals = " +     receipt.getBankTotals()); System.out.println("Message = " +     receipt.getMessage()); System.out.println("AuthCode = " +     receipt.getAuthCode()); System.out.println("Complete = " +     receipt.getComplete()); System.out.println("TransDate = " +     receipt.getTransDate()); System.out.println("TransTime = " +     receipt.getTransTime()); </pre>

Sample Refund - CA	Sample Refund - US
<pre> System.out.println("Ticket = " +     receipt.getTicket()); System.out.println("TimedOut = " +     receipt.getTimedOut()); } catch (Exception e) {     e.printStackTrace(); } } } </pre>	<pre> System.out.println("Ticket = " +     receipt.getTicket()); System.out.println("TimedOut = " +     receipt.getTimedOut()); //System.out.println("StatusCode = " +     receipt.getStatusCode()); //System.out.println("StatusMessage = " +     receipt.getStatusMessage()); } catch (Exception e) {     e.printStackTrace(); } } } </pre>

## 2.9 Independent Refund

### Things to Consider:

- Because of the potential for fraud, permission for this transaction is not granted to all accounts by default. If it is required for your business, it must be requested via your account manager.

### Independent Refund transaction object definition

```
IndependentRefund indrefund = new IndependentRefund();
```

### HttpPostRequest object for Independent Refund transaction

```
HttpPostRequest mpgReq = new HttpPostRequest();
```

```
mpgReq.setTransaction(indrefund);
```

### Independent Refund transaction values

For a full description of mandatory and optional values, see "Definition of Request Fields" on page 306

**Table 13: Independent Refund transaction object mandatory values**

Value	Type	Limits	Set method
Order ID	String	50-character alpha-numeric	<code>indrefund.setOrderId(order_id);</code>
Amount	String	9-character decimal	<code>indrefund.setAmount(amount);</code>
Credit card number	String	20-character alpha-numeric	<code>indrefund.setPan(pan);</code>



**Table 13: Independent Refund transaction object mandatory values (continued)**

Value	Type	Limits	Set method
Expiry date	String	4-character alpha-numeric (YYMM format)	<code>indrefund.setExpDate(exp-date);</code>
E-Commerce indicator	String	1-character alpha-numeric	<code>indrefund.setCryptType(crypt_type);</code>

**Table 14: Independent Refund transaction optional values**

Value	Type	Limits	Set method
Customer ID	String	50-character alpha-numeric	<code>indrefund.setCustId(custid);</code>
Dynamic descriptor	String	20-character alpha-numeric	<code>indrefund.setDynamicDescriptor(dynamic_descriptor);</code>
Status Check	Boolean	true/false	<code>mpgReq.setStatusCheck(status_check);</code>
Commcard invoice <sup>1</sup>	String	17-character alpha-numeric	<code>indrefund.setCommcardInvoice(commcard_invoice);</code>
Commcard tax amount <sup>2</sup>	String	9-character decimal Must contain at least 3 digits, two of which must be penny values.	<code>indrefund.setCommcardTaxAmount(commcard_tax_amount);</code>

Sample Independent Refund - CA	Sample Independent Refund - US
<pre>package Canada; import JavaAPI.*; public class TestCanadaIndependentRefund {     public static void main(String[] args)     {         java.util.Date createDate = new java.util.Date             ();     } }</pre>	<pre>package USA; import JavaAPI.*; public class TestUSAIndependentRefund {     public static void main(String[] args)     {         java.util.Date createDate = new java.util.Date             ();     } }</pre>

<sup>1</sup>Available to US integrations only.<sup>2</sup>Available to US integrations only.

Sample Independent Refund - CA	Sample Independent Refund - US
<pre> String order_id = "Test"+createDate.getTime(); String store_id = "store5"; String api_token = "yesguy"; String cust_id = "my customer id"; String amount = "20.00"; String pan = "4242424242424242"; String expdate = "1901"; //YYMM String crypt = "7"; String processing_country_code = "CA"; boolean status_check = false; IndependentRefund indrefund = new     IndependentRefund(); indrefund.setOrderId(order_id); indrefund.setCustId(cust_id); indrefund.setAmount(amount); indrefund.setPan(pan); indrefund.setExpdate(expdate); indrefund.setCryptType(crypt); indrefund.setDynamicDescriptor("123456"); HttpPostRequest mpgReq = new HttpPostRequest     (); mpgReq.setProcCountryCode(processing_country_     code); mpgReq.setTestMode(true); //false or comment     out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(indrefund); mpgReq.setStatusCheck(status_check); mpgReq.send(); try {     Receipt receipt = mpgReq.getReceipt();     System.out.println("CardType = " +         receipt.getCardType());     System.out.println("TransAmount = " +         receipt.getTransAmount());     System.out.println("TxnNumber = " +         receipt.getTxnNumber());     System.out.println("ReceiptId = " +         receipt.getReceiptId());     System.out.println("TransType = " +         receipt.getTransType());     System.out.println("ReferenceNum = " +         receipt.getReferenceNum());     System.out.println("ResponseCode = " +         receipt.getResponseCode());     System.out.println("ISO = " + receipt.getISO         ());     System.out.println("BankTotals = " +         receipt.getBankTotals());     System.out.println("Message = " +         receipt.getMessage());     System.out.println("AuthCode = " +         receipt.getAuthCode());     System.out.println("Complete = " +         receipt.getComplete());     System.out.println("TransDate = " + </pre>	<pre> String order_id = "Test"+createDate.getTime(); String store_id = "monusqa002"; String api_token = "qatoken"; String cust_id = "my customer id"; String amount = "20.00"; String pan = "4242424242424242"; String expdate = "1602"; //YYMM format String crypt = "7"; String commcard_invoice = "INVC090"; String commcard_tax_amount = "1.00"; String processing_country_code = "US"; boolean status_check = false; IndependentRefund indrefund = new     IndependentRefund(); indrefund.setOrderId(order_id); indrefund.setCustId(cust_id); indrefund.setAmount(amount); indrefund.setPan(pan); indrefund.setExpdate(expdate); indrefund.setCryptType(crypt); indrefund.setCommcardInvoice(commcard_     invoice); indrefund.setCommcardTaxAmount(commcard_tax_     amount); indrefund.setDynamicDescriptor("123456"); HttpPostRequest mpgReq = new HttpPostRequest     (); mpgReq.setProcCountryCode(processing_country_     code); mpgReq.setTestMode(true); //false or comment     out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(indrefund); mpgReq.setStatusCheck(status_check); mpgReq.send(); try {     Receipt receipt = mpgReq.getReceipt();     System.out.println("CardType = " +         receipt.getCardType());     System.out.println("TransAmount = " +         receipt.getTransAmount());     System.out.println("TxnNumber = " +         receipt.getTxnNumber());     System.out.println("ReceiptId = " +         receipt.getReceiptId());     System.out.println("TransType = " +         receipt.getTransType());     System.out.println("ReferenceNum = " +         receipt.getReferenceNum());     System.out.println("ResponseCode = " +         receipt.getResponseCode());     System.out.println("ISO = " + receipt.getISO         ());     System.out.println("BankTotals = " +         receipt.getBankTotals());     System.out.println("Message = " + </pre>

Sample Independent Refund - CA	Sample Independent Refund - US
<pre> receipt.getTransDate(); System.out.println("TransTime = " +     receipt.getTransTime()); System.out.println("Ticket = " +     receipt.getTicket()); System.out.println("TimedOut = " +     receipt.getTimedOut()); System.out.println("IsVisaDebit = " +     receipt.getIsVisaDebit()); } catch (Exception e) { e.printStackTrace(); } } } </pre>	<pre> receipt.getMessage(); System.out.println("AuthCode = " +     receipt.getAuthCode()); System.out.println("Complete = " +     receipt.getComplete()); System.out.println("TransDate = " +     receipt.getTransDate()); System.out.println("TransTime = " +     receipt.getTransTime()); System.out.println("Ticket = " +     receipt.getTicket()); System.out.println("TimedOut = " +     receipt.getTimedOut()); System.out.println("IsVisaDebit = " +     receipt.getIsVisaDebit()); } catch (Exception e) { e.printStackTrace(); } } } </pre>

## 2.10 Card Verification

### Things to Consider:

- This transaction type only applies to Visa and MasterCard transactions.
- This transaction is also known as an "account status inquiry".
- AVD and CVD values are mandatory for US integrations only.

### Card Verification object definition

```
CardVerification cardVerification = new CardVerification();
```

### HttpPostRequest object for Card Verification transaction

```

HttpPostRequest mpgReq = new HttpPostRequest();
mpgReq.setTransaction(cardVerification );

```

### Card Verification transaction values

For a full description of mandatory and optional values, see "Definition of Request Fields" on page 306

Table 15: Card Verification transaction object mandatory values

Value	Type	Limits	Set method
Order ID	String	50-character alpha-numeric	cardVerification.setOrderId(order_id);
Credit card number	String	20-character alpha-numeric	cardVerification.setPan(pan);
Expiry date	String	4-character alpha-numeric (YYMM format)	cardVerification.setExpDate(expdate);
E-commerce indicator	String	1-character alpha-numeric	cardVerification.setCryptType(crypt_type);
AVS	Object	Not applicable. See Appendix E (page 336).	cardVerification.setAvsInfo(avsCheck);
CVD	Object	Not applicable. See Appendix F (page 342).	cardVerification.setCvdInfo(cvdCheck);

Sample Card Verification - CA	Sample Card Verification - US
<pre> package Canada; import JavaAPI.*; public class TestCanadaCardVerification {     public static void main(String[] args)     {         String store_id = "store5";         String api_token = "yesguy";         java.util.Date createDate = new java.util.Date         ();         String order_id = "Test"+createDate.getTime();         String pan = "4242424242424242";         String expdate = "1901"; //YYMM format         String crypt = "7";         String processing_country_code = "CA";         boolean status_check = false;         AvsInfo avsCheck = new AvsInfo();         avsCheck.setAvsStreetNumber("212");         avsCheck.setAvsStreetName("Payton Street");         avsCheck.setAvsZipCode("M1M1M1");         CvdInfo cvdCheck = new CvdInfo();         cvdCheck.setCvdIndicator("1");         cvdCheck.setCvdValue("099");         CardVerification cardVerification = new         CardVerification();         cardVerification.setOrderId(order_id); </pre>	<pre> package USA; import JavaAPI.*; public class TestUSACardVerification {     public static void main(String[] args)     {         String store_id = "monusqa002";         String api_token = "qatoken";         java.util.Date createDate = new java.util.Date         ();         String order_id = "Test"+createDate.getTime();         String cust_id = "customer1";         String pan = "4242424242424242";         String expiry_date = "1901"; //YYMM format         String processing_country_code = "US";         boolean status_check = false;         AvsInfo avsCheck = new AvsInfo();         avsCheck.setAvsStreetNumber("212");         avsCheck.setAvsStreetName("Payton Street");         avsCheck.setAvsZipCode("M1M1M1");         CvdInfo cvdCheck = new CvdInfo();         cvdCheck.setCvdIndicator("1");         cvdCheck.setCvdValue("099");         CardVerification cardVerification = new         CardVerification();         cardVerification.setOrderId(order_id); </pre>

Sample Card Verification - CA	Sample Card Verification - US
<pre> cardVerification.setPan(pan); cardVerification.setExpdate(expdate); cardVerification.setCryptType(crypt); cardVerification.setAvsInfo(avsCheck); cardVerification.setCvdInfo(cvdCheck); HttpsPostRequest mpgReq = new HttpsPostRequest (); mpgReq.setProcCountryCode(processing_country_ code); mpgReq.setTestMode(true); //false or comment     out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(cardVerification); mpgReq.setStatusCheck(status_check); mpgReq.send(); try { Receipt receipt = mpgReq.getReceipt(); System.out.println("CardType = " +     receipt.getCardType()); System.out.println("TransAmount = " +     receipt.getTransAmount()); System.out.println("TxnNumber = " +     receipt.getTxnNumber()); System.out.println("ReceiptId = " +     receipt.getReceiptId()); System.out.println("TransType = " +     receipt.getTransType()); System.out.println("ReferenceNum = " +     receipt.getReferenceNum()); System.out.println("ResponseCode = " +     receipt.getResponseCode()); System.out.println("ISO = " + receipt.getISO ()); System.out.println("BankTotals = " +     receipt.getBankTotals()); System.out.println("Message = " +     receipt.getMessage()); System.out.println("AuthCode = " +     receipt.getAuthCode()); System.out.println("Complete = " +     receipt.getComplete()); System.out.println("TransDate = " +     receipt.getTransDate()); System.out.println("TransTime = " +     receipt.getTransTime()); System.out.println("Ticket = " +     receipt.getTicket()); System.out.println("TimedOut = " +     receipt.getTimedOut()); System.out.println("IsVisaDebit = " +     receipt.getIsVisaDebit()); } catch (Exception e) { e.printStackTrace(); } </pre>	<pre> cardVerification.setCustId(cust_id); cardVerification.setPan(pan); cardVerification.setExpdate(expiry_date); cardVerification.setAvsInfo(avsCheck); cardVerification.setCvdInfo(cvdCheck); HttpsPostRequest mpgReq = new HttpsPostRequest (); mpgReq.setProcCountryCode(processing_country_ code); mpgReq.setTestMode(true); //false or comment     out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(cardVerification); mpgReq.setStatusCheck(status_check); mpgReq.send(); try { Receipt receipt = mpgReq.getReceipt(); System.out.println("CardType = " +     receipt.getCardType()); System.out.println("TransAmount = " +     receipt.getTransAmount()); System.out.println("TxnNumber = " +     receipt.getTxnNumber()); System.out.println("ReceiptId = " +     receipt.getReceiptId()); System.out.println("TransType = " +     receipt.getTransType()); System.out.println("ReferenceNum = " +     receipt.getReferenceNum()); System.out.println("ResponseCode = " +     receipt.getResponseCode()); System.out.println("Message = " +     receipt.getMessage()); System.out.println("AuthCode = " +     receipt.getAuthCode()); System.out.println("Complete = " +     receipt.getComplete()); System.out.println("TransDate = " +     receipt.getTransDate()); System.out.println("TransTime = " +     receipt.getTransTime()); System.out.println("Ticket = " +     receipt.getTicket()); System.out.println("TimedOut = " +     receipt.getTimedOut()); //System.out.println("CardLevelResult = " +     receipt.getCardLevelResult()); } catch (Exception e) { e.printStackTrace(); } </pre>

Sample Card Verification - CA	Sample Card Verification - US
<pre> } } </pre>	

## 2.11 Batch Close

### Batch Close transaction object definition

```
BatchClose batchclose = new BatchClose();
```

### HttpPostRequest object for Batch Close transaction

```

HttpPostRequest mpgReq = new HttpPostRequest();

mpgReq.setTransaction(batchclose);

```

### Batch Close transaction values

For a full description of mandatory and optional values, see "Definition of Request Fields" on page 306

**Table 16: Batch Close transaction object mandatory values**

Value	Type	Limits	Set method
ECR (electronic cash register) number	String	No limit (value provided by Moneris)	<code>batchclose.setEcrno(ecr_no);</code>

Sample Batch Close - CA	Sample Batch Close - US
<pre> package Canada; import JavaAPI.*; public class TestCanadaBatchClose {     public static void main(String[] args)     {         String store_id = "store5";         String api_token = "yesguy";         String ecr_no = "66013455"; //ecr within         store         String processing_country_code = "CA";         boolean status_check = false;         BatchClose batchclose = new BatchClose();         batchclose.setEcrno(ecr_no);         HttpPostRequest mpgReq = new             HttpPostRequest();         mpgReq.setProcCountryCode(processing_country_             code);         mpgReq.setTestMode(true); //false or comment             out this line for production transactions         mpgReq.setStoreId(store_id);         mpgReq.setApiToken(api_token);         mpgReq.setTransaction(batchclose); </pre>	<pre> package USA; import JavaAPI.*; public class TestUSABatchClose {     public static void main(String[] args)     {         String store_id = "monusqa002";         String api_token = "qatoken";         String ecr_no = "64000003"; //ecr within store             "64000001"         String processing_country_code = "US";         boolean status_check = false;         BatchClose batchclose = new BatchClose();         batchclose.setEcrno(ecr_no);         HttpPostRequest mpgReq = new HttpPostRequest             ();         mpgReq.setProcCountryCode(processing_country_             code);         mpgReq.setTestMode(true); //false or comment             out this line for production transactions         mpgReq.setStoreId(store_id);         mpgReq.setApiToken(api_token);         mpgReq.setTransaction(batchclose); </pre>

Sample Batch Close - CA	Sample Batch Close - US
<pre> mpgReq.setStatusCheck(status_check); mpgReq.send(); try { Receipt receipt = mpgReq.getReceipt(); if ((receipt.getReceiptId()).equals("Global Error Receipt")    receipt.getReceiptId().equals("null")    receipt.getReceiptId().equals("")) { System.out.println("CardType = " + receipt.getCardType()); System.out.println("TransAmount = " + receipt.getTransAmount()); System.out.println("TxnNumber = " + receipt.getTxnNumber()); System.out.println("ReceiptId = " + receipt.getReceiptId()); System.out.println("TransType = " + receipt.getTransType()); System.out.println("ReferenceNum = " + receipt.getReferenceNum()); System.out.println("ResponseCode = " + receipt.getResponseCode()); System.out.println("ISO = " + receipt.getISO ()); System.out.println("BankTotals = null"); System.out.println("Message = " + receipt.getMessage()); System.out.println("AuthCode = " + receipt.getAuthCode()); System.out.println("Complete = " + receipt.getComplete()); System.out.println("TransDate = " + receipt.getTransDate()); System.out.println("TransTime = " + receipt.getTransTime()); System.out.println("Ticket = " + receipt.getTicket()); System.out.println("TimedOut = " + receipt.getTimedOut()); } else { for (String ecr : receipt.getTerminalIDs()) { System.out.println("ECR: " + ecr); for (String cardType : receipt.getCreditCards (ecr)) { System.out.println("\tCard Type: " + cardType); System.out.println("\t\tPurchase: Count = " + receipt.getPurchaseCount(ecr, cardType) + " Amount = " + receipt.getPurchaseAmount(ecr, cardType)); System.out.println("\t\tRefund: Count = " </pre>	<pre> mpgReq.setStatusCheck(status_check); mpgReq.send(); try { Receipt receipt = mpgReq.getReceipt(); if ((receipt.getReceiptId()).equals("Global Error Receipt")) { System.out.println("CardType = " + receipt.getCardType()); System.out.println("TransAmount = " + receipt.getTransAmount()); System.out.println("TxnNumber = " + receipt.getTxnNumber()); System.out.println("ReceiptId = " + receipt.getReceiptId()); System.out.println("TransType = " + receipt.getTransType()); System.out.println("ReferenceNum = " + receipt.getReferenceNum()); System.out.println("ResponseCode = " + receipt.getResponseCode()); System.out.println("ISO = " + receipt.getISO ()); System.out.println("BankTotals = null"); System.out.println("Message = " + receipt.getMessage()); System.out.println("AuthCode = " + receipt.getAuthCode()); System.out.println("Complete = " + receipt.getComplete()); System.out.println("TransDate = " + receipt.getTransDate()); System.out.println("TransTime = " + receipt.getTransTime()); System.out.println("Ticket = " + receipt.getTicket()); System.out.println("TimedOut = " + receipt.getTimedOut()); } else { for (String ecr : receipt.getTerminalIDs()) { System.out.println("ECR: " + ecr); for (String cardType : receipt.getCreditCards (ecr)) { System.out.println("\tCard Type: " + cardType); System.out.println("\t\tPurchase: Count = " + receipt.getPurchaseCount(ecr, cardType) + " Amount = " + receipt.getPurchaseAmount(ecr, cardType)); System.out.println("\t\tRefund: Count = " + receipt.getRefundCount(ecr, cardType) + " Amount = " + receipt.getRefundAmount(ecr, cardType)); </pre>

Sample Batch Close - CA	Sample Batch Close - US
<pre> + receipt.getRefundCount(ecr, cardType) + " Amount = " + receipt.getRefundAmount(ecr, cardType)); System.out.println("\t\tCorrection: Count = " + receipt.getCorrectionCount(ecr, cardType) + " Amount = " + receipt.getCorrectionAmount(ecr, cardType)); } } } catch (Exception e) { e.printStackTrace(); } } } </pre>	<pre> System.out.println("\t\tCorrection: Count = " + receipt.getCorrectionCount(ecr, cardType) + " Amount = " + receipt.getCorrectionAmount(ecr, cardType)); } } } catch (Exception e) { e.printStackTrace(); } } } </pre>

## 2.12 Open Totals

### OpenTotals transaction object definition

```
OpenTotals opentotals = new OpenTotals();
```

### HttpPostRequest object for Open Totals transaction

```
HttpPostRequest mpgReq = new HttpPostRequest();
```

```
mpgReq.setTransaction(opentotals);
```

### Open Totals transaction values

For a full description of mandatory and optional values, see "Definition of Request Fields" on page 306

**Table 17: Open Totals transaction object mandatory values**

Value	Type	Limits	Set method
ECR (electronic cash register) number	String	No limit (value provided by Moneris)	<code>opentotals.setEcrno(ecr_no);</code>

Sample Open Totals - CA	Sample Open Totals - US
<pre> package Canada; import JavaAPI.*; public class TestCanadaOpenTotals { public static void main(String[] args) { String store_id = "store5"; </pre>	<pre> package USA; import JavaAPI.*; public class TestUSAOpenTotals { public static void main(String[] args) { String store_id = "monusqa002"; </pre>



Sample Open Totals - CA	Sample Open Totals - US
<pre> String api_token = "yesguy"; String ecr_no = "66013455"; //String ecr_no = "66011091"; String processing_country_code = "CA"; OpenTotals opentotals = new OpenTotals(); opentotals.setEcrno(ecr_no); HttpsPostRequest mpgReq = new HttpsPostRequest (); mpgReq.setProcCountryCode(processing_country_ code); mpgReq.setTestMode(true); //false or comment out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(opentotals); mpgReq.send();  try { Receipt receipt = mpgReq.getReceipt(); if ((receipt.getReceiptId()).equals("Global Error Receipt")    receipt.getReceiptId().equals("null")    receipt.getReceiptId().equals("")) { System.out.println("CardType = null"); System.out.println("TransAmount = " + receipt.getTransAmount()); System.out.println("TxnNumber = " + receipt.getTxnNumber()); System.out.println("ReceiptId = " + receipt.getReceiptId()); System.out.println("TransType = " + receipt.getTransType()); System.out.println("ReferenceNum = " + receipt.getReferenceNum()); System.out.println("ResponseCode = " + receipt.getResponseCode()); System.out.println("ISO = " + receipt.getISO ()); System.out.println("BankTotals = null"); System.out.println("Message = " + receipt.getMessage()); System.out.println("AuthCode = " + receipt.getAuthCode()); System.out.println("Complete = " + receipt.getComplete()); System.out.println("TransDate = " + receipt.getTransDate()); System.out.println("TransTime = " + receipt.getTransTime()); System.out.println("Ticket = " + receipt.getTicket()); System.out.println("TimedOut = " + receipt.getTimedOut()); } else { </pre>	<pre> String api_token = "qatoken"; String ecr_no = "64000003"; String processing_country_code = "US"; OpenTotals opentotals = new OpenTotals(); opentotals.setEcrno(ecr_no); HttpsPostRequest mpgReq = new HttpsPostRequest (); mpgReq.setProcCountryCode(processing_country_ code); mpgReq.setTestMode(true); //false or comment out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(opentotals); mpgReq.send(); try { Receipt receipt = mpgReq.getReceipt(); if ((receipt.getReceiptId()).equals("Global Error Receipt")) { System.out.println("CardType = " + receipt.getCreditCards(ecr_no)); System.out.println("TransAmount = " + receipt.getTransAmount()); System.out.println("TxnNumber = " + receipt.getTxnNumber()); System.out.println("ReceiptId = " + receipt.getReceiptId()); System.out.println("TransType = " + receipt.getTransType()); System.out.println("ReferenceNum = " + receipt.getReferenceNum()); System.out.println("ResponseCode = " + receipt.getResponseCode()); System.out.println("ISO = " + receipt.getISO ()); System.out.println("BankTotals = null"); System.out.println("Message = " + receipt.getMessage()); System.out.println("AuthCode = " + receipt.getAuthCode()); System.out.println("Complete = " + receipt.getComplete()); System.out.println("TransDate = " + receipt.getTransDate()); System.out.println("TransTime = " + receipt.getTransTime()); System.out.println("Ticket = " + receipt.getTicket()); System.out.println("TimedOut = " + receipt.getTimedOut()); } else { for (String ecr : receipt.getTerminalIDs()) { System.out.println("ECR: " + ecr); </pre>

Sample Open Totals - CA	Sample Open Totals - US
<pre> for (String ecr : receipt.getTerminalIDs()) { System.out.println("ECR: " + ecr);  for (String cardType : receipt.getCreditCards (ecr)) { System.out.println("\tCard Type: " + cardType); System.out.println("\t\tPurchase: Count = " + receipt.getPurchaseCount(ecr, cardType) + " Amount = " + receipt.getPurchaseAmount(ecr, cardType)); System.out.println("\t\tRefund: Count = " + receipt.getRefundCount(ecr, cardType) + " Amount = " + receipt.getRefundAmount(ecr, cardType)); System.out.println("\t\tCorrection: Count = " + receipt.getCorrectionCount(ecr, cardType) + " Amount = " + receipt.getCorrectionAmount(ecr, cardType)); } } } catch (Exception e) { e.printStackTrace(); } } } </pre>	<pre> for (String cardType : receipt.getCreditCards (ecr)) { System.out.println("\tCard Type: " + cardType); System.out.println("\t\tPurchase: Count = " + receipt.getPurchaseCount(ecr, cardType) + " Amount = " + receipt.getPurchaseAmount(ecr, cardType)); System.out.println("\t\tRefund: Count = " + receipt.getRefundCount(ecr, cardType) + " Amount = " + receipt.getRefundAmount(ecr, cardType)); System.out.println("\t\tCorrection: Count = " + receipt.getCorrectionCount(ecr, cardType) + " Amount = " + receipt.getCorrectionAmount(ecr, cardType)); } } } catch (Exception e) { e.printStackTrace(); } } } </pre>



## 3 MPI

- 3.1 About MPI Transactions
- 3.2 3-D Secure Implementations (VbV, MCSC, SafeKey)
- 3.3 Activating VbV and MCSC
- 3.4 Activating Amex SafeKey
- 3.5 Transaction Flow
- 3.6 MPI Transactions

### 3.1 About MPI Transactions

The Moneris Gateway can enable transactions using the 3-D Secure protocol via Merchant Plug-In (MPI) and Access Control Server (ACS) .

Moneris Gateway supports the following 3-D Secure implementations:

- Verified by Visa (VbV)
- Mastercard Secure Code (MCSC)
- American Express SafeKey

### 3.2 3-D Secure Implementations (VbV, MCSC, SafeKey)

Verified by Visa (VbV), MasterCard Secure Code (MCSC) and American Express SafeKey are programs based on the 3-D Secure Protocol to improve the security of online transactions.

These programs involve authentication of the cardholder during an online e-commerce transaction. Authentication is based on the issuer's selected method of authentication.

The following are examples of authentication methods:

- Risk-based authentication
- Dynamic passwords
- Static passwords.

Some benefits of these programs are reduced risk of fraudulent transactions and protection against chargebacks for certain fraudulent transactions.

#### **Additional eFraud features**

To further decrease fraudulent activity, Moneris also recommends implementing the following features:

- AVS: Address Verification Service (page 336)
- CVD: Card Validation Digits (page 342).

### 3.3 Activating VbV and MCSC

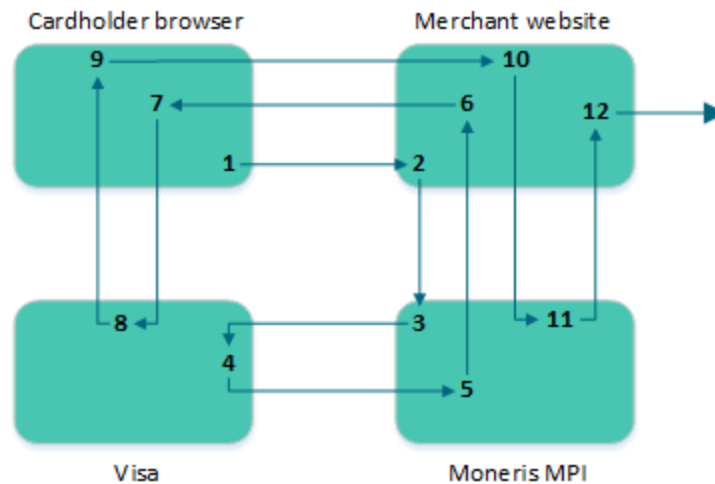
To integrate Verified by Visa and/or MasterCard Secure Code transaction functionality in your system, call Moneris Sales Support to have Moneris enroll you in the program(s) and enable the functionality on your account.

### 3.4 Activating Amex SafeKey

To Activate Amex SafeKey transaction functionality with your system via the Moneris Gateway API:

1. Enroll in the SafeKey program with American Express  
at: <https://network.americanexpress.com/ca/en/safekey/index.aspx>
2. Call your Moneris sales rep to get Amex SafeKey functionality enabled on your account

### 3.5 Transaction Flow



**Figure 1: Transaction flow diagram**

1. Cardholder enters the credit card number and submits the transaction information to the merchant.
2. Upon receiving the transaction request, the merchant calls the MonerisMPI API and passes a TXN type request. For sample code please refer to section 6.a(XREF TBD).
3. The Moneris MPI receives the request, authenticates the merchant and sends the transaction information to Visa, MasterCard or American Express.
4. Visa/MasterCard/Amex verifies that the card is enrolled and returns the issuer URL.
5. Moneris MPI receives the response from Visa, MasterCard or Amex and forwards the information to the merchant.
6. The MonerisMPI API installed at the merchant receives the response from the Moneris MPI.  
If the response is "Y" for enrolled, the merchant makes a call to the API, which opens a popup/in-line window in the cardholder browser.  
If the response is "N" for not enrolled, a transaction could be sent to the processor identifying it as VBV/MCSC/SafeKey attempted with an ECI value of 6.  
If the response is "U" for unable to authenticate or the response times out, the transaction can be sent to the processor with an ECI value of 7. The merchant can then choose to continue with the transaction and be liable for a chargeback, or the merchant can choose to end the transaction.
7. The cardholder browser uses the URL that was returned from Visa/MasterCard/Amex via the merchant to communicate directly to the bank. The contents of the popup are loaded and the cardholder enters the PIN.

8. The information is submitted to the bank and authenticated. A response is then returned to the client browser.
9. The client browser receives the response from the bank, and forwards it to the merchant.
10. The merchant receives the response information from the cardholder browser, and passes an ACS request type to the Moneris MPI API.
11. Moneris MPI receives the ACS request and authenticates the information. The Moneris MPI then provides a CAVV value (`getCavv()`) and a crypt type (`getMpiEciO`) to the merchant.  
 If the `getSuccess()` of the response is "true", the merchant may proceed with the cavv purchase or cavv preauth.  
 If the `getSuccess()` of the response is "false" **and** the `getMessage()` is "N", the transaction must be cancelled because the cardholder failed to authenticate.  
 If the `getSuccess()` of the response is "false" **and** the `getMessage` is "U", the transaction can be processed as a normal purchase or PreAuth; however in this case the merchant assumes liability of a chargeback.  
 If the response times out, the transaction can be processed as a normal purchase or PreAuth; however in this case the merchant assumes liability of a chargeback.
12. The merchant retrieves the CAVV value, and formats a cavv purchase or a cavv preauth request using the method that is normally used. As part of this transaction method, the merchant must pass the CAVV value and the crypt type.

## 3.6 MPI Transactions

Any of the transaction objects that are defined in this section can be passed to the `HttpPostRequest` connection object defined in Section 12.5 (page 286).

### **TXN**

Sends the initial transaction data to the Moneris MPI to verify whether the card is enrolled.  
The browser returns a `PARes` as well as a success field.

### **ACS**

Passes the `PARes` (received in the response to the `TXN` transaction) to the Moneris MPI API.

### **Cavv Purchase**

After receiving confirmation from the ACS transaction, this verifies funds on the customer's card, removes the funds and prepares them for deposit into the merchant's account.

### **Cavv Pre-Authorization**

After receiving confirmation from the ACS transaction, this verifies and locks funds on the customer's credit card. The funds are locked for a specified amount of time based on the card issuer.

To retrieve the funds that have been locked by a Pre-Authorization transaction so that they may be settled in the merchant's account, a basic Completion transaction (page 18) must be performed. A `PreAuthorization` transaction may only be "completed" once.

### 3.6.1 VbV, MCSC and SafeKey Responses

For each transaction, a crypt type is sent to identify whether it is a VbV-, MCSC- or SafeKey-authenticated transaction. Below are the tables defining the possible crypt types as well as the possible `VARes` and `PARes` responses.

Table 18: Crypt type definitions

Crypt type	Visa definition	MasterCard definition	American Express Definition
5	<ul style="list-style-type: none"> <li>Fully authenticated</li> <li>There is a liability shift, and the merchant is protected from chargebacks</li> </ul>	<ul style="list-style-type: none"> <li>Fully authenticated</li> <li>There is a liability shift, and the merchant is protected from chargebacks.</li> </ul>	<ul style="list-style-type: none"> <li>Fully authenticated</li> <li>There is a liability shift, and the merchant is protected from chargebacks.</li> </ul>
6	<ul style="list-style-type: none"> <li>VbV has been attempted</li> <li>There is a liability shift, and the merchant is protected from certain chargebacks on fraudulent transactions</li> </ul>	<ul style="list-style-type: none"> <li>MCSC has been attempted</li> <li>There is a liability shift, and the merchant is protected from certain chargebacks on fraudulent transactions</li> </ul>	<ul style="list-style-type: none"> <li>SafeKey has been attempted</li> <li>There is a liability shift, and the merchant is protected from certain chargebacks on fraudulent transactions</li> </ul>
7	<ul style="list-style-type: none"> <li>Non-VbV transaction</li> <li>No liability shift</li> <li>Merchant is not protected from chargebacks</li> </ul>	<ul style="list-style-type: none"> <li>Non-MCSC transaction</li> <li>No liability shift</li> <li>Merchant is not protected from chargebacks</li> </ul>	<ul style="list-style-type: none"> <li>Non-SafeKey transaction</li> <li>No liability shift</li> <li>Merchant is not protected from chargebacks</li> </ul>

**Table 19: VERes response definitions**

VERes Response	Response Definition
N	The card/issuer is not enrolled. Sent as a normal Purchase/PreAuth transaction with a crypt type of 6.
U	The card type is not participating in VbV/MCSC/SafeKey. It could be corporate card or another card plan that Visa/MasterCard/Amex excludes. Proceed with a regular transaction with a crypt type of 7 or cancel the transaction.
Y	The card is enrolled. Proceed to create the VbV/MCSC/SafeKey inline window for cardholder authentication. Proceed to PAREs for crypt type.

**Table 20: PAREs response definitions**

PAREs response	Response definition
A	Attempted to verify PIN, and will receive a CAVV. Send as a cavv_purchase/cavv_preAuth, which returns a crypt type of 6.
Y	Fully authenticated, and will receive a CAVV. Send as a cavv_purchase/cavv_preAuth which will return a crypt type of 5.
N	Failed to authenticate. No CAVV is returned. Cancel transaction. Merchant may proceed with a crypt type of 7 although this is strongly discouraged.

**Table 21: CAVV transaction handling**

Step 1: VERes Cardholder/issuer enrolled?	Step 2: PAREs VbV/MCSC InLine win- dow response	Step 3: Transaction Are you protected?
Y	Y	Send a CAVV transaction
Y	N	Cancel transaction. Authentication failed or high-risk transaction.
Y	A	Send a CAVV transaction
U	n/a	Send a regular transaction with a crypt type of 7
N	n/a	Send a regular transaction with a crypt type of 6



## 3.6.2 MpiTxn Request Transaction

### MpiTxn transaction object definition

```
MpiTxn mpiTxn = new MpiTxn();
```

### HttpPostRequest object for MpiTxn transaction

```
HttpPostRequest mpgReq = new HttpPostRequest();
```

```
mpgReq.setTransaction(mpiTxn);
```

### MpiTxn transaction values

For a full description of mandatory and optional values, see "Definition of Request Fields" on page 306

**Table 22: MpiTxn transaction object mandatory values**

Value	Type	Limits	Set method
XID	String	20-character alpha-numeric	<code>mpiTxn.setXid(xid);</code>
Credit card number	String	20-character numeric	<code>mpiTxn.setPan(pan);</code>
Expiry date	String	4-character alpha-numeric (YYMM format)	<code>mpiTxn.setExpDate(expdate);</code>
Amount	String	9-character decimal  Must contain at least 3 digits including two penny values.	<code>mpiTxn.setAmount(amount);</code>
MD	String	1024-character alpha-numeric	<code>mpiTxn.setMD(MD);</code>
Merchant URL	String	N/A	<code>mpiTxn.setMerchantUrl(merchantUrl);</code>
Accept	String	N/A	<code>mpiTxn.setAccept(accept);</code>
User Agent	String	N/A	<code>mpiTxn.setUserAgent(userAgent);</code>

Sample MpiTXN Request - CA	Sample MpiTXN Request - US
<pre> package Canada; import JavaAPI.*; public class TestCanadaMpiTxn {     public static void main(String[] args)     {         String store_id = "moneris";         String api_token = "hurgle";         String amount = "1.00";         String xid = "12345678910111214037";         String MD = xid + "mycardinfo" + amount;         String merchantUrl = "www.mystoreurl.com";         String accept = "true";         String userAgent = "Mozilla";         String processing_country_code = "CA";         String pan = "4242424242424242";         String expdate = "1905";         boolean status_check = false;         MpiTxn mpiTxn = new MpiTxn();         mpiTxn.setXid(xid);         mpiTxn.setPan(pan);         mpiTxn.setExpDate(expdate);         mpiTxn.setAmount(amount);         mpiTxn.setMD(MD);         mpiTxn.setMerchantUrl(merchantUrl);         mpiTxn.setHttpAccept(accept);         mpiTxn.setHttpUserAgent(userAgent);         //*****OPTIONAL         VARIABLES*****         HttpsPostRequest mpgReq = new HttpsPostRequest         ();         mpgReq.setProcCountryCode(processing_country_         code);         mpgReq.setTestMode(true); //false or comment         out this line for production transactions         mpgReq.setStoreId(store_id);         mpgReq.setApiToken(api_token);         mpgReq.setTransaction(mpiTxn);         mpgReq.setStatusCheck(status_check);         mpgReq.send();         /***** REQUEST         *****/         try         {             Receipt receipt = mpgReq.getReceipt();             System.out.println("MpiMessage = " +             receipt.getMpiMessage());             System.out.println("MpiSuccess = " +             receipt.getMpiSuccess());             if (receipt.getMpiSuccess().equals("true"))             {                 System.out.println(receipt.getMpiInLineForm                 ());             }             else             {                 System.out.println(receipt.getMessage());             }         } </pre>	<pre> package USA; import JavaAPI.*; public class TestUSAMpiTxn {     public static void main(String[] args)     {         String store_id = "monusqa002";         String api_token = "qatoken";         String amount = "1.00";         String xid = "12345678910111216007";         String MD = xid + "mycardinfo" + amount;         String merchantUrl = "www.mystoreurl.com";         String accept = "true";         String userAgent = "Mozilla";         String processing_country_code = "US";         String pan = "4242424242424242";         String expdate = "1905";         boolean status_check = false;         MpiTxn mpiTxn = new MpiTxn();         mpiTxn.setXid(xid);         mpiTxn.setPan(pan);         mpiTxn.setExpDate(expdate);         mpiTxn.setAmount(amount);         mpiTxn.setMD(MD);         mpiTxn.setMerchantUrl(merchantUrl);         mpiTxn.setHttpAccept(accept);         mpiTxn.setHttpUserAgent(userAgent);         //*****OPTIONAL         VARIABLES*****         HttpsPostRequest mpgReq = new HttpsPostRequest         ();         mpgReq.setProcCountryCode(processing_country_         code);         mpgReq.setTestMode(true); //false or comment         out this line for production transactions         mpgReq.setStoreId(store_id);         mpgReq.setApiToken(api_token);         mpgReq.setTransaction(mpiTxn);         mpgReq.setStatusCheck(status_check);         mpgReq.send();         /***** REQUEST         *****/         try         {             Receipt receipt = mpgReq.getReceipt();             System.out.println("MpiMessage = " +             receipt.getMpiMessage());             System.out.println("MpiSuccess = " +             receipt.getMpiSuccess());             if (receipt.getMpiSuccess().equals("true"))             {                 System.out.println(receipt.getMpiInLineForm                 ());             }             }             catch (Exception e)             {                 e.printStackTrace();             }         } </pre>

Sample MpiTXN Request - CA	Sample MpiTXN Request - US
<pre> catch (Exception e) {     e.printStackTrace(); } } } // end TestResMpiTxn </pre>	<pre> } } // end TestResMpiTxn </pre>

### 3.6.2.1 TXN Response and Creating the Popup

The TXN request returns a response with one of several possible values. The get Message method of the response object returns “Y”, “U”, or “N”.

#### N

Purchase or Pre-Authorization can be sent as a crypt type of 6 (attempted authentication).

#### Y

A call to the API to create the VBV form is made.

#### U

(Returned for non-participating cards such as corporate cards)

Merchant can send the transaction with crypt\_type 7. However, the merchant is liable for chargebacks.

Below is the TXN response code. This code can be found from the store.java sample included in the download.

```

MpiResponse mpiRes = mpiReq.getResponse();
String crypt_type;

if (mpiRes.getMessage().equals("Y") )
{
    out.print(mpiRes.getInLineForm());
}
else {
    if (mpiRes.getMessage().equals("N") )
    {
        //send transaction using the mpg API
        // use crypt_type="6";
    }
    else // corporate cards, unable to authenticate or times out (eg. MPI is down)
    {
        //optional to send transaction using the mpg API in this case merchant
        //assumes liability, use crypt_type="7";
    }
}
}

```

## 3.6.3 Vault MPI Transaction - ResMpiTxn

### ResMpiTxn transaction object definition

```
ResMpiTxn resMpiTxn = new ResMpiTxn();
```

### HttpPostRequest object for ResMpiTxn transaction

```
HttpPostRequest mpgReq = new HttpPostRequest();
```

```
mpgReq.setTransaction(resMpiTxn);
```

### ResMpiTxn transaction values

For a full description of mandatory and optional values, see "Definition of Request Fields" on page 306

**Table 23: ResMpiTxn transaction object mandatory values**

Value	Type	Limits	Set method
Data key	String	25-character alpha-numeric	<code>resMpiTxn.setData(data_key);</code>
XID	String	20-character alpha-numeric	<code>resMpiTxn.setXid(xid);</code>
Amount	String	9-character decimal	<code>resMpiTxn.setAmount(amount);</code>
MD	String	1024-character alpha-numeric	<code>resMpiTxn.setMD(MD);</code>
Merchant URL	String	n/a	<code>resMpiTxn.setMerchantUrl(merchantUrl);</code>
Accept	String	n/a	<code>resMpiTxn.setAccept(accept);</code>
User Agent	String	n/a	<code>resMpiTxn.setUserAgent(userAgent);</code>
Expiry date	String	4-character alpha-numeric (YYMM format)	<code>resMpiTxn.setExpDate(exp-date);</code>

**Table 24: ResMpiTxn transaction optional values**

Value	Type	Limits	Set method
Status Check	Boolean	true/false	<code>mpgReq.setStatusCheck(status_check);</code>

Sample ResMpiTxn - CA	Sample ResMpiTxn - US
<pre>package Canada; import java.util.HashMap; import java.util.Map; import JavaAPI.*; public class TestCanadaResMpiTxn</pre>	<pre>package USA; import JavaAPI.*; public class TestUSAMpiTxn {     public static void main(String[] args)</pre>

Sample ResMpiTxn - CA	Sample ResMpiTxn - US
<pre> { public static void main(String[] args) { String store_id = "store5"; String api_token = "yesguy"; String data_key = "ot- 7hkuLdmybbHdUD0y2gCXQQx6J"; String amount = "1.00"; java.util.Date createDate = new java.util.Date (); String xid = "TEMPXID"+ createDate.getTime(); String MD = xid + "mycardinfo" + amount; String merchantUrl = "www.mystoreurl.com"; String accept = "true"; String userAgent = "Mozilla"; String processing_country_code = "CA"; String expdate = "1712"; boolean status_check = false; ResMpiTxn resMpiTxn = new ResMpiTxn(); resMpiTxn.setData(data_key); resMpiTxn.setXid(xid); resMpiTxn.setAmount(amount); resMpiTxn.setMD(MD); resMpiTxn.setMerchantUrl(merchantUrl); resMpiTxn.setAccept(accept); resMpiTxn.setUserAgent(userAgent); resMpiTxn.setExpDate(expdate); //*****OPTIONAL VARIABLES***** HttpPostRequest mpgReq = new HttpPostRequest (); mpgReq.setProcCountryCode(processing_country_ code); mpgReq.setTestMode(true); //false or comment out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(resMpiTxn); mpgReq.setStatusCheck(status_check); mpgReq.send(); /***** REQUEST *****/ try { Receipt receipt = mpgReq.getReceipt(); System.out.println("MpiMessage = " + receipt.getMpiMessage()); System.out.println("MpiSuccess = " + receipt.getMpiSuccess()); if (receipt.getMpiSuccess().equals("true")) { System.out.println(receipt.getMpiInLineForm ()); } } catch (Exception e) { e.printStackTrace(); } } </pre>	<pre> { String store_id = "monusqa002"; String api_token = "qatoken"; String amount = "1.00"; String xid = "12345678910111216007"; String MD = xid + "mycardinfo" + amount; String merchantUrl = "www.mystoreurl.com"; String accept = "true"; String userAgent = "Mozilla"; String processing_country_code = "US"; String pan = "4242424242424242"; String expdate = "1905"; boolean status_check = false; MpiTxn mpiTxn = new MpiTxn(); mpiTxn.setXid(xid); mpiTxn.setPan(pan); mpiTxn.setExpDate(expdate); mpiTxn.setAmount(amount); mpiTxn.setMD(MD); mpiTxn.setMerchantUrl(merchantUrl); mpiTxn.setHttpAccept(accept); mpiTxn.setHttpUserAgent(userAgent); //*****OPTIONAL VARIABLES***** HttpPostRequest mpgReq = new HttpPostRequest (); mpgReq.setProcCountryCode(processing_country_ code); mpgReq.setTestMode(true); //false or comment out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(mpiTxn); mpgReq.setStatusCheck(status_check); mpgReq.send(); /***** REQUEST *****/ try { Receipt receipt = mpgReq.getReceipt(); System.out.println("MpiMessage = " + receipt.getMpiMessage()); System.out.println("MpiSuccess = " + receipt.getMpiSuccess()); if (receipt.getMpiSuccess().equals("true")) { System.out.println(receipt.getMpiInLineForm ()); } } catch (Exception e) { e.printStackTrace(); } } // end TestResMpiTxn </pre>

Sample ResMpiTxn - CA	Sample ResMpiTxn - US
<pre>     }     } // end TestResMpiTxn </pre>	

### Vault response fields

For a list and explanation of (Receipt object) response fields that are available after sending this Vault transaction, see Definition of Response Fields (page 314).

## 3.6.4 MPI ACS Request Transaction

### MPI ACS Request transaction object definition

```
MpiAcs mpiAcs = new MpiAcs();
```

### HttpPostRequest object for MPI ACS Request transaction

```
HttpPostRequest mpgReq = new HttpPostRequest();
```

```
mpgReq.setTransaction(mpiAcs);
```

### MPI ACS Request transaction values

For a full description of mandatory and optional values, see "Definition of Request Fields" on page 306

**Table 25: MPI ACS Request transaction object mandatory values**

Value	Type	Limits	Set method
XID	String	20-character alpha-numeric	N/A
Amount	String	9-character decimal  Must contain at least 3 digits including two penny values.	<code>mpiAcs.setAmount(amount);</code>
MD	String	1024-character alpha-numeric	<code>mpiAcs.setMD(MD);</code>
PARes	String	TBD	<code>mpiAcs.setPaRes(PaRes);</code>

Sample MPI ACS Request - CA	Sample MPI ACS Request - US
<pre> package Canada; import JavaAPI.*; </pre>	<pre> package USA; import JavaAPI.*; </pre>

Sample MPI ACS Request - CA	Sample MPI ACS Request - US
<pre> public class TestCanadaMpiAcs {     public static void main(String[] args)     {         String store_id = "moneris";         String api_token = "hurgle";         String amount = "1.00";         String xid = "12345678910111214011";         String MD = xid + "mycardinfo" + amount;         String PaRes = "PaRes string";         String processing_country_code = "CA";         boolean status_check = false;         MpiAcs mpiAcs = new MpiAcs();         mpiAcs.setPaRes (PaRes);         mpiAcs.setMD (MD);         //*****OPTIONAL         VARIABLES*****         HttpsPostRequest mpgReq = new HttpsPostRequest         ();         mpgReq.setProcCountryCode (processing_country_         code);         mpgReq.setTestMode(true); //false or comment         out this line for production transactions         mpgReq.setStoreId(store_id);         mpgReq.setApiToken (api_token);         mpgReq.setTransaction (mpiAcs);         mpgReq.setStatusCheck (status_check);         mpgReq.send();         /***** REQUEST         *****/         try         {             Receipt receipt = mpgReq.getReceipt();             System.out.println("MpiMessage = " +             receipt.getMpiMessage());             System.out.println("MpiSuccess = " +             receipt.getMpiSuccess());             if (receipt.getMpiSuccess().equals("true"))             {                 System.out.println("CAVV = " +                 receipt.getMpiCavv());                 System.out.println("Crypt Type = " +                 receipt.getMpiEci());             }         }         catch (Exception e)         {             e.printStackTrace();         }     } } // end TestResMpiTxn </pre>	<pre> public class TestUSAMpiAcs {     public static void main(String[] args)     {         String store_id = "monusqa006";         String api_token = "qatoken";         String amount = "1.00";         String xid = "12345678910111214005";         String MD = xid + "mycardinfo" + amount;         String PaRes = "PaRes string";         String processing_country_code = "US";         boolean status_check = false;         MpiAcs mpiAcs = new MpiAcs();         mpiAcs.setPaRes (PaRes);         mpiAcs.setMD (MD);         //*****OPTIONAL         VARIABLES*****         HttpsPostRequest mpgReq = new HttpsPostRequest         ();         mpgReq.setProcCountryCode (processing_country_         code);         mpgReq.setTestMode(true); //false or comment         out this line for production transactions         mpgReq.setStoreId(store_id);         mpgReq.setApiToken (api_token);         mpgReq.setTransaction (mpiAcs);         mpgReq.setStatusCheck (status_check);         mpgReq.send();         /***** REQUEST         *****/         try         {             Receipt receipt = mpgReq.getReceipt();             System.out.println("MpiMessage = " +             receipt.getMpiMessage());             System.out.println("MpiSuccess = " +             receipt.getMpiSuccess());             System.out.println("Message = " +             receipt.getMessage());             if (receipt.getMpiSuccess().equals("true"))             {                 System.out.println("Cavv = " +                 receipt.getMpiCavv());             }         }         catch (Exception e)         {             e.printStackTrace();         }     } } // end TestResMpiTxn </pre>

### 3.6.4.1 ACS Response and Forming a Transaction

The ACS response contains the CAVV value and the Electronic Commerce Indicator (ECI). These values are to be passed to the transaction engine using the cavv Purchase or cavv Pre-Authorization request. Please see the documentation provided by your payment solution.

Outlined below is how to send a transaction to Moneris Gateway.

```

if ( mpiRes.getSuccess().equals("true") )
{
    //Send transaction to host using CAVV purchase or CAVV preauth, refer to sample
    //code for Moneris Gateway. Call mpiRes.getCavv() to obtain the CAVV value.
    //If you are using preauth/capture model, be sure to call getMessage() so the
    //value can be stored and used in the capture transaction after on to protect
    //your chargeback liability. (e.g. getMPIMessage()= A = crypt type of 6 for
    //follow on transaction and getMPIMessage() = Y = crypt type of 5 for follow on
    //transaction.
}
else
{
    if (mpiRes.getMessage().equals("N"))
    {
        //Do not send transaction as the cardholder failed authentication.
    }
    else
    {
        //Optional to send transaction using the mpg API. In this case merchant
        //assumes liability.
    }
}
}

```

### 3.6.5 Cavv Purchase

#### CavvPurchase transaction object definition

```
CavvPurchase cavvPurchase = new CavvPurchase();
```

#### HttpPostRequest object for Cavv Purchase transaction

```
HttpPostRequest mpgReq = new HttpPostRequest();
```

```
mpgReq.setTransaction(cavvPurchase);
```

#### Cavv Purchase transaction values

For a full description of mandatory and optional values, see "Definition of Request Fields" on page 306

**Table 26: CavvPurchase transaction object mandatory values**

Value	Type	Limits	Set method
Order ID	String	50-character alpha-numeric	cavvPurchase.setOrderId(order_id);
Amount	String	9-character decimal	cavvPurchase.setAmount(amount);
Credit card number	String	20-character alpha-numeric	cavvPurchase.setPan(pan);



**Table 26: CavvPurchase transaction object mandatory values**

Value	Type	Limits	Set method
Expiry date	String	4-character alpha-numeric (YYMM format)	<code>cavvPurchase.setExpDate (exp-date) ;</code>
CAVV	String	50-character alpha-numeric	<code>cavvPurchase.setCavv (cavv) ;</code>
E-commerce indicator	String	1-character alpha-numeric	<code>cavvPurchase.setCryptType (crypt_type) ;</code>

**Table 1: CavvPurchase transaction object optional values**

Value	Type	Limits	Set Method
Status Check	Boolean	true/false	<code>mpgReq.setStatusCheck (status_check) ;</code>
Customer ID	String	50-character alpha-numeric	<code>cavvPurchase.setCustId (custid) ;</code>
Dynamic descriptor	String	20-character alpha-numeric	<code>cavvPurchase.setDynamicDescriptor (dynamic_descriptor) ;</code>
Commercial card invoice <sup>1</sup>	String	17-character alpha-numeric	<code>cavvPurchase.setCommcardInvoice (commcard_invoice) ;</code>
Commercial card tax amount <sup>2</sup>	String	9-character decimal Must contain at least 3 digits, two of which must be penny values.	<code>cavvPurchase.setCommcardTaxAmount (commcard_tax_amount) ;</code>
Customer information	Object	Not applicable. See Appendix D (page 330)	<code>CustInfo customer = new CustInfo () ;</code>  <code>cavvPurchase.setCustInfo (customer) ;</code>

<sup>1</sup>Available to US integrations only.<sup>2</sup>Available to US integrations only.

Value	Type	Limits	Set Method
AVS	Object	Not applicable. See Appendix E (page 336)	<pre>AvsInfo avsCheck = new AvsInfo();  cavvPurchase.setAvsInfo (avsCheck);</pre>
CVD	Object	Not applicable. See Appendix F (page 342)	<pre>CvdInfo cvdCheck = new CvdInfo();  cavvPurchase.setCvdInfo (cvdCheck);</pre>
Convenience fee	Object	Not applicable. See Appendix H (page 352).	<pre>ConvFeeInfo convFeeInfo = new ConvFeeInfo();  cavvPurchase.setConvFeeInfo (convFeeInfo);</pre>

Sample CavvPurchase - CA	Sample CavvPurchase - US
<pre>package Canada; import JavaAPI.*; public class TestCanadaCavvPurchase {     public static void main(String[] args)     {         String store_id = "store5";         String api_token = "yesguy";         java.util.Date createDate = new java.util.Date             ();         String order_id = "Test"+createDate.getTime();         String cust_id = "CUS887H67";         String amount = "10.42";         String pan = "4242424242424242";         String expdate = "1901"; //YYMM         String cavv = "AAABBJg0VhI0VniQEjRWAAAAA=";         String dynamic_descriptor = "123456";         String processing_country_code = "CA";         String crypt_type = "5";         boolean status_check = false;         CavvPurchase cavvPurchase = new CavvPurchase             ();         cavvPurchase.setOrderId(order_id);         cavvPurchase.setCustId(cust_id);         cavvPurchase.setAmount(amount);         cavvPurchase.setPan(pan);         cavvPurchase.setExpdate(expdate);         cavvPurchase.setCavv(cavv);         cavvPurchase.setCryptType(crypt_type);         //Mandatory for AMEX only         cavvPurchase.setDynamicDescriptor(dynamic_             descriptor);         //cavvPurchase.setWalletIndicator("APP");         //set only for wallet transactions. e.g</pre>	<pre>package USA; import JavaAPI.*; public class TestUSACavvPurchase {     public static void main(String[] args)     {         String store_id = "monusqa002";         String api_token = "qatoken";         java.util.Date createDate = new java.util.Date             ();         String order_id = "Test"+createDate.getTime();         String cust_id = "B_Urlac_54";         String amount = "10.42";         String pan = "4005554444444403";         String expdate = "1901"; //YYMM format         String cavv = "AAABBJg0VhI0VniQEjRWAAAAA=";         String commcard_invoice = "COINV982";         String commcard_tax_amount = "1.00";         String dynamic_descriptor = "my descriptor";         String processing_country_code = "US";         boolean status_check = false;         AvsInfo avsCheck = new AvsInfo();         avsCheck.setAvsStreetNumber("212");         avsCheck.setAvsStreetName("Payton Street");         avsCheck.setAvsZipCode("M1M1M1");         CvdInfo cvdCheck = new CvdInfo();         cvdCheck.setCvdIndicator("1");         cvdCheck.setCvdValue("099");         CavvPurchase cavvPurchase = new CavvPurchase             ();         cavvPurchase.setOrderId(order_id);         cavvPurchase.setCustId(cust_id);         cavvPurchase.setAmount(amount);         cavvPurchase.setPan(pan);         cavvPurchase.setExpdate(expdate);</pre>

Sample CavvPurchase - CA	Sample CavvPurchase - US
<pre> APPLE PAY HttpPostRequest mpgReq = new HttpsPostRequest (); mpgReq.setProcCountryCode (processing_country_ code); mpgReq.setTestMode(true); //false or comment out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(cavvPurchase); mpgReq.setStatusCheck(status_check); mpgReq.send(); try { Receipt receipt = mpgReq.getReceipt(); System.out.println("CardType = " + receipt.getCardType()); System.out.println("TransAmount = " + receipt.getTransAmount()); System.out.println("TxnNumber = " + receipt.getTxnNumber()); System.out.println("ReceiptId = " + receipt.getReceiptId()); System.out.println("TransType = " + receipt.getTransType()); System.out.println("ReferenceNum = " + receipt.getReferenceNum()); System.out.println("ResponseCode = " + receipt.getResponseCode()); System.out.println("ISO = " + receipt.getISO ()); System.out.println("BankTotals = " + receipt.getBankTotals()); System.out.println("Message = " + receipt.getMessage()); System.out.println("AuthCode = " + receipt.getAuthCode()); System.out.println("Complete = " + receipt.getComplete()); System.out.println("TransDate = " + receipt.getTransDate()); System.out.println("TransTime = " + receipt.getTransTime()); System.out.println("Ticket = " + receipt.getTicket()); System.out.println("TimedOut = " + receipt.getTimedOut()); System.out.println("CavvResultCode = " + receipt.getCavvResultCode()); } catch (Exception e) { e.printStackTrace(); } } </pre>	<pre> cavvPurchase.setCavv(cavv); cavvPurchase.setDynamicDescriptor(dynamic_ descriptor); cavvPurchase.setCommcardInvoice(commcard_ invoice); cavvPurchase.setCommcardTaxAmount(commcard_ tax_amount); cavvPurchase.setAvsInfo(avsCheck); cavvPurchase.setCvdInfo(cvdCheck); HttpPostRequest mpgReq = new HttpsPostRequest (); mpgReq.setProcCountryCode (processing_country_ code); mpgReq.setTestMode(true); //false or comment out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(cavvPurchase); mpgReq.setStatusCheck(status_check); mpgReq.send(); try { Receipt receipt = mpgReq.getReceipt(); System.out.println("CardType = " + receipt.getCardType()); System.out.println("TransAmount = " + receipt.getTransAmount()); System.out.println("TxnNumber = " + receipt.getTxnNumber()); System.out.println("ReceiptId = " + receipt.getReceiptId()); System.out.println("TransType = " + receipt.getTransType()); System.out.println("ReferenceNum = " + receipt.getReferenceNum()); System.out.println("ResponseCode = " + receipt.getResponseCode()); System.out.println("ISO = " + receipt.getISO ()); System.out.println("BankTotals = " + receipt.getBankTotals()); System.out.println("Message = " + receipt.getMessage()); System.out.println("AuthCode = " + receipt.getAuthCode()); System.out.println("Complete = " + receipt.getComplete()); System.out.println("TransDate = " + receipt.getTransDate()); System.out.println("TransTime = " + receipt.getTransTime()); System.out.println("Ticket = " + receipt.getTicket()); System.out.println("TimedOut = " + receipt.getTimedOut()); System.out.println("Avs Response = " + receipt.getAvsResultCode()); } </pre>

Sample CavvPurchase - CA	Sample CavvPurchase - US
	<pre> System.out.println("Cvd Response = " +     receipt.getCvdResultCode()); //System.out.println("CardLevelResult = " +     receipt.getCardLevelResult()); System.out.println("CavvResultCode = " +     receipt.getCavvResultCode()); //System.out.println("StatusCode = " +     receipt.getStatusCode()); //System.out.println("StatusMessage = " +     receipt.getStatusMessage()); } catch (Exception e) {     e.printStackTrace(); } } } </pre>

### 3.6.6 Cavv Pre-Authorization

#### Cavv Pre-Authorization transaction object definition

```
CavvPreAuth cavvPreauth = new CavvPreAuth();
```

#### HttpPostRequest object for Cavv Pre-Authorization transaction

```
HttpPostRequest mpgReq = new HttpPostRequest();
```

```
mpgReq.setTransaction(cavvPreauth);
```

#### Cavv Pre-Authorization transaction values

For a full description of mandatory and optional values, see "Definition of Request Fields" on page 306

**Table 27: CavvPre-Authorization object mandatory values**

Value	Type	Limits	Set method
Order ID	String	50-character alpha-numeric	<code>cavvPreauth.setOrderId(order_id);</code>
Amount	String	9-character decimal	<code>cavvPreauth.setAmount(amount);</code>
Credit card number	String	20-character numeric	<code>cavvPreauth.setPan(pan);</code>

Value	Type	Limits	Set method
Cardholder Authentication Verification Value (CAVV)	String	50-character alphanumeric	<code>cavvPreauth.setCavv(cavv);</code>
Expiry date	String	4-character numeric	<code>cavvPreauth.setExpDate(exp-date);</code>
E-commerce indicator	String	1-character alphanumeric	<code>cavvPreauth.setCryptType(crypt_type);</code>

Table 1: Cavv Pre-Authorization object optional values

Value	Type	Limits	Set method
Status Check	Boolean	true/false	<code>mpgReq.setStatusCheck(status_check);</code>
Customer ID	String	50-character alphanumeric	<code>cavvPreauth.setCustId(custid);</code>
Dynamic descriptor	String	20-character alphanumeric	<code>cavvPreauth.setDynamicDescriptor(dynamic_descriptor);</code>
AVS	Object	Not applicable. See Appendix E (page 336).	<pre> AvsInfo avsCheck = new AvsInfo();  cavvPreauth.setAvsInfo (avsCheck); </pre>
CVD	Object	Not applicable. See Appendix F (page 342).	<pre> CvdInfo cvdCheck = new CvdInfo();  cavvPreauth.setCvdInfo (cvdCheck); </pre>

Sample Cavv Pre-Authorization - CA	Sample Cavv Pre-Authorization - US
<pre> package Canada; import JavaAPI.*; public class TestCanadaCavvPreauth { public static void main(String[] args) { String store_id = "store5"; String api_token = "yesguy"; java.util.Date createDate = new java.util.Date (); </pre>	<pre> package USA; import JavaAPI.*; public class TestUSACavvPreAuth { public static void main(String[] args) { String store_id = "monusqa002"; String api_token = "qatoken"; java.util.Date createDate = new java.util.Date (); </pre>

Sample Cavv Pre-Authorization - CA	Sample Cavv Pre-Authorization - US
<pre>String order_id = "Test"+createDate.getTime(); String cust_id = "CUS887H67"; String amount = "10.42"; String pan = "4242424242424242"; String expdate = "1911"; //YYMM format String cavv = "AAABBJg0VhI0VniQEjRWAAAAA="; String dynamic_descriptor = "123456"; String processing_country_code = "CA"; String crypt_type = "5"; boolean status_check = false; CavvPreAuth cavvPreauth = new CavvPreAuth(); cavvPreauth.setOrderId(order_id); cavvPreauth.setCustId(cust_id); cavvPreauth.setAmount(amount); cavvPreauth.setPan(pan); cavvPreauth.setExpdate(expdate); cavvPreauth.setCavv(cavv); cavvPreauth.setCryptType(crypt_type); //Mandatory for AMEX only cavvPreauth.setDynamicDescriptor(dynamic_descriptor); //cavvPreauth.setWalletIndicator("APP"); //set //only for wallet transactions. e.g APPLE //PAY HttpsPostRequest mpgReq = new HttpsPostRequest(); mpgReq.setProcCountryCode(processing_country_code); mpgReq.setTestMode(true); //false or comment //out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(cavvPreauth); mpgReq.setStatusCheck(status_check); mpgReq.send(); try { Receipt receipt = mpgReq.getReceipt(); System.out.println("CardType = " + receipt.getCardType()); System.out.println("TransAmount = " + receipt.getTransAmount()); System.out.println("TxnNumber = " + receipt.getTxnNumber()); System.out.println("ReceiptId = " + receipt.getReceiptId()); System.out.println("TransType = " + receipt.getTransType()); System.out.println("ReferenceNum = " + receipt.getReferenceNum()); System.out.println("ResponseCode = " + receipt.getResponseCode()); System.out.println("ISO = " + receipt.getISO()); System.out.println("BankTotals = " + receipt.getBankTotals()); System.out.println("Message = " + receipt.getMessage());</pre>	<pre>String order_id = "Test"+createDate.getTime(); String cust_id = "B_Urlac_54"; String amount = "1.00"; String pan = "4242424242424242"; String expdate = "1902"; //YYMM format String cavv = "AAABBJg0VhI0VniQEjRWAAAAA="; String crypt_type = "5"; String dynamic_descriptor = "123456"; String processing_country_code = "US"; boolean status_check = false; AvsInfo avsCheck = new AvsInfo(); avsCheck.setAvsStreetNumber("212"); avsCheck.setAvsStreetName("Payton Street"); avsCheck.setAvsZipCode("M1M1M1"); CvdInfo cvdCheck = new CvdInfo(); cvdCheck.setCvdIndicator("1"); cvdCheck.setCvdValue("099"); CavvPreAuth cavvPreauth = new CavvPreAuth(); cavvPreauth.setOrderId(order_id); cavvPreauth.setCustId(cust_id); cavvPreauth.setAmount(amount); cavvPreauth.setPan(pan); cavvPreauth.setExpdate(expdate); cavvPreauth.setCavv(cavv); cavvPreauth.setCryptType(crypt_type); //Mandatory for AMEX only cavvPreauth.setDynamicDescriptor(dynamic_descriptor); cavvPreauth.setAvsInfo(avsCheck); cavvPreauth.setCvdInfo(cvdCheck); HttpsPostRequest mpgReq = new HttpsPostRequest(); mpgReq.setProcCountryCode(processing_country_code); mpgReq.setTestMode(true); //false or comment //out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(cavvPreauth); mpgReq.setStatusCheck(status_check); mpgReq.send(); try { Receipt receipt = mpgReq.getReceipt(); System.out.println("CardType = " + receipt.getCardType()); System.out.println("TransAmount = " + receipt.getTransAmount()); System.out.println("TxnNumber = " + receipt.getTxnNumber()); System.out.println("ReceiptId = " + receipt.getReceiptId()); System.out.println("TransType = " + receipt.getTransType()); System.out.println("ReferenceNum = " + receipt.getReferenceNum()); System.out.println("ResponseCode = " + receipt.getResponseCode());</pre>

Sample Cavv Pre-Authorization - CA	Sample Cavv Pre-Authorization - US
<pre> System.out.println("AuthCode = " +     receipt.getAuthCode()); System.out.println("Complete = " +     receipt.getComplete()); System.out.println("TransDate = " +     receipt.getTransDate()); System.out.println("TransTime = " +     receipt.getTransTime()); System.out.println("Ticket = " +     receipt.getTicket()); System.out.println("TimedOut = " +     receipt.getTimedOut()); System.out.println("CavvResultCode = " +     receipt.getCavvResultCode()); } catch (Exception e) { e.printStackTrace(); } } } </pre>	<pre> System.out.println("ISO = " + receipt.getISO ()); System.out.println("BankTotals = " +     receipt.getBankTotals()); System.out.println("Message = " +     receipt.getMessage()); System.out.println("AuthCode = " +     receipt.getAuthCode()); System.out.println("Complete = " +     receipt.getComplete()); System.out.println("TransDate = " +     receipt.getTransDate()); System.out.println("TransTime = " +     receipt.getTransTime()); System.out.println("Ticket = " +     receipt.getTicket()); System.out.println("TimedOut = " +     receipt.getTimedOut()); System.out.println("Avs Response = " +     receipt.getAvsResultCode()); System.out.println("Cvd Response = " +     receipt.getCvdResultCode()); //System.out.println("CardLevelResult = " +     receipt.getCardLevelResult()); System.out.println("CavvResultCode = " +     receipt.getCavvResultCode()); } catch (Exception e) { e.printStackTrace(); } } } catch (Exception e) { e.printStackTrace(); } } } </pre>

### 3.6.7 Cavv Result Codes for Verified by Visa

**Table 28: CAVV result codes for VbV**

Code	Message	Significance
0	CAVV authentication results invalid	For this transaction, you may not receive protection from chargebacks as a result of using VbV because the CAVV was considered invalid at the time the financial transaction was processed.

Table 28: CAVV result codes for VbV (continued)

Code	Message	Significance
		Check that you are following the VbV process correctly and passing the correct data in our transactions.
1	CAVV failed validation; authentication	Provided that you have implemented the VbV process correctly, the liability for this transaction should remain with the Issuer for chargeback reason codes covered by Verified by Visa.
2	CAVV passed validation; authentication	The CAVV was confirmed as part of the financial transaction. This transaction is a fully authenticated VbV transaction (ECI 5)
3	CAVV passed validation; attempt	The CAVV was confirmed as part of the financial transaction. This transaction is an attempted VbV transaction (ECI 6)
4	CAVV failed validation; attempt	Provided that you have implemented the VbV process correctly the liability for this transaction should remain with the Issuer for chargeback reason codes covered by Verified by Visa.
7	CAVV failed validation; attempt (US issued cards only)	<p>Please check that you are following the VbV process correctly and passing the correct data in your transactions.</p> <p>Provided that you have implemented the VbV process correctly the liability for this transaction should be the same as an attempted transaction (ECI 6)</p>
8	CAVV passed validation; attempt (US issued cards only)	The CAVV was confirmed as part of the financial transaction. This transaction is an attempted VbV transaction (ECI 6)
9	CAVV failed validation; attempt (US issued cards only)	Please check that you are following the VbV process correctly and



**Table 28: CAVV result codes for VbV (continued)**

Code	Message	Significance
		<p>passing the correct data in our transactions.</p> <p>Provided that you have implemented the VbV process correctly the liability for this transaction should be the same as an attempted transaction (ECI 6)</p>
A	CAVV passed validation; attempt (US issued cards only)	The CAVV was confirmed as part of the financial transaction. This transaction is an attempted VbV transaction (ECI 6)
B	CAVV passed validation; information only, no liability shift	The CAVV was confirmed as part of the financial transaction. However, this transaction does not qualify for the liability shift. Treat this transaction the same as an ECI 7.

### 3.6.8 Vault Cavv Purchase

#### Vault Cavv Purchase transaction object definition

```
ResCavvPurchaseCC resCavvPurchaseCC = new ResCavvPurchaseCC();
```

#### HttpPostRequest object for Vault Cavv Purchase transaction

```
HttpPostRequest mpgReq = new HttpPostRequest();
```

```
mpgReq.setTransaction(resCavvPurchaseCC);
```

## Vault Cavv Purchase transaction details

**Table 29: Vault CavvPurchase transaction object mandatory values**

Value	Type	Limits	Set method
Data Key	String	25-character alpha-numeric	<code>resCavvPurchaseCC.setData(data_key);</code>
Order ID	String	50-character alpha-numeric	<code>resCavvPurchaseCC</code>
Amount	String	9-character decimal	<code>resCavvPurchaseCC.setAmount(amount);</code>
Cardholder Authentication Verification Value (CAVV)	String	50-character alpha-numeric	<code>resCavvPurchaseCC.setCavv(cavv);</code>
E-commerce indicator	String	1-character alpha-numeric	<code>.setCryptType(crypt_type);</code>

**Table 30: Vault CavvPurchase transaction object optional values**

Value	Type	Limits	Set method
Customer ID	String	50-character alpha-numeric	<code>resCavvPurchaseCC.setCustId(custid);</code>
Status Check	Boolean	true/false	<code>mpgReq.setStatusCheck(status_check);</code>
Expiry date	String	4-character alpha-numeric (YYMM format)	<code>resCavvPurchaseCC.setExpDate(expdate);</code>

Sample Vault Cavv Purchase - CA	Sample Vault Cavv Purchase - US
<pre>package Canada; import JavaAPI.*; public class TestCanadaResCavvPurchaseCC {     public static void main(String[] args)     {         String store_id = "store1";         String api_token = "yesguy";</pre>	

Sample Vault Cavv Purchase - CA	Sample Vault Cavv Purchase - US
<pre> String data_key = "4INQRlA8ocxD0oafSz50LADXY"; java.util.Date createDate = new java.util.Date (); String order_id = "Test"+createDate.getTime(); String amount = "1.00"; String cust_id = "customer1"; //if sent will     be submitted, otherwise cust_id from     profile will be used String cavv = "AAABBJg0VhI0VniQEjRWAAAAA"; String processing_country_code = "CA"; String exp_date = "1901"; boolean status_check = false; ResCavvPurchaseCC resCavvPurchaseCC = new     ResCavvPurchaseCC(); resCavvPurchaseCC.setOrderId(order_id); resCavvPurchaseCC.setData(data_key); resCavvPurchaseCC.setCustId(cust_id); resCavvPurchaseCC.setAmount(amount); resCavvPurchaseCC.setCavv(cavv); resCavvPurchaseCC.setExpDate(exp_date); HttpPostRequest mpgReq = new HttpsPostRequest (); mpgReq.setProcCountryCode(processing_country_     code); mpgReq.setTestMode(true); //false or comment     out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(resCavvPurchaseCC); mpgReq.setStatusCheck(status_check); mpgReq.send(); try { Receipt receipt = mpgReq.getReceipt(); System.out.println("DataKey = " +     receipt.getDataKey()); System.out.println("ReceiptId = " +     receipt.getReceiptId()); System.out.println("ReferenceNum = " +     receipt.getReferenceNum()); System.out.println("ResponseCode = " +     receipt.getResponseCode()); System.out.println("AuthCode = " +     receipt.getAuthCode()); System.out.println("Message = " +     receipt.getMessage()); System.out.println("TransDate = " +     receipt.getTransDate()); System.out.println("TransTime = " +     receipt.getTransTime()); System.out.println("TransType = " +     receipt.getTransType()); System.out.println("Complete = " +     receipt.getComplete()); System.out.println("TransAmount = " +     receipt.getTransAmount()); System.out.println("CardType = " +     receipt.getCardType()); </pre>	

Sample Vault Cavv Purchase - CA	Sample Vault Cavv Purchase - US
<pre> System.out.println("TxnNumber = " +     receipt.getTxnNumber()); System.out.println("TimedOut = " +     receipt.getTimedOut()); System.out.println("ResSuccess = " +     receipt.getResSuccess()); System.out.println("PaymentType = " +     receipt.getPaymentType()); System.out.println("CavvResultCode = " +     receipt.getCavvResultCode()); //ResolveData System.out.println("Cust ID = " +     receipt.getResCustId()); System.out.println("Phone = " +     receipt.getResPhone()); System.out.println("Email = " +     receipt.getResEmail()); System.out.println("Note = " +     receipt.getResNote()); System.out.println("Masked Pan = " +     receipt.getResMaskedPan()); System.out.println("Exp Date = " +     receipt.getResExpdate()); System.out.println("Crypt Type = " +     receipt.getResCryptType()); System.out.println("Avs Street Number = " +     receipt.getResAvsStreetNumber()); System.out.println("Avs Street Name = " +     receipt.getResAvsStreetName()); System.out.println("Avs Zipcode = " +     receipt.getResAvsZipcode()); } catch (Exception e) {     e.printStackTrace(); } } </pre>	

### 3.6.9 Vault Cavv Pre-authorization

#### Vault Cavv Pre-authorization transaction object definition

```
CavvPreAuth resCavvPreauthCC = new CavvPreAuth();
```

#### HttpPostRequest object for Vault Cavv Pre-authorization

```

HttpPostRequest mpgReq = new HttpPostRequest();

mpgReq.setTransaction(resCavvPreauthCC);

```

**Vault Cavv Pre-authorization transaction details****Table 31: Vault Cavv Pre-Authorization object mandatory values**

Value	Type	Limits	Set method
Order ID	String	50-character alpha-numeric	<code>resCavvPreauthCC.setOrderId(order_id);</code>
Amount	String	9-character decimal	<code>resCavvPreauthCC.setAmount(amount);</code>
Credit card number	String	20-character numeric	<code>resCavvPreauthCC.setPan(pan);</code>
CAVV	String	50-character alpha-numeric	<code>resCavvPreauthCC.setCavv(cavv);</code>
Expiry date	String	4-character numeric	<code>resCavvPreauthCC.setExpDate(expdate);</code>
E-commerce indicator	String	1-character alpha-numeric	<code>resCavvPreauthCC.setCryptType(crypt_type);</code>

**Table 32: Vault Cavv Pre-Authorization object optional values**

Value	Type	Limits	Set method
Customer ID	String	50-character alphanumeric	<code>resCavvPreauthCC.setCustId(custid);</code>
Status Check	Boolean	true/false	<code>mpgReq.setStatusCheck(status_check);</code>
Dynamic descriptor	String	20-character alpha-numeric	<code>resCavvPreauthCC.setDynamicDescriptor(dynamic_descriptor);</code>
AVS	Object	Not applicable. See Appendix E (page 336).	<code>resCavvPreauthCC.setAvsInfo(avsCheck);</code>
CVD	Object	Not applicable. See Appendix F (page 342).	<code>resCavvPreauthCC.setCvdInfo(cvdCheck);</code>

## 4 INTERAC® Online Payment

- 4.1 About INTERAC® Online Payment Transactions
- 4.2 Other Documents and References
- 4.3 Website and Certification Requirements
- 4.4 Transaction Flow for INTERAC® Online Payment
- 4.5 Sending an INTERAC® Online Payment Purchase Transaction
- 4.6 INTERAC® Online Payment Purchase
- 4.7 INTERAC® Online Payment Refund
- 4.8 INTERAC® Online Payment Field Definitions

### 4.1 About INTERAC® Online Payment Transactions

The INTERAC® Online Payment method offers cardholders the ability to pay using online banking. This payment method can be combined with the Moneris GatewayJava API solution to allow online payments using credit and debit cards.

INTERAC® Online Payment transactions via the Java API require two steps:

1. The cardholder guarantees the funds for the purchase amount using their online banking process.
2. The merchant confirms the payment by sending an INTERAC® Online Payment purchase request to Moneris using the Java API.

Any of the transaction objects that are defined in this section can be passed to the `HttpPostRequest` connection object defined in Section 12.5 (page 286).

INTERAC® Online Payment transactions are available to **Canadian integrations** only.

### 4.2 Other Documents and References

INTERAC® Online Payment is offered by Acxsys Corporation, which is also a licensed user of the *Interac* logo. Refer to the following documentation and websites for additional details.

#### **INTERAC® Online PaymentMerchant Guideline**

Visit the Moneris Developer Portal (<https://developer.moneris.com>) to access the latest documentation and downloads.

This details the requirements for each page consumers visit on a typical INTERAC® Online Payment merchant website. It also details the requirements that can be displayed on any page (that is, requirements that are not page-specific).

#### **Logos**

Visit the Moneris Developer Portal (<https://developer.moneris.com>) to access the logos and downloads.

## 4.3 Website and Certification Requirements

### 4.3.1 Things to provide to Moneris

Refer to the Merchant Guidelines referenced in Section 4.2 for instructions on proper use of logos and the term "INTERAC® Online Payment". You need to provide Moneris with the following registration information:

- Merchant logo to be displayed on the INTERAC® Online Payment Gateway page
  - In both French and English
  - 120 × 30 pixels
  - Only PNG format is supported.
- Merchant business name
  - In both English and French
  - Maximum 30 characters.
- List of all referrer URLs. That is, URLs from which the customer may be redirected to the INTERAC® Online Payment gateway.
- List of all URLs that may appear in the IDEBIT\_FUNDEDURL field of the https form POST to the INTERAC® Online Payment Gateway.
- List of all URLs that may appear in the IDEBIT\_NOTFUNDEDURL field of the https form POST to the INTERAC® Online Payment Gateway.

Note that if your test and production environments are different, provide the above information for both environments.

### 4.3.2 Certification process

#### Test cases

All independent merchants and third-party service/shopping cart providers must pass the certification process by conducting all the test cases outlined in Appendix N (page 377) and "Third-Party Service Provider Checklists for INTERAC® Online Payment Certification Testing" on page 381 respectively. This is required after you have completed all of your testing.

Any major changes to your website after certification (with respect to the INTERAC® Online Payment functionality) require the site to be re-certified by completing the test cases again.

Appendix Q (page 389) is the Certification Test Case Detail showing all the information and requirements for each test case.

#### Screenshots

You must provide Moneris with screenshots of your check-out process showing examples of approved and declined transactions using the INTERAC® Online Payment service.

## Checklists

To consistently portray the INTERAC Online service as a secure payment option, you must complete the respective Merchant Requirement checklist in Appendix N (page 377) or Appendix O (page 381) accordingly. The detailed descriptions of the requirements in these checklists can be found in the INTERAC® Online Payment Merchant Guidelines document referred to in 4.2 (page 70). If any item does not apply, mark it as "N/A".

After completion, fax or email the results to the Moneris Integration Support help desk for review before implementing the change into the production environment.

### 4.3.3 Client Requirements

## Checklists

As a merchant using an INTERAC® Online Payment-certified third-party solution, your clients must complete the Merchant Checklists for INTERAC® Online Payment Certification form (Appendix P, page 386). They will **not** be required to complete any of the test cases.

Your clients must also complete the Merchant Requirement checklist (Appendix P, page 386). Ensure that your product documentation properly instructs your clients to fax or email the results to the Moneris Integration Support helpdesk for registration purposes.

## Screenshots

Your clients must provide Moneris with screenshots of their check-out process that show examples of approved and declined transactions using INTERAC® Online Payment.

### 4.3.4 Delays

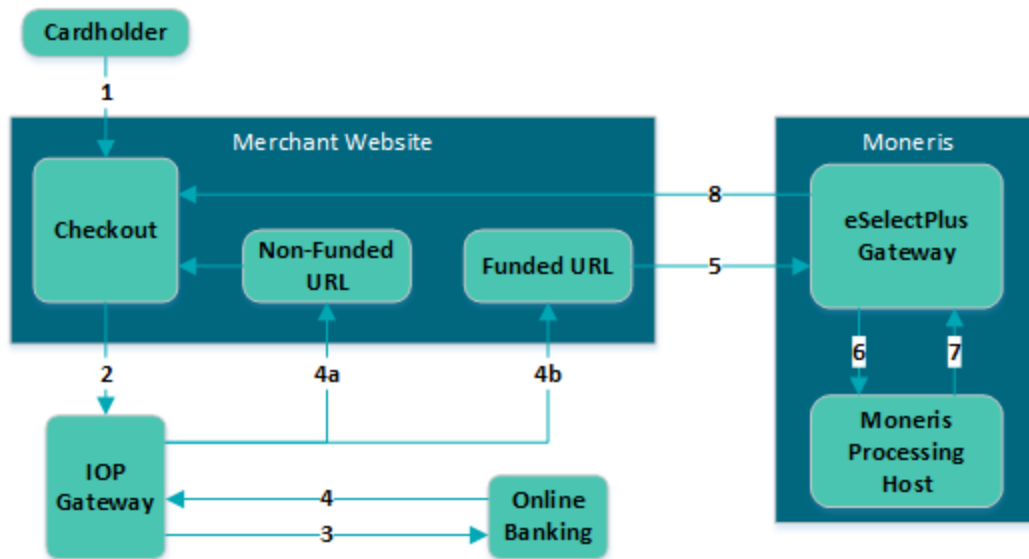
Note that merchants that fall under the following category codes listed in Table 33 may experience delays in the certification or registration process of up to 7 days.

**Table 33: Category codes that might introduce certification/registration delays**

Category code	Merchant type/name
4812	Telecommunication equipment including telephone sales
4829	Money transfer—merchant
5045	Computers, computer peripheral equipment, software
5732	Electronic sales
6012	Financial institution—merchandise and services
6051	Quasi cash—merchant
6530	Remote stored value load—merchant
6531	Payment service provider—money transfer for a purchase
6533	Payment service provider—merchant—payment transaction



## 4.4 Transaction Flow for INTERAC® Online Payment



**Figure 2: INTERAC® Online Payment transaction flow diagram**

1. Customer selects the INTERAC® Online Payment option on the merchant's web store.
2. Merchant redirects the customer to the IOP gateway to select a financial institution (issuer) of choice. This step involves form-posting the following required variables over the HTTPS protocol:
  - IDEBIT\_MERCHNUM
  - IDEBIT\_AMOUNT<sup>1</sup>
  - IDEBIT\_CURRENCY
  - IDEBIT\_FUNDEDURL
  - IDEBIT\_NOTFUNDEDURL
  - IDEBIT\_MERCHLANG
  - IDEBIT\_VERSIONIDEBIT\_TERMID - optional
  - IDEBIT\_INVOICE - optional
  - IDEBIT\_MERCHDATA - optional

3. Customer selects an issuer, and is directed to the online banking site. Customer completes the online banking process and guarantees the funds for the purchase.
4. Depending on the results of step 4.4, the issuer re-directs the customer through the IOP Gateway to either the merchant's non-funded URL (4a) or funded URL (4b). Both URLs can appear on the same page. The funded/non-funded URLs must validate the variables posted back according to 4.8 (page 79) before continuing.

4.4 shows the variables that are posted back in the re-direction.

If the customer is directed to the non-funded URL, return to step 4.4 and ask for another means of payment.

If the customer is directed to the funded URL, continue to the next step.

<sup>1</sup>This value is expressed in cents. Therefore, \$1 is input as 100

5. Merchant sends an INTERAC® Online Payment purchase request to Moneris Gateway while displaying the "Please wait...." message to the customer. This should be done within 30 minutes of receiving the response in step 4.4.
6. Moneris' processing host sends a request for payment confirmation to the issuer.
7. The issuer sends a response (either approved or declined) to Moneris host.
8. Moneris Gateway relays the response back to the merchant. If the payment was approved, the merchant fulfills the order.

**Table 34: Funded and non-funded URL variables**

To funded URL only	To funded and non-funded URL
IDEBIT_TRACK2	IDEBIT_VERSION
IDEBIT_ISSCONF	IDEBIT_ISSLANG
IDEBIT_ISSNAME	IDEBIT_TERMID (optional)
	IDEBIT_INVOICE (optional)
	IDEBIT_MERCHDATA (optional)

## 4.5 Sending an INTERAC® Online Payment Purchase Transaction

### 4.5.1 Fund-Guarantee Request

After choosing to pay by INTERAC® Online Payment, the customer is redirected using an HTML form post to the INTERAC® Online PaymentGateway page. Below is a sample code that is used to post the request to the Gateway.

```
<form action='from Section 9' method='post'>
<input type='text' name='IDEBIT_INVOICE' value='your unique invoice number'>
  <input type='text' name='IDEBIT_AMOUNT' value='100'> <!-- ($1.00) use cent values instead of
    dollar.cent format ->
<input type='text' name='IDEBIT_MERCHNUM' value='from Moneris Solutions'>
<input type='text' name='IDEBIT_CURRENCY' value='CA'>
<input type='text' name='IDEBIT_FUNDEDURL' value='your funded url'>
<input type='text' name='IDEBIT_NOTFUNDEDURL' value='your not funded url'>
<input type='text' name='IDEBIT_ISSLANG' value='en'>
<input type='text' name='IDEBIT_VERSION' value='1'>
<input type="submit" name="Submit" value="Submit to Gateway">
</form>
```

### 4.5.2 Online Banking Response and Fund-Confirmation Request

The response variables are posted back in an HTML form to either the funded or non-funded URL that was provided to INTERAC®.

The following variables must be validated (4.8, page 79):

- IDEBIT\_TRACK2
- IDEBIT\_ISSCONF
- IDEBIT\_ISSNAME
- IDEBIT\_VERSION
- IDEBIT\_ISSLANG
- IDEBIT\_INVOICE

Note that IDEBIT\_ISSCONF and IDEBIT\_ISSNAME must be displayed on the client's receipt that is generated by the merchant.

After validation, IDEBIT\_TRACK2 is used to form an IDebitPurchase transaction that is sent to Moneris Gateway to confirm the fund.

If the validation fails, redirect the client to the main page and ask for a different means of payment.

If the validation passes, an IDebitPurchase transaction can be sent to Moneris Gateway.

## 4.6 INTERAC® Online Payment Purchase

### IDebitPurchase transaction object definition

```
IDebitPurchase IOP_Txn = new IDebitPurchase();
```

### HttpPostRequest object for INTERAC® Online Payment Purchase transaction

```
HttpPostRequest mpgReq = new HttpPostRequest();
```

```
mpgReq.setTransaction(IOP_Txn);
```

### INTERAC® Online Payment Purchase transaction values

For a full description of mandatory and optional values, see "Definition of Request Fields" on page 306

**Table 35: IDebitPurchase transaction object mandatory values**

Value	Type	Limits	Set method
Order ID	String	50-character alphanumeric	<code>IOP_Txn.setOrderId(order_id);</code>
Amount	String	9-character decimal	<code>IOP_Txn.setAmount(amount);</code>
Track2 data	String	40-character alphanumeric	<code>IOP_Txn.setTrack2(track2);</code>

**Table 36: INTERAC® Online Payment Purchase transaction optional values**

Value	Type	Limits	Set method
Customer ID	String	50-character alphanumeric	<code>IOP_Txn.setCustId(custid);</code>
Dynamic descriptor	String	20-character alphanumeric	<code>IOP_Txn.setDynamicDescriptor("dynamicdescriptor1");</code>

**Table 36: INTERAC® Online Payment Purchase transaction optional values**

Value	Type	Limits	Set method
Customer information	Object	Not applicable. See Section Appendix D (page 330).	IOP_TxnsetCustInfo(customer);

**Sample IDebitPurchase - CA**

```

package Canada;
import JavaAPI.*;
public class TestCanadaIDebitPurchase
{
    public static void main(String[] args)
    {
        String store_id = "store5";
        String api_token = "yesguy";
        java.util.Date createDate = new java.util.Date();
        String order_id = "Test"+createDate.getTime();
        String cust_id = "Lance_Briggs_55";
        String amount = "5.00";
        String track2 = "5268051119993326=0609AAAAAAAAAAAA000";
        String processing_country_code = "CA";
        boolean status_check = false;
        /***** Billing/Shipping Variables *****/
        String first_name = "Bob";
        String last_name = "Smith";
        String company_name = "ProLine Inc.";
        String address = "623 Bears Ave";
        String city = "Chicago";
        String province = "Illinois";
        String postal_code = "M1M2M1";
        String country = "Canada";
        String phone = "777-999-7777";
        String fax = "777-999-7778";
        String tax1 = "10.00";
        String tax2 = "5.78";
        String tax3 = "4.56";
        String shipping_cost = "10.00";
        /***** Order Line Item Variables *****/
        String[] item_description = new String[] { "Chicago Bears Helmet", "Soldier Field Poster" };
        String[] item_quantity = new String[] { "1", "1" };
        String[] item_product_code = new String[] { "CB3450", "SF998S" };
        String[] item_extended_amount = new String[] { "150.00", "19.79" };
        /***** Customer Information Object *****/
        CustInfo customer = new CustInfo();
        /***** Set Customer Billing Information *****/
        customer.setBilling(first_name, last_name, company_name, address, city,
            province, postal_code, country, phone, fax, tax1, tax2,
            tax3, shipping_cost);
        /***** Set Customer Shipping Information *****/
        customer.setShipping(first_name, last_name, company_name, address, city,
            province, postal_code, country, phone, fax, tax1, tax2,
            tax3, shipping_cost);
        /***** Order Line Items *****/
        customer.setItem(item_description[0], item_quantity[0],
            item_product_code[0], item_extended_amount[0]);
        customer.setItem(item_description[1], item_quantity[1],
            item_product_code[1], item_extended_amount[1]);
        /***** Request *****/

```

**Sample IDebitPurchase - CA**

```

IDebitPurchase IOP_Txn = new IDebitPurchase();
IOP_Txn.setOrderId(order_id);
IOP_Txn.setCustId(cust_id);
IOP_Txn.setAmount(amount);
IOP_Txn.setIdebitTrack2(track2);
IOP_Txn.setCustInfo(customer);
//IOP_Txn.setDynamicDescriptor("dynamicdescriptor1");
HttpPostRequest mpgReq = new HttpPostRequest();
mpgReq.setProcCountryCode(processing_country_code);
mpgReq.setTestMode(true); //false or comment out this line for production transactions
mpgReq.setStoreId(store_id);
mpgReq.setApiToken(api_token);
mpgReq.setTransaction(IOP_Txn);
mpgReq.setStatusCheck(status_check);
mpgReq.send();
try
{
Receipt receipt = mpgReq.getReceipt();
System.out.println("CardType = " + receipt.getCardType());
System.out.println("TransAmount = " + receipt.getTransAmount());
System.out.println("TxnNumber = " + receipt.getTxnNumber());
System.out.println("ReceiptId = " + receipt.getReceiptId());
System.out.println("TransType = " + receipt.getTransType());
System.out.println("ReferenceNum = " + receipt.getReferenceNum());
System.out.println("ResponseCode = " + receipt.getResponseCode());
System.out.println("ISO = " + receipt.getISO());
System.out.println("BankTotals = " + receipt.getBankTotals());
System.out.println("Message = " + receipt.getMessage());
System.out.println("AuthCode = " + receipt.getAuthCode());
System.out.println("Complete = " + receipt.getComplete());
System.out.println("TransDate = " + receipt.getTransDate());
System.out.println("TransTime = " + receipt.getTransTime());
System.out.println("Ticket = " + receipt.getTicket());
System.out.println("TimedOut = " + receipt.getTimedOut());
}
catch (Exception e)
{
e.printStackTrace();
}
}

```

## 4.7 INTERAC® Online Payment Refund

To process this transaction, you need the order ID and transaction number from the original INTERAC® Online Payment Purchase transaction.

### IDebitRefund transaction object definition

```
IDebitRefund refund = new IDebitRefund();
```

### HttpPostRequest object for Refund transaction

```

HttpPostRequest mpgReq = new HttpPostRequest();

mpgReq.setTransaction(refund);

```

## Refund transaction object values

For a full description of mandatory and optional values, see "Definition of Request Fields" on page 306

**Table 37: INTERAC® Online Payment Refund transaction object mandatory variables**

Value	Type	Limits	Set method
Order ID	String	50-character alpha-numeric	<code>refund.setOrderId(order_id);</code>
Amount	String	9-character decimal	<code>refund.setAmount(amount);</code>
Transaction number	String	255-character varchar	<code>refund.setTxnNumber(txn_number);</code>

**Table 38: INTERAC® Online Payment Refund transaction optional values**

Value	Type	Limits	Set method
Customer ID	String	50-character alpha-numeric	<code>refund.setCustId(custid);</code>
Status Check	Boolean	true/false	<code>mpgReq.setStatusCheck(status_check);</code>

## Sample code

Sample IDebitRefund - CA
<pre> package Canada; import JavaAPI.*; public class TestCanadaIDebitRefund {     public static void main(String[] args)     {         String store_id = "store5";         String api_token = "yesguy";         String order_id = "Test1435508096214";         String amount = "5.00";         String txn_number = "116181-0_10";         String processing_country_code = "CA";         String cust_id = "my customer id";         boolean status_check = false;         IDebitRefund refund = new IDebitRefund();         refund.setOrderId(order_id);         refund.setAmount(amount);         refund.setTxnNumber(txn_number);         refund.setCustId(cust_id);         HttpsPostRequest mpgReq = new HttpsPostRequest();         mpgReq.setProcCountryCode(processing_country_code);         mpgReq.setTestMode(true); //false or comment out this line for production transactions         mpgReq.setStoreId(store_id);     } } </pre>

## Sample IDebitRefund - CA

```

mpgReq.setApiToken(api_token);
mpgReq.setTransaction(refund);
mpgReq.setStatusCheck(status_check);
mpgReq.send();
try
{
    Receipt receipt = mpgReq.getReceipt();
    System.out.println("CardType = " + receipt.getCardType());
    System.out.println("TransAmount = " + receipt.getTransAmount());
    System.out.println("TxnNumber = " + receipt.getTxnNumber());
    System.out.println("ReceiptId = " + receipt.getReceiptId());
    System.out.println("TransType = " + receipt.getTransType());
    System.out.println("ReferenceNum = " + receipt.getReferenceNum());
    System.out.println("ResponseCode = " + receipt.getResponseCode());
    System.out.println("ISO = " + receipt.getISO());
    System.out.println("BankTotals = " + receipt.getBankTotals());
    System.out.println("Message = " + receipt.getMessage());
    System.out.println("AuthCode = " + receipt.getAuthCode());
    System.out.println("Complete = " + receipt.getComplete());
    System.out.println("TransDate = " + receipt.getTransDate());
    System.out.println("TransTime = " + receipt.getTransTime());
    System.out.println("Ticket = " + receipt.getTicket());
    System.out.println("TimedOut = " + receipt.getTimedOut());
}
catch (Exception e)
{
    e.printStackTrace();
}
}

```

## 4.8 INTERAC® Online Payment Field Definitions

Table 39: Field Definitions

Value	Characters		Limits
	Description		
IDEBIT_MERCHNUM	5-14	Numbers and uppercase letters	
	This field is provided by Moneris. For example, 0003MONMPGXXXX.		
IDEBIT_TERMID	8	Numbers and uppercase letters	
	Optional field		
IDEBIT_AMOUNT	1-12	Numbers	
	Amount expressed in cents (for example, 1245 for \$12.45) to charge to the card.		
IDEBIT_CURRENCY	3	"CAD" or "USD"	
	National currency of the transaction.		

Table 39: Field Definitions (continued)

Value	Characters		Limits
	Description		
IDEBIT_INVOICE	1-20	ISO-8859-1 encoded characters restricted to: <ul style="list-style-type: none"><li>• Uppercase and lowercase</li><li>• Numbers</li><li>• À Á Â Ã Ä Å Æ Ç È É Ê Ë Ì Í Î Ï Ñ Ò Ó Ô Õ Ö Ç à á â ã ä å è é ê ë ì í î ï ñ ò ó ô õ ö ÷ ç</li><li>• Spaces</li><li>• # \$ . , - / = ? @ ' </li></ul>	
	Optional field  Can be the Order ID when used with Moneris Gateway fund confirmation trans- actions.		
IDEBIT_MERCHDATA	1024	ISO-8859-1 restricted to single-byte codes, hex 20 to 7E (consistent with US-ASCII and ISO-8859-1 Latin-1).  Note that the following character combinations may not be accepted in the IDEBIT_MERCHDATA field: <ul style="list-style-type: none"><li>• "/. ", "/%2E.", "/.%2E", "/%2E%2E", "\\%2E%2E", "\\%2E.", "\\%2E", "\\%2E%2E", "&amp;#", "&lt;", "%3C", "&gt;", "%3E"</li></ul>	
	Free form data provided by the merchant that will be passed back unchanged to the merchant once the payment has been guaranteed in online banking.  This may be used to identify the customer, session or both.		
IDEBIT_FUNDEDURL	1024	ISO-8859-1 restricted to single-byte codes, restricted to: <ul style="list-style-type: none"><li>• Uppercase and lowercase letters</li><li>• Numbers</li><li>• ; / ? : @ &amp; = + \$ , - _ . ! ~ * ' ( ) %</li></ul>	
	Https address to which the issuer will redirect cardholders after guaranteeing the fund through online banking.		
IDEBIT_NOTFUNDEDURL	1024	ISO-8859-1, restricted to single-byte codes, restricted to: <ul style="list-style-type: none"><li>• Uppercase and lowercase letters</li><li>• Numbers</li><li>• ; / ? : @ &amp; = + \$ , - _ . ! ~ * ' ( ) %</li></ul>	
	Https address to which the issuer redirects cardholders after failing or canceling the online banking process.		
IDEBIT_MERCHLANG	2	“en” or “fr”	
	Customer's current language at merchant.		
IDEBIT_VERSION	3	Numbers	
	Initially, the value is 1.		



Table 39: Field Definitions (continued)

Value	Characters		Limits
	Description		
IDEBIT_ISSLANG	2	"en" or "fr"	
	Customer's current language at issuer.		
IDEBIT_TRACK2	37	ISO-8859-1 (restricted to single-byte codes), hex 20 to 7E (consistent with US-ASCII and ISO-8859-1 Latin-1)	
	Value returned by the issuer. It includes the PAN, expiry date, and transaction ID.		
IDEBIT_ISSCONF	15	ISO-8859-1 encoded characters restricted to: <ul style="list-style-type: none"> <li>• Uppercase and lowercase letters</li> <li>• Numbers</li> <li>• À Á Â Ã Ä Å Æ Ç È É Ê Ë Ì Í Î Ï Ñ Ò Ó Ô Õ Ö × à á â ã ä å è é ê ë ì í î ï ò ó ô õ ö ÷ ç</li> <li>• Spaces</li> <li>• # \$ . , - / = ? @ ' </li> </ul>	
	Confirmation number returned from the issuer to be displayed on the merchant's confirmation page and on the receipt.		
IDEBIT_ISSNAME	30	ISO-8859-1 encoded characters restricted to: <ul style="list-style-type: none"> <li>• Uppercase and lowercase letters</li> <li>• Numbers</li> <li>• À Á Â Ã Ä Å Æ Ç È É Ê Ë Ì Í Î Ï Ñ Ò Ó Ô Õ Ö × à á â ã ä å è é ê ë ì í î ï ò ó ô õ ö ÷ ç</li> <li>• Spaces</li> <li>• # \$ . , - / = ? @ • ' </li> </ul>	
	Issuer name to be displayed on the merchant's confirmation page and on the receipt.		

## 5 ACH Transaction Set

- 5.2 ACH Transaction Definitions
- 5.3 ACHInfo Object
- 5.4 ACH Debit
- 5.5 ACH Reversal
- 5.6 ACH Credit
- 5.7 ACH FI Inquiry

### 5.1 About ACH Transactions

Automated Clearing House (ACH) is a flexible low-cost way to automatically collect payments and fees directly from a customer's bank account. ACH transactions allow the customer to submit bank account information to/from which funds can be credited/debited.

Any of the transaction objects that are defined in this section can be passed to the `HttpPostRequest` connection object defined in Section 12.5 (page 286).

ACH transactions are available to **US integrations** only.

### 5.2 ACH Transaction Definitions

#### ACH Debit

Verifies and collects the customer's bank account information, removes the funds directly from the bank account and prepares them for deposit into the merchant's account.

#### ACH Reversal

Refunds the **full** amount of an ACH Debit transaction.

This transaction can only be performed against an ACH Debit transaction that was performed within the last 3 months.

#### ACH Credit

Verifies and collects the customer's bank account information, and transfers merchant funds directly to the customer.

#### ACH Financial Inquiry (FI)

Verifies which financial institution a routing number belongs to.

Can also be used to verify whether the routing number is valid before submitting an ACH Debit transaction or an ACH Credit transaction.

### 5.3 ACHInfo Object

The `ACHDebit` and `ACHCredit` transaction objects have the `ACHInfo` object as a property. Therefore, before invoking the connection object's `setTransaction` method, you need to pass the `ACHInfo` object to the ACH transaction object by using its `setAchInfo` method.

#### ACH Info object definition

```
ACHInfo achinfo = new ACHInfo(sec, cust_first_name, cust_last_name, cust_address1, cust_address2, cust_city, cust_state, cust_zip, routing_num, account_num, check_num, account_type);
```

**NOTE:** All alphanumeric fields allow the following characters: a-z A-Z 0-9 \_ - : . @ \$ = /

**NOTE:** If you send characters that are not included in the allowed list, the ACH transaction may not be properly registered.

**NOTE:** AchInfo fields are **not** used for any type of address verification or fraud check.

**Table 40: ACHInfo object mandatory arguments**

Value	Type	Limits	Sample Code Variable Name
	Description (if any)		
Sec code	String	3-character alphanumeric	String sec = "ppd";
	See " ACH SEC Codes and Process Flow" on page 85.		
Customer's first name	String	50-character alphanumeric	String cust_first_name = "Christian";
Customer's last name	String	50-character alphanumeric	String cust_last_name = "M";
Customer's address 1	String	50-character alphanumeric	String cust_address1 = "3300 Bloor St W";
Customer's address 2	String	50-character alphanumeric	String cust_address2 = "4th floor west tower";
Customer's city	String	50-character alphanumeric	String cust_city = "Toronto";
Customer's state	String	2-character alphanumeric	String cust_state = "ON";
Customer's zip code	String	15-character alphanumeric	String cust_zip = "12345";
Check routing number	String	9-character numeric	String routing_num = "490000018";
	First number in the MICR line at the bottom of a check. It always begins with 0, 1, 2 or 3.		

Table 40: ACHInfo object mandatory arguments (continued)

Value	Type Limits Sample Code Variable Name		
	Description (if any)		
Account number	String	50-character numeric	String account_num = "222222";
	May appear before or after the check number in the MICR line at the bottom of the check.		
Check number	String	16-character numeric	String check_num = "11";
	Sequential number that appears in both the MICR line at the bottom of the check and in the upper right corner.		
Account type	String	savings/checking	String account_type = "checking";
	Identifies the type of bank account. This field is case-sensitive.		

**Sample ACHInfo object definition (using ACHDebit as the transaction)**

```
//Declaration and initialization of variables removed for space.

ACHInfo achinfo = new ACHInfo(sec, cust_first_name, cust_last_name, cust_address1, cust_address2,
    cust_city, cust_state, cust_zip, routing_num, account_num, check_num, account_type);

ACHDebit achdebit = new ACHDebit();
achdebit.setAchInfo(achinfo);

HttpPostRequest mpgReq = new HttpPostRequest();
mpgReq.setTransaction(achdebit);
mpgReq.send();
```

**5.3.1 ACH SEC Codes and Process Flow****Table 41: ACH SEC codes**

Check	Code	Description
Not present	PPD*	<b>Pre-arranged payment and deposit</b>  Debit (sale): Consumer grants the merchant the right to initiate either a one-time or recurring charge(s) to an account as bills become due.  Credit (refund): Transfers funds into a consumer's bank account. The funds being deposited can represent a variety of financial transactions, such as payroll, interest, pension and so on.
	CCD*	<b>Cash concentration or disbursement</b>  Debit (sale): Client grants the merchant the right to initiate a one-time or recurring charge(s) to a business bank account.  Credit (Refund): Transfers funds to a client's business bank account.
	WEB	<b>Internet-initiated entry</b>  Debit (Sale): A debit entry to a consumer's bank account initiated by a merchant. The consumer's authorization is obtained via the Internet.  Credit (Refund): N/A.

\* Only PPD and CCD apply to ACH Credit transactions.

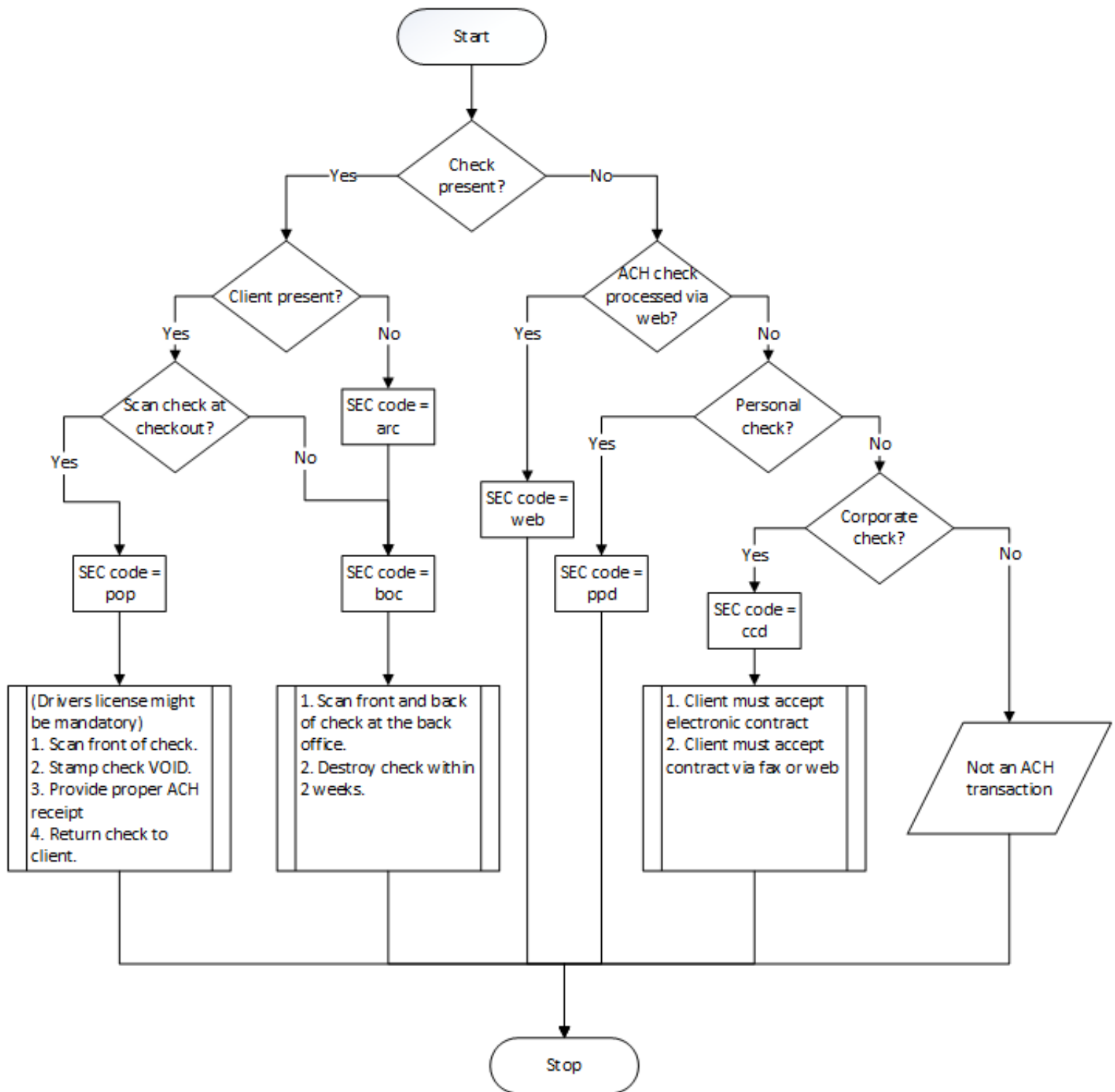


Figure 3: Process flow for ACH transactions

## 5.4 ACH Debit

### ACH Debit transaction object definition

```
ACHDebit achdebit = new ACHDebit();
```

### HttpPostRequest object for ACH Debit transaction

```
HttpPostRequest mpgReq = new HttpPostRequest();
```

```
mpgReq.setTransaction(achdebit);
```

### ACHDebit transaction values

For a full description of mandatory and optional values, see "Definition of Request Fields" on page 306

**Table 42: ACH Debit transaction object mandatory values**

Value	Type	Limits	Set method
Order ID	String	50-character alpha-numeric	<code>achdebit.setOrderId(order_id);</code>
Amount	String	9-character decimal	<code>achdebit.setAmount(amount);</code>
ACH Info	Object	See ACH info object tables below for a list of variables	<code>achdebit.setAchInfo(achinfo);</code>

**Table 43: ACH Debit transaction optional values**

Value	Type	Limits	Set method
Customer ID	String	50-character alpha-numeric	<code>achdebit.setCustId(custid);</code>
Status Check	Boolean	true/false	<code>mpgReq.setStatusCheck(status_check);</code>
Customer information	Object	Not applicable. See Section Appendix D (page 330).	<code>achdebit.setCustInfo(customer);</code>
Convenience fee	Object	Not applicable. See Appendix H (page 352).	<code>achdebit.setConvFeeInfo(convFeeInfo);</code>
Recurring billing	Object	Not applicable. See Section Appendix G (page 345).	<code>achdebit.setRecurInfo(recurInfo);</code>

**NOTE:** Recurring Billing fields are only available to SEC codes ppd, ccd and web.

**Table 1: ACH Info object mandatory values**

Value	Type	Limits	Variable
SEC code	String	ppd/ccd/web	sec
Routing Number	String	9-character numeric	routing_num
Account Number	String	15-character alpha-numeric	account_num
Account Type	String	savings/checking	account_type

**Table 2: ACH Info object optional values**

Value	Type	Limits	Variable
Customer First Name	String	50-character alpha-numeric	cust_first_name
Customer Last Name	String	50-character alpha-numeric	cust_last_name
Customer Address 1	String	50-character alpha-numeric	cust_address1
Customer Address 2	String	50-character alpha-numeric	cust_address2
Customer City	String	50-character alpha-numeric	cust_city
Customer State	String	2-character alpha-numeric	cust_state
Customer Zip Code	String	10-character numeric	cust_zip
Check Number	String	16-character numeric	check_num



## Sample ACH Debit - US

```

package USA;
import JavaAPI.*;
public class TestUSAACHDebit
{
public static void main(String[] args)
{
java.util.Date createDate = new java.util.Date();
String order_id = "Test"+createDate.getTime();
String store_id = "monusqa002";
String api_token = "qatoken";
//String status = "true";
String amount = "1.00";
//ACHInfo Variables
String sec = "ppd";
String cust_first_name = "Christian";
String cust_last_name = "M";
String cust_address1 = "3300 Bloor St W";
String cust_address2 = "4th floor west tower";
String cust_city = "Toronto";
String cust_state = "ON";
String cust_zip = "M1M1M1";
String routing_num = "490000018";
String account_num = "222222";
String check_num = "11";
String account_type = "checking";
String micr = "t071000013t742941347o128";
String dl_num = "CO-12312312";
String magstripe = "no";
String image_front = "";
String image_back = "";
String processing_country_code = "US";
boolean status_check = false;
ACHInfo achinfo = new ACHInfo(sec, cust_first_name, cust_last_name,
cust_address1, cust_address2, cust_city, cust_state, cust_zip,
routing_num, account_num, check_num, account_type, micr);
achinfo.setImgFront(image_front);
achinfo.setImgBack(image_back);
achinfo.setDLNum(dl_num);
achinfo.setMagstripe(magstripe);
ACHDebit achdebit = new ACHDebit();
achdebit.setOrderId(order_id);
achdebit.setAmount(amount);
achdebit.setAchInfo(achinfo);
//*****OPTIONAL VARIABLES*****
//Cust_id Variable
String cust_id = "customer1";
achdebit.setCustId(cust_id);
HttpPostRequest mpgReq = new HttpPostRequest();
mpgReq.setProcCountryCode(processing_country_code);
mpgReq.setTestMode(true); //false or comment out this line for production transactions
mpgReq.setStoreId(store_id);
mpgReq.setApiToken(api_token);
mpgReq.setTransaction(achdebit);
mpgReq.setStatusCheck(status_check);
mpgReq.send();
/*Status Check Example
ACHHttpPostRequest mpgReq = new ACHHttpPostRequest(host, store_id, api_token, status, achdebit);
*/
/***** REQUEST *****/

```

**Sample ACH Debit - US**

```

try
{
    Receipt receipt = mpgReq.getReceipt();
    System.out.println("CardType = " + receipt.getCardType());
    System.out.println("TransAmount = " + receipt.getTransAmount());
    System.out.println("TxnNumber = " + receipt.getTxnNumber());
    System.out.println("ReceiptId = " + receipt.getReceiptId());
    System.out.println("TransType = " + receipt.getTransType());
    System.out.println("ReferenceNum = " + receipt.getReferenceNum());
    System.out.println("ResponseCode = " + receipt.getResponseCode());
    System.out.println("Message = " + receipt.getMessage());
    System.out.println("Complete = " + receipt.getComplete());
    System.out.println("TransDate = " + receipt.getTransDate());
    System.out.println("TransTime = " + receipt.getTransTime());
    System.out.println("Ticket = " + receipt.getTicket());
    System.out.println("TimedOut = " + receipt.getTimedOut());
    //System.out.println("StatusCode = " + receipt.getStatusCode());
    //System.out.println("StatusMessage = " + receipt.getStatusMessage());
}
catch (Exception e)
{
    e.printStackTrace();
}
}
}

```

## 5.5 ACH Reversal

### ACH Reversal transaction object definition

```
ACHReversal achreversal = new ACHReversal();
```

### HttpPostRequest object for ACH Reversal transaction

```
HttpPostRequest mpgReq = new HttpPostRequest();
```

```
mpgReq.setTransaction(achreversal);
```

### ACH Reversal transaction values

The ACH Reversal transaction requires the order ID and the transaction number from the corresponding ACH Debit transaction.

For a full description of mandatory and optional values, see "Definition of Request Fields" on page 306

**Table 44: ACH Reversal transaction object mandatory values**

Value	Type	Limits	Set method
Order ID	String	50-character alpha-numeric	achreversal.setOrderId(order_id);
Transaction number	String	255-character variable	achreversal.setTxnNumber(txn_number);

**Table 45: ACH Reversal transaction optional values**

Value	Type	Limits	Set method
Status Check	Boolean	true/false	mpgReq.setStatusCheck(status_check);

**Sample ACH Reversal - US**

```

package USA;
import JavaAPI.*;
public class TestUSAACHReversal
{
    public static void main(String[] args)
    {
        String order_id = "Test1432136975473";
        String txn_number = "43592-0_25";
        String store_id = "monusqa002";
        String api_token = "qatoken";
        String processing_country_code = "US";
        boolean status_check = false;
        ACHReversal achreversal = new ACHReversal();
        achreversal.setOrderId(order_id);
        achreversal.setTxnNumber(txn_number);
        HttpsPostRequest mpgReq = new HttpsPostRequest();
        mpgReq.setProcCountryCode(processing_country_code);
        mpgReq.setTestMode(true); //false or comment out this line for production transactions
        mpgReq.setStoreId(store_id);
        mpgReq.setApiToken(api_token);
        mpgReq.setTransaction(achreversal);
        mpgReq.setStatusCheck(status_check);
        mpgReq.send();
        try
        {
            Receipt receipt = mpgReq.getReceipt();
            System.out.println("CardType = " + receipt.getCardType());
            System.out.println("TransAmount = " + receipt.getTransAmount());
            System.out.println("TxnNumber = " + receipt.getTxnNumber());
            System.out.println("ReceiptId = " + receipt.getReceiptId());
            System.out.println("TransType = " + receipt.getTransType());
            System.out.println("ReferenceNum = " + receipt.getReferenceNum());
            System.out.println("ResponseCode = " + receipt.getResponseCode());
            System.out.println("Message = " + receipt.getMessage());
            System.out.println("Complete = " + receipt.getComplete());
            System.out.println("TransDate = " + receipt.getTransDate());
            System.out.println("TransTime = " + receipt.getTransTime());
        }
    }
}

```

### Sample ACH Reversal - US

```

System.out.println("Ticket = " + receipt.getTicket());
System.out.println("TimedOut = " + receipt.getTimedOut());
//System.out.println("StatusCode = " + receipt.getStatusCode());
//System.out.println("StatusMessage = " + receipt.getStatusMessage());
}
catch (Exception e)
{
    e.printStackTrace();
}
}
}

```

## 5.6 ACH Credit

### ACH Credit transaction object definition

```
ACHCredit achcredit = new ACHCredit();
```

### HttpPostRequest object for ACH Credit transaction

```

HttpPostRequest mpgReq = new HttpPostRequest();
mpgReq.setTransaction(achcredit);

```

### ACH Credit transaction values

For a full description of mandatory and optional values, see "Definition of Request Fields" on page 306

**Table 46: ACH Credit transaction object mandatory values**

Value	Type	Limits	Set method
Order ID	String	50-character alpha-numeric	<code>achcredit.setOrderId(order_id);</code>
Amount	String	9-character decimal	<code>achcredit.setAmount(amount);</code>
ACH Info	Object	See ACH info object tables below for a list of variables	<code>achcredit.setAchInfo(achinfo);</code>

**NOTE:** The ACHCredit transaction may only be submitted with an SEC code of `ppd` or `ccd`.

**Table 47: ACH Credit transaction optional values**

Value	Type	Limits	Set method
Customer ID	String	50-character alpha-numeric	<code>achcredit.setCustId(custid);</code>
Status Check	Boolean	true/false	<code>mpgReq.setStatusCheck(status_check);</code>

**Table 1: ACH Info mandatory values**

Value	Type	Limits	Set method
SEC code	String	ppd/ccd/web	<code>sec</code>
Routing Number	String	9-character numeric	<code>routing_num</code>
Account Number	String	15-character alpha-numeric	<code>account_num</code>
Account Type	String	savings/checking	<code>account_type</code>

**Table 2: ACH Info object optional values**

Value	Type	Limits	Set method
Customer First Name	String	50-character alpha-numeric	<code>cust_first_name</code>
Customer Last Name	String	50-character alpha-numeric	<code>cust_last_name</code>
Customer Address 1	String	50-character alpha-numeric	<code>cust_address1</code>
Customer Address 2	String	50-character alpha-numeric	<code>cust_address2</code>
Customer City	String	50-character alpha-numeric	<code>cust_city</code>
Customer State	String	2-character alpha-numeric	<code>cust_state</code>
Customer Zip Code	String	10-character numeric	<code>cust_zip</code>
Check Number	String	16-character numeric	<code>check_num</code>

## Sample ACH Credit - US

```

package USA;
import JavaAPI.*;
public class TestUSAACHCredit
{
    public static void main(String[] args)
    {
        java.util.Date createDate = new java.util.Date();
        String order_id = "Test"+createDate.getTime();
        String store_id = "monusqa002";
        String api_token = "qatoken";
        String amount = "1.00";
        //ACHInfo Variables
        String sec = "ppd";
        String cust_first_name = "Christian";
        String cust_last_name = "M";
        String cust_address1 = "3300 Bloor St W";
        String cust_address2 = "4th floor west tower";
        String cust_city = "Toronto";
        String cust_state = "ON";
        String cust_zip = "M1M1M1";
        String routing_num = "011000015";
        String account_num = "12345678946";
        String check_num = "11";
        String account_type = "checking";
        String micr = "t071000013t742941347o129";
        String processing_country_code = "US";
        boolean status_check = false;
        String cust_id = "customer1";
        ACHInfo achinfo = new ACHInfo(sec, cust_first_name, cust_last_name,
        cust_address1, cust_address2, cust_city, cust_state, cust_zip,
        routing_num, account_num, check_num, account_type, micr);
        //achinfo.setImgFront(image_front);
        // achinfo.setImgBack(image_back);
        achinfo.setDlNum(dl_num);
        achinfo.setMagstripe(magstripe);
        ACHCredit achcredit = new ACHCredit();
        achcredit.setOrderId(order_id);
        achcredit.setAmount(amount);
        achcredit.setAchInfo(achinfo);
        achcredit.setCustId(cust_id);
        HttpsPostRequest mpgReq = new HttpsPostRequest();
        mpgReq.setProcCountryCode(processing_country_code);
        mpgReq.setTestMode(true); //false or comment out this line for production transactions
        mpgReq.setStoreId(store_id);
        mpgReq.setApiToken(api_token);
        mpgReq.setTransaction(achcredit);
        mpgReq.setStatusCheck(status_check);
        mpgReq.send();
        try
        {
            Receipt receipt = mpgReq.getReceipt();
            System.out.println("CardType = " + receipt.getCardType());
            System.out.println("TransAmount = " + receipt.getTransAmount());
            System.out.println("TxnNumber = " + receipt.getTxnNumber());
            System.out.println("ReceiptId = " + receipt.getReceiptId());
            System.out.println("TransType = " + receipt.getTransType());
            System.out.println("ReferenceNum = " + receipt.getReferenceNum());
            System.out.println("ResponseCode = " + receipt.getResponseCode());
            System.out.println("Message = " + receipt.getMessage());
        }
    }
}

```

**Sample ACH Credit - US**

```

System.out.println("Complete = " + receipt.getComplete());
System.out.println("TransDate = " + receipt.getTransDate());
System.out.println("TransTime = " + receipt.getTransTime());
System.out.println("Ticket = " + receipt.getTicket());
System.out.println("TimedOut = " + receipt.getTimedOut());
//System.out.println("StatusCode = " + receipt.getStatusCode());
//System.out.println("StatusMessage = " + receipt.getStatusMessage());
}
catch (Exception e)
{
    e.printStackTrace();
}
}
}

```

## 5.7 ACH Fi Inquiry

### ACHFiInquiry transaction object definition

```
ACHFiInquiry achfiinquiry = new ACHFiInquiry();
```

### HttpPostRequest object for ACH Fi Inquiry transaction

```
HttpPostRequest mpgReq = new HttpPostRequest();
```

```
mpgReq.setTransaction(achfiinquiry);
```

### ACH Fi Inquiry transaction object mandatory arguments

For a full description of mandatory and optional values, see "Definition of Request Fields" on page 306

**Table 48: ACH Fi Inquiry transaction object mandatory values**

Value	Type	Limits	Set method
Routing number	String	9-character numeric	achcredit.setRoutingNum(routing_num);

**Sample ACH Fi Inquiry - US**

```

package USA;
import JavaAPI.*;
public class TestUSAACHFiInquiry
{
    public static void main(String[] args)
    {
        String store_id = "monusqa002";
        String api_token = "qatoken";
        String routing_num = "071000013";
        String processing_country_code = "US";
        boolean status_check = false;
    }
}

```

**Sample ACH Fi Inquiry - US**

```
ACHFiInquiry achfiinquiry = new ACHFiInquiry();
achfiinquiry.setRoutingNum(routing_num);
HttpPostRequest mpgReq = new HttpPostRequest();
mpgReq.setProcCountryCode(processing_country_code);
mpgReq.setTestMode(true); //false or comment out this line for production transactions
mpgReq.setStoreId(store_id);
mpgReq.setApiToken(api_token);
mpgReq.setTransaction(achfiinquiry);
mpgReq.setStatusCheck(status_check);
mpgReq.send();
try
{
    Receipt receipt = mpgReq.getReceipt();
    System.out.println("CardType = " + receipt.getCardType());
    System.out.println("TransAmount = " + receipt.getTransAmount());
    System.out.println("TxnNumber = " + receipt.getTxnNumber());
    System.out.println("ReceiptId = " + receipt.getReceiptId());
    System.out.println("TransType = " + receipt.getTransType());
    System.out.println("ReferenceNum = " + receipt.getReferenceNum());
    System.out.println("ResponseCode = " + receipt.getResponseCode());
    System.out.println("Message = " + receipt.getMessage());
    System.out.println("Complete = " + receipt.getComplete());
    System.out.println("TransDate = " + receipt.getTransDate());
    System.out.println("TransTime = " + receipt.getTransTime());
    System.out.println("Ticket = " + receipt.getTicket());
    System.out.println("TimedOut = " + receipt.getTimedOut());
}
catch (Exception e)
{
    e.printStackTrace();
}
}
```



## 6 Vault

- 6.1 About the Vault Transaction Set
- 6.2 Vault Transaction Types
- 6.3 Administrative Transactions
- 6.4 Financial Transactions
- 6.5 Hosted Tokenization

### 6.1 About the Vault Transaction Set

The Vault feature allows merchants to create customer profiles, edit those profiles, and use them to process transactions without having to enter financial information each time. Customer profiles store customer data essential to processing transactions, including credit, and signature debit and ACH payment details.

The Vault is a complement to the recurring payment module. It securely stores customer account information on Moneris secure servers. This allows merchants to bill customers for routine products or services when an invoice is due.

Any of the transaction objects that are defined in this section can be passed to the `HttpPostRequest` connection object defined in Section 12.5 (page 286).

### 6.2 Vault Transaction Types

The Vault API supports both administrative and financial transactions.

#### 6.2.1 Administrative Vault Transaction types

##### **ResAddCC**

Creates a new credit card profile, and generates a unique data key which can be obtained from the Receipt object.

This data key is the profile identifier that all future financial Vault transactions will use to associate with the saved information (see 6.3.1.1, page 103).

##### **EncResAddCC**

Creates a new credit card profile, but requires the card data to be either swiped or manually keyed in via a Moneris-provided encrypted mag swipe reader.

##### **ResAddACH**

Creates a new ACH profile. A data key is generated and returned to the merchant in the response.

For more information about the data key, see "Data Key" on page 103.

##### **ResTempAdd**

Creates a new temporary token credit card profile. This transaction requires a duration to be set to indicate how long the temporary token is to be stored for.

During the lifetime of this temporary token, it may be used for any other vault transaction before it is permanently deleted from the system.

##### **ResUpdateCC**

Updates a Vault profile (based on the data key) to contain credit card information.

All information contained within a credit card profile is updated as indicated by the submitted fields. The fields are explained in more detail in "Administrative Transactions" on page 100.

#### **EncResUpdateCC**

Updates a profile (based on the data key) to contain credit card information. The encrypted version of this transaction requires the card data to either be swiped or manually keyed in via a Moneris-provided encrypted mag swipe reader.

#### **ResUpdateACH**

Updates a Vault profile (based on the unique data key) to contain ACH information.

#### **ResDelete**

Deletes an existing Vault profile of any type using the unique data key that was assigned when the profile was added.

It is important to note that after a profile is deleted, the information which was saved within can no longer be retrieved.

#### **ResLookupFull**

Verifies what is currently saved under the Vault profile associated with the given data key. The response to this transaction returns the latest active data for that profile.

Unlike ResLookupMasked (which returns the masked credit card number), this transaction returns both the masked and the unmasked credit card numbers.

#### **ResLookupMasked**

Verifies what is currently saved under the Vault profile associated with the given data key. The response to this transaction returns the latest active data for that profile.

Unlike ResLookupFull (which only returns both the masked and the unmasked credit card numbers), this transaction only returns the masked credit card number.

#### **ResGetExpiring**

Verifies which profiles have credit cards that are expiring during the current and next calendar month. For example, if you are processing this transaction on September 30, then it will return all cards that expire(d) in September and October of this year.

When generating a list of profiles with expiring credit cards, only the **masked** credit card numbers are returned.

This transaction can be performed no more than 2 times on any given calendar day, and it only applies to credit card profiles.

#### **ResIsCorporateCard**

Determines whether a profile has a corporate card registered within it.

After sending the transaction, the response field to the Receipt object's getCorporateCard method is either `true` or `false` depending on whether the associated card is a corporate card.

#### **ResAddToken**

Converts a Hosted Tokenization temporary token to a permanent Vault token.

A temporary token is valid for 15 minutes after it is created.

#### **ResTokenizeCC**

Creates a new credit card profile using the credit card number, expiry date and e-commerce indicator that were submitted in a previous financial transaction. A transaction that was previously done in Moneris Gateway is taken, and the card data from that transaction is stored in the Moneris Vault.

As with ResAddCC, a unique data key is generated and returned to the merchant via the Receipt object. This is the profile identifier that all future financial Vault transactions will use to associate with the saved information.

For more information about the data key, see "Data Key" on page 103.

## 6.2.2 Financial Vault Transaction types

### ResPurchaseCC

Uses the data key to identify a previously registered credit card profile. The details saved within the profile are then submitted to perform a Purchase transaction.

### ResPurchaseACH

This transaction is processed as an ACHDebit. The ACHInfo registered for this profile will be used. The details submitted within ACHInfo object are returned in the response within ResolveData.

### ResPreauthCC

Uses the data key to identify a previously registered credit card profile. The details within the profile are submitted to perform a Pre-Authorization transaction.

### ResIndRefundCC

Uses the unique data key to identify a previously registered credit card profile, and credits a specified amount to that credit card.

### ResIndRefundACH

Uses the unique data key to identify a previously registered ACH profile, and credits a specified amount to that credit card. This is processed as an ACH Credit.

### ResMpiTxn

Uses the data key (as opposed to a credit card number) in a VBV/SecureCode Txn MPI transaction. The merchant uses the data key with ResMpiTxn request, and then reads the response fields to verify whether the card is enrolled in Verified by Visa or MasterCard SecureCode. Retrieves the vault transaction value to pass on to Visa or MasterCard.

After it has been validated that the data key is enrolled in 3-D Secure, a window appears in which the customer can enter the 3-D Secure password. The merchant may initiate the forming of the validation form `getMpiInLineForm()`.

For more information on integrating with MonerisMPI, refer to MPI (page 44)

## 6.2.3 Charging a Temporary Token

The only difference between charging a temporary token and charging a normal Vault token is whether the expiry date is sent. With the Vault token, the expiry date is stored along with the card number as part of the Vault profile. Therefore, there is no need to send the expiry date again with each normal Vault transaction. However, a temporary token transaction only stores the card number. Therefore, the expiry date must be sent when you charge the card.

The following financial transactions can charge a temporary token:

- ResPurchaseCC (page 136)
- ResPreauthCC (page 142)
- ResIndRefundCC (page 145).

A temporary token can be made permanent by using the ResAddTokenCC transaction (page 131).

## 6.3 Administrative Transactions

Administrative transactions allow you to perform such tasks as creating new Vault profiles, deleting existing Vault profiles and updating profile information.

### 6.3.1 Vault Add Credit Card- ResAddCC

#### ResAddCC transaction object definition

```
ResAddCC resaddcc = new ResAddCC();
```

#### HttpPostRequest object for ResAddCC transaction

```
HttpPostRequest mpgReq = new HttpPostRequest();
```

```
mpgReq.setTransaction(resaddcc);
```

#### ResAddCC transaction values

For a full description of mandatory and optional values, see "Definition of Request Fields" on page 306

**Table 49: ResAddCC transaction object mandatory values**

Value	Type	Limits	Set method
Credit card number	String	20-character alpha-numeric	<code>resaddcc.setPan(pan);</code>
Expiry date	String	4-character alpha-numeric (YYMM format)	<code>resaddcc.setExpDate(exp-date);</code>
E-commerce indicator	String	1-character alpha-numeric	<code>resaddcc.setCryptType(crypt_type);</code>

Table 50: Purchase transaction optional values

Value	Type	Limits	Set method
Customer ID	String	50-character alpha-numeric	<code>resaddcc.setCustId(custid);</code>
AVS information	Object	Not applicable. See Appendix E (page 336).	<code>resaddcc.setAvsInfo(avsCheck);</code>
Email address	String	30-character alpha-numeric	<code>resaddcc.setEmail(email);</code>
Phone number	String	30-character alpha-numeric	<code>resaddcc.setPhone(phone);</code>
Note	String	30-character alpha-numeric	<code>resaddcc.setNote(note);</code>

Sample ResAddCC - CA	Sample ResAddCC - US
<pre> package Canada; import JavaAPI.*; public class TestCanadaResAddCC {     public static void main(String[] args)     {         String store_id = "store5";         String api_token = "yesguy";         String pan = "5454545454545454";         String expdate = "1912";         String phone = "0000000000";         String email = "bob@smith.com";         String note = "my note";         String cust_id = "customer1";         String crypt_type = "7";         String processing_country_code = "CA";         boolean status_check = false;         AvsInfo avsCheck = new AvsInfo();         avsCheck.setAvsStreetNumber("212");         avsCheck.setAvsStreetName("Payton Street");         avsCheck.setAvsZipCode("M1M1M1");         ResAddCC resaddcc = new ResAddCC();         resaddcc.setPan(pan);         resaddcc.setExpdate(expdate);         resaddcc.setCryptType(crypt_type);         resaddcc.setCustId(cust_id);         resaddcc.setPhone(phone);         resaddcc.setEmail(email);         resaddcc.setNote(note);         resaddcc.setAvsInfo(avsCheck);         HttpsPostRequest mpgReq = new HttpsPostRequest         ();         mpgReq.setProcCountryCode(processing_country_ </pre>	<pre> package USA; import JavaAPI.*; public class TestUSAResAddCC {     public static void main(String[] args)     {         String store_id = "monusqa002";         String api_token = "qatoken";         String pan = "5454545454545454";         String expdate = "1602"; //YYMM format         String phone = "0000000000";         String email = "bob@smith.com";         String note = "my note";         String cust_id = "customer1";         String crypt_type = "7";         String processing_country_code = "US";         boolean status_check = false;         AvsInfo avsCheck = new AvsInfo();         avsCheck.setAvsStreetNumber("212");         avsCheck.setAvsStreetName("Payton Street");         avsCheck.setAvsZipCode("M1M1M1");         ResAddCC resaddcc = new ResAddCC();         resaddcc.setPan(pan);         resaddcc.setExpdate(expdate);         resaddcc.setCryptType(crypt_type);         resaddcc.setCustId(cust_id);         resaddcc.setPhone(phone);         resaddcc.setEmail(email);         resaddcc.setNote(note);         resaddcc.setAvsInfo(avsCheck);         HttpsPostRequest mpgReq = new HttpsPostRequest         ();         mpgReq.setProcCountryCode(processing_country_ </pre>

Sample ResAddCC - CA	Sample ResAddCC - US
<pre> code); mpgReq.setTestMode(true); //false or comment     out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(resaddcc); mpgReq.setStatusCheck(status_check); mpgReq.send(); try { Receipt receipt = mpgReq.getReceipt(); System.out.println("DataKey = " +     receipt.getDataKey()); System.out.println("ResponseCode = " +     receipt.getResponseCode()); System.out.println("Message = " +     receipt.getMessage()); System.out.println("TransDate = " +     receipt.getTransDate()); System.out.println("TransTime = " +     receipt.getTransTime()); System.out.println("Complete = " +     receipt.getComplete()); System.out.println("TimedOut = " +     receipt.getTimedOut()); System.out.println("ResSuccess = " +     receipt.getResSuccess()); System.out.println("PaymentType = " +     receipt.getPaymentType()); System.out.println("Cust ID = " +     receipt.getResCustId()); System.out.println("Phone = " +     receipt.getResPhone()); System.out.println("Email = " +     receipt.getResEmail()); System.out.println("Note = " +     receipt.getResNote()); System.out.println("MaskedPan = " +     receipt.getResMaskedPan()); System.out.println("Exp Date = " +     receipt.getResExpdate()); System.out.println("Crypt Type = " +     receipt.getResCryptType()); System.out.println("Avs Street Number = " +     receipt.getResAvsStreetNumber()); System.out.println("Avs Street Name = " +     receipt.getResAvsStreetName()); System.out.println("Avs Zipcode = " +     receipt.getResAvsZipcode()); } catch (Exception e) { e.printStackTrace(); } } } </pre>	<pre> code); mpgReq.setTestMode(true); //false or comment     out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(resaddcc); mpgReq.setStatusCheck(status_check); mpgReq.send(); try { Receipt receipt = mpgReq.getReceipt(); System.out.println("DataKey = " +     receipt.getDataKey()); System.out.println("ResponseCode = " +     receipt.getResponseCode()); System.out.println("Message = " +     receipt.getMessage()); System.out.println("TransDate = " +     receipt.getTransDate()); System.out.println("TransTime = " +     receipt.getTransTime()); System.out.println("Complete = " +     receipt.getComplete()); System.out.println("TimedOut = " +     receipt.getTimedOut()); System.out.println("ResSuccess = " +     receipt.getResSuccess()); System.out.println("PaymentType = " +     receipt.getPaymentType()); System.out.println("Cust ID = " +     receipt.getResCustId()); System.out.println("Phone = " +     receipt.getResPhone()); System.out.println("Email = " +     receipt.getResEmail()); System.out.println("Note = " +     receipt.getResNote()); System.out.println("MaskedPan = " +     receipt.getResMaskedPan()); System.out.println("Exp Date = " +     receipt.getResExpdate()); System.out.println("Crypt Type = " +     receipt.getResCryptType()); System.out.println("Avs Street Number = " +     receipt.getResAvsStreetNumber()); System.out.println("Avs Street Name = " +     receipt.getResAvsStreetName()); System.out.println("Avs Zipcode = " +     receipt.getResAvsZipcode()); } catch (Exception e) { e.printStackTrace(); } } } </pre>

## Vault response fields

For a list and explanation of (Receipt object) response fields that are available after sending this Vault transaction, see Definition of Response Fields (page 314).

### 6.3.1.1 Data Key

The ResAddCC sample code includes the following instruction from the Receipt object:

```
System.out.println("DataKey = " + receipt.getDataKey());
```

The data key response field is populated when you send a ResAddCC transaction or a ResTokenizeCC transaction (page 134). It is the profile identifier that all future financial Vault transactions will use to associate with the saved information.

The data key is a maximum 25-character alphanumeric string.

### 6.3.1.2 Vault Encrypted Add Credit Card - EncResAddCC

#### EncResAddCC transaction object definition

```
EncResAddCC encresaddcc = new EncResAddCC();
```

#### HttpPostRequest object for EncResAddCC transaction

```
HttpPostRequest mpgReq = new HttpPostRequest();
```

```
mpgReq.setTransaction(encresaddcc);
```

#### EncResAddCC transaction values

For a full description of mandatory and optional values, see "Definition of Request Fields" on page 306

**Table 51: EncResAddCC transaction object mandatory values**

Value	Type	Limits	Set method
Encrypted Track2 data	String	40-character numeric	<code>encresaddcc.setEncTrack2(enc_track2);</code>
Device type	String	TBD	<code>encresaddcc.setDeviceType(device_type);</code>
E-commerce indicator	String	1-character alphanumeric	<code>encresaddcc.setCryptType(crypt_type);</code>

**Table 52: EncResAddCC transaction optional values**

Value	Type	Limits	Set method
Customer ID	String	50-character alpha-numeric	<code>encresaddcc.setCustId(custid);</code>
AVS information	Object	Not applicable. See Appendix E (page 336).	<code>encresaddcc.setAvsInfo(avsCheck);</code>
Email address	String	30-character alpha-numeric	<code>encresaddcc.setEmail(email);</code>
Phone number	String	30-character alpha-numeric	<code>encresaddcc.setPhone(phone);</code>
Note	String	30-character alpha-numeric	<code>encresaddcc.setNote(note);</code>

Sample Encrypted ResAddCC - CA	Sample Encrypted ResAddCC - US
<pre> package Canada; import JavaAPI.*; public class TestCanadaEncResAddCC {     public static void main(String args[])     {         String store_id = "moneris";         String api_token = "hurgle";         String enc_track2 = "ENCRYPTEDTRACK2DATA";         String device_type = "idtech_bdk";         String phone = "5555555555";         String email = "test.user@moneris.com";         String note = "my note";         String cust_id = "customer2";         String crypt = "7";         String processing_country_code = "CA";          AvsInfo avsCheck = new AvsInfo();         avsCheck.setAvsStreetNumber("212");         avsCheck.setAvsStreetName("Payton Street");         avsCheck.setAvsZipcode("M1M1M1");         EncResAddCC enc_res_add_cc = new EncResAddCC         ();         enc_res_add_cc.setEncTrack2(enc_track2);         enc_res_add_cc.setDeviceType(device_type);         enc_res_add_cc.setCryptType(crypt);         enc_res_add_cc.setCustId(cust_id);         enc_res_add_cc.setPhone(phone);         enc_res_add_cc.setEmail(email);         enc_res_add_cc.setNote(note);         //enc_res_add_cc.setAvsInfo(avsCheck);         HttpsPostRequest mpgReq = new HttpsPostRequest         (); </pre>	<pre> package USA; import JavaAPI.*; public class TestUSAEncResAddCC {     public static void main(String args[])     {         String store_id = "monusqa002";         String api_token = "qatoken";         String enc_track2 = "ENCRYPTEDTRACK2DATA";         String device_type = "idtech";         String phone = "5555555555";         String email = "test.user@moneris.com";         String note = "my note";         String cust_id = "customer2";         String crypt = "7";         String processing_country_code = "US";         AvsInfo avsCheck = new AvsInfo();         avsCheck.setAvsStreetNumber("212");         avsCheck.setAvsStreetName("Payton Street");         avsCheck.setAvsZipcode("M1M1M1");         EncResAddCC resAddCC = new EncResAddCC();         resAddCC.setEncTrack2(enc_track2);         resAddCC.setDeviceType(device_type);         resAddCC.setCryptType(crypt);         resAddCC.setCustId(cust_id);         resAddCC.setPhone(phone);         resAddCC.setEmail(email);         resAddCC.setNote(note);         //usResAddCC.setAvsInfo(avsCheck);         HttpsPostRequest mpgReq = new HttpsPostRequest         ();         mpgReq.setProcCountryCode(processing_country_         code); </pre>



Sample Encrypted ResAddCC - CA	Sample Encrypted ResAddCC - US
<pre> mpgReq.setProcCountryCode(processing_country_ code); mpgReq.setTestMode(true); //false or comment out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(enc_res_add_cc); mpgReq.send();  try { Receipt receipt = mpgReq.getReceipt(); System.out.println("DataKey = " + receipt.getDataKey()); System.out.println("ResponseCode = " + receipt.getResponseCode()); System.out.println("Message = " + receipt.getMessage()); System.out.println("TransDate = " + receipt.getTransDate()); System.out.println("TransTime = " + receipt.getTransTime()); System.out.println("Complete = " + receipt.getComplete()); System.out.println("TimedOut = " + receipt.getTimedOut()); System.out.println("ResSuccess = " + receipt.getResSuccess()); System.out.println("PaymentType = " + receipt.getPaymentType() + "\n"); //Contents of ResolveData System.out.println("Cust ID = " + receipt.getResCustId()); System.out.println("Phone = " + receipt.getResPhone()); System.out.println("Email = " + receipt.getResEmail()); System.out.println("Note = " + receipt.getResNote()); System.out.println("MaskedPan = " + receipt.getResMaskedPan()); System.out.println("Exp Date = " + receipt.getResExpDate()); System.out.println("Crypt Type = " + receipt.getResCryptType()); System.out.println("Avs Street Number = " + receipt.getResAvsStreetNumber()); System.out.println("Avs Street Name = " + receipt.getResAvsStreetName()); System.out.println("Avs Zipcode = " + receipt.getResAvsZipcode()); } catch (Exception e) { e.printStackTrace(); } } </pre>	<pre> mpgReq.setTestMode(true); //false or comment out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(resAddCC); mpgReq.send(); try { Receipt receipt = mpgReq.getReceipt(); System.out.println("DataKey = " + receipt.getDataKey()); System.out.println("ResponseCode = " + receipt.getResponseCode()); System.out.println("Message = " + receipt.getMessage()); System.out.println("TransDate = " + receipt.getTransDate()); System.out.println("TransTime = " + receipt.getTransTime()); System.out.println("Complete = " + receipt.getComplete()); System.out.println("TimedOut = " + receipt.getTimedOut()); System.out.println("ResSuccess = " + receipt.getResSuccess()); System.out.println("PaymentType = " + receipt.getPaymentType() + "\n"); //Contents of ResolveData System.out.println("Cust ID = " + receipt.getResCustId()); System.out.println("Phone = " + receipt.getResPhone()); System.out.println("Email = " + receipt.getResEmail()); System.out.println("Note = " + receipt.getResNote()); System.out.println("MaskedPan = " + receipt.getResMaskedPan()); System.out.println("Exp Date = " + receipt.getResExpDate()); System.out.println("Crypt Type = " + receipt.getResCryptType()); System.out.println("Avs Street Number = " + receipt.getResAvsStreetNumber()); System.out.println("Avs Street Name = " + receipt.getResAvsStreetName()); System.out.println("Avs Zipcode = " + receipt.getResAvsZipcode()); } catch (Exception e) { e.printStackTrace(); } } </pre>

## Vault response fields

For a list and explanation of (Receipt object) response fields that are available after sending this Vault transaction, see Definition of Response Fields (page 314).

### 6.3.2 Vault Add ACH - ResAddACH

#### Things to Consider:

- Only the following SEC codes are currently supported: PPD, CCD, and WEB.
- The SEC code, along with the rest of the ACHInfo object data will be submitted with all future Vault transactions unless it is later updated.

#### ResAddACH transaction object definition

```
ResAddAch ressaddach = new ResAddAch();
```

#### HttpPostRequest object for ResAddACH transaction

```
HttpPostRequest mpgReq = new HttpPostRequest();
```

```
mpgReq.setTransaction(ressaddach);
```

#### ResAddACH transaction values

For a full description of mandatory and optional values, see "Definition of Request Fields" on page 306

**Table 53: ResAddACH transaction object mandatory values**

Value	Type	Limits	Set method
ACH Info	Object	Not applicable. See 5.3 (page 82).	<code>ressaddach.setAchInfo(achinfo);</code>

**Table 54: ResAddACH transaction optional values**

Value	Type	Limits	Set method
Customer ID	String	50-character alpha-numeric	<code>ressaddach.setCustId(custid);</code>
Status Check	Boolean	true/false	<code>mpgReq.setStatusCheck(status_check);</code>
Email address	String	30-character alpha-numeric	<code>ressaddach.setEmail(email);</code>

**Table 54: ResAddACH transaction optional values**

Value	Type	Limits	Set method
Phone number	String	30-character alpha-numeric	<code>ressaddach.setPhone(phone);</code>
Note	String	30-character alpha-numeric	<code>ressaddach.setNote(note);</code>

**Sample ResAddACH - US**

```

package USA;
import JavaAPI.*;
public class TestUSAResAddAch
{
    public static void main(String[] args)
    {
        String store_id = "monusqa002";
        String api_token = "qatoken";
        String phone = "0000000000";
        String email = "bob.smith@moneris.com";
        String note = "my note";
        String cust_id = "customer1";
        //ACHInfo Variables
        String sec = "ppd";
        String cust_first_name = "Christian";
        String cust_last_name = "M";
        String cust_address1 = "3300 Bloor St W";
        String cust_address2 = "4th floor west tower";
        String cust_city = "Toronto";
        String cust_state = "ON";
        String cust_zip = "M1M1M1";
        String routing_num = "490000018";
        String account_num = "222222";
        String check_num = "12";
        String account_type = "checking";
        String processing_country_code = "US";
        boolean status_check = false;
        ACHInfo achinfo = new ACHInfo(sec, cust_first_name, cust_last_name,
        cust_address1, cust_address2, cust_city, cust_state, cust_zip,
        routing_num, account_num, check_num, account_type);
        //alternatively, each field of ACHInfo can be set individually
        /*ACHInfo achinfo = new ACHInfo();
        //*****MANDATORY ACH VARIABLES*****
        achinfo.setSec(sec);
        achinfo.setRoutingNum(routing_num);
        achinfo.setAccountNum(account_num);
        achinfo.setAccountType(account_type);
        //*****OPTIONAL ACH VARIABLES*****
        achinfo.setCustFirstName(cust_first_name);
        achinfo.setCustLastName(cust_last_name);
        achinfo.setCustAddress1(cust_address1);
        achinfo.setCustAddress2(cust_address2);
        achinfo.setCustCity(cust_city);
        achinfo.setCustState(cust_state);
        achinfo.setCustZip(cust_zip);

```

## Sample ResAddACH - US

```

achinfo.setCheckNum(check_num);
*/
ResAddAch ressaddach = new ResAddAch();
ressaddach.setAchInfo(achinfo);
ressaddach.setCustId(cust_id);
ressaddach.setPhone(phone);
ressaddach.setEmail(email);
ressaddach.setNote(note);
HttpsPostRequest mpgReq = new HttpsPostRequest();
mpgReq.setProcCountryCode(processing_country_code);
mpgReq.setTestMode(true); //false or comment out this line for production transactions
mpgReq.setStoreId(store_id);
mpgReq.setApiToken(api_token);
mpgReq.setTransaction(ressaddach);
mpgReq.setStatusCheck(status_check);
mpgReq.send();
try
{
Receipt receipt = mpgReq.getReceipt();
System.out.println("DataKey = " + receipt.getDataKey());
System.out.println("ResponseCode = " + receipt.getResponseCode());
System.out.println("Message = " + receipt.getMessage());
System.out.println("TransDate = " + receipt.getTransDate());
System.out.println("TransTime = " + receipt.getTransTime());
System.out.println("Complete = " + receipt.getComplete());
System.out.println("TimedOut = " + receipt.getTimedOut());
System.out.println("ResSuccess = " + receipt.getResSuccess());
System.out.println("PaymentType = " + receipt.getPaymentType());
System.out.println("Cust ID = " + receipt.getResCustId());
System.out.println("Phone = " + receipt.getResPhone());
System.out.println("Email = " + receipt.getResEmail());
System.out.println("Note = " + receipt.getResNote());
System.out.println("Sec = " + receipt.getResSec());
System.out.println("Cust First Name = " + receipt.getResCustFirstName());
System.out.println("Cust Last Name = " + receipt.getResCustLastName());
System.out.println("Cust Address 1 = " + receipt.getResCustAddress1());
System.out.println("Cust Address 2 = " + receipt.getResCustAddress2());
System.out.println("Cust City = " + receipt.getResCustCity());
System.out.println("Cust State = " + receipt.getResCustState());
System.out.println("Cust Zip = " + receipt.getResCustZip());
System.out.println("Routing Num = " + receipt.getResRoutingNum());
System.out.println("Masked Account Num = " + receipt.getResMaskedAccountNum());
System.out.println("Check Num = " + receipt.getResCheckNum());
System.out.println("Account Type = " + receipt.getResAccountType());
}
catch (Exception e)
{
e.printStackTrace();
}
}
}

```

**Vault response fields**

For a list and explanation of (Receipt object) response fields that are available after sending this Vault transaction, see [Definition of Response Fields \(page 314\)](#).

### 6.3.3 Vault Add Temporary Token - ResTempAdd

#### ResTempAdd transaction object definition

```
ResTempAdd resTempAdd = new ResTempAdd();
```

#### HttpPostRequest object for ResTempAdd transaction

```
HttpPostRequest mpgReq = new HttpPostRequest();
```

```
mpgReq.setTransaction(resTempAdd);
```

#### ResTempAdd transaction values

For a full description of mandatory and optional values, see "Definition of Request Fields" on page 306

**Table 55: ResTempAdd transaction object mandatory values**

Value	Type	Limits	Set method
Credit card number	String	20-character numeric	<code>resTempAdd.setPan(pan);</code>
Expiry date	String	4-character numeric	<code>resTempAdd.setExpdate(expdate);</code>
Duration	String	maximum 15 minutes	<code>resTempAdd.setDuration(duration);</code>
E-commerce indicator	String	1-character alphanumeric	<code>resTempAdd.setCryptType(crypt_type);</code>

**Table 56: ResTempAdd transaction optional values**

Value	Type	Limits	Set method
Status Check	Boolean	true/false	<code>mpgReq.setStatusCheck(status_check);</code>

Sample ResTempAdd - CA	Sample ResTempAdd - US
<pre>package Canada; import JavaAPI.*; public class TestCanadaResTempAdd {     public static void main(String[] args)     {         String store_id = "store1";         String api_token = "yesguy";         String pan = "5454545454545454";         String expdate = "1901"; //YYMM format         String crypt_type = "7";     } }</pre>	<pre>package USA; import JavaAPI.*; public class TestUSAResTempAdd {     public static void main(String[] args)     {         String store_id = "monusqa002";         String api_token = "qatoken";         String pan = "5454545454545454";         String expdate = "1902"; //YYMM format         String crypt_type = "7";     } }</pre>

Sample ResTempAdd - CA	Sample ResTempAdd - US
<pre>String duration = "900"; String processing_country_code = "CA"; boolean status_check = false; ResTempAdd resTempAdd = new ResTempAdd(); resTempAdd.setPan(pan); resTempAdd.setExpdate(expdate); resTempAdd.setDuration(duration); resTempAdd.setCryptType(crypt_type); HttpsPostRequest mpgReq = new HttpsPostRequest (); mpgReq.setProcCountryCode(processing_country_ code); mpgReq.setTestMode(true); //false or comment out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(resTempAdd); mpgReq.setStatusCheck(status_check); mpgReq.send(); try { Receipt receipt = mpgReq.getReceipt(); System.out.println("DataKey = " + receipt.getDataKey()); System.out.println("ResponseCode = " + receipt.getResponseCode()); System.out.println("Message = " + receipt.getMessage()); System.out.println("TransDate = " + receipt.getTransDate()); System.out.println("TransTime = " + receipt.getTransTime()); System.out.println("Complete = " + receipt.getComplete()); System.out.println("TimedOut = " + receipt.getTimedOut()); System.out.println("ResSuccess = " + receipt.getResSuccess()); System.out.println("PaymentType = " + receipt.getPaymentType()); System.out.println("MaskedPan = " + receipt.getResMaskedPan()); System.out.println("Exp Date = " + receipt.getResExpdate()); } catch (Exception e) { e.printStackTrace(); } }</pre>	<pre>String duration = "900"; String processing_country_code = "US"; boolean status_check = false; ResTempAdd resTempAdd = new ResTempAdd(); resTempAdd.setPan(pan); resTempAdd.setExpdate(expdate); resTempAdd.setDuration(duration); resTempAdd.setCryptType(crypt_type); HttpsPostRequest mpgReq = new HttpsPostRequest (); mpgReq.setProcCountryCode(processing_country_ code); mpgReq.setTestMode(true); //false or comment out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(resTempAdd); mpgReq.setStatusCheck(status_check); mpgReq.send(); try { Receipt receipt = mpgReq.getReceipt(); System.out.println("DataKey = " + receipt.getDataKey()); System.out.println("ResponseCode = " + receipt.getResponseCode()); System.out.println("Message = " + receipt.getMessage()); System.out.println("TransDate = " + receipt.getTransDate()); System.out.println("TransTime = " + receipt.getTransTime()); System.out.println("Complete = " + receipt.getComplete()); System.out.println("TimedOut = " + receipt.getTimedOut()); System.out.println("ResSuccess = " + receipt.getResSuccess()); System.out.println("PaymentType = " + receipt.getPaymentType()); System.out.println("MaskedPan = " + receipt.getResMaskedPan()); System.out.println("Exp Date = " + receipt.getResExpdate()); } catch (Exception e) { e.printStackTrace(); } }</pre>

## Vault response fields

For a list and explanation of (Receipt object) response fields that are available after sending this Vault transaction, see [Definition of Response Fields \(page 314\)](#).

### 6.3.4 Vault Update Credit Card - ResUpdateCC

#### ResUpdateCC transaction object definition

```
ResUpdateCC resUpdateCC = new ResUpdateCC();
```

#### HttpRequest object for ResUpdateCC transaction

```
HttpRequest mpgReq = new HttpRequest();  
mpgReq.setTransaction(resUpdateCC);
```

#### ResUpdateCC transaction values

For a full description of mandatory and optional values, see "Definition of Request Fields" on page 306

**Table 57: ResUpdateCC transaction object mandatory values**

Value	Type	Limits	Set method
Data key	String	25-character alpha-numeric	<code>resUpdateCC.setData(data_key);</code>

Optional values that are submitted to the ResUpdateCC object are updated. Unsubmitted optional values (with one exception) remain unchanged. This allows you to change only the fields you want.

The exception is that if you are making changes to the payment type, **all** of the variables in the optional values table below must be submitted.

If you update a profile to a different payment type, it is automatically deactivated and a new credit card profile is created and assigned to the data key. The only values from the prior profile that will remain unchanged are the customer ID, phone number, email address, and note.

**EXAMPLE:** If a profile contains AVS information, but a ResUpdateCC transaction is submitted without an AVSInfo object, the existing AVSInfo details are deactivated and the new credit card information is registered without AVS.

**Table 58: ResUpdateCC transaction optional values**

Value	Type	Limits	Set method
Credit card number	String	20-character alpha-numeric	<code>resUpdateCC.setPan(pan);</code>
Expiry date	String	4-character alpha-numeric (YYMM format)	<code>resUpdateCC.setExpDate(exp-date);</code>
E-commerce indicator	String	1-character alpha-	<code>resUpdateCC.setCryptType</code>

Value	Type	Limits	Set method
		numeric	(crypt_type);
Customer ID	String	50-character alpha-numeric	resUpdateCC.setCustId(custid);
Status Check	Boolean	true/false	mpgReq.setStatusCheck(status_check);
AVS information	Object	Not applicable. See Appendix E (page 336).	resUpdateCC.setAvsInfo(avsCheck);
Email address	String	30-character alpha-numeric	resUpdateCC.setEmail(email);
Phone number	String	30-character alpha-numeric	resUpdateCC.setPhone(phone);
Note	String	30-character alpha-numeric	resUpdateCC.setNote(note);

Sample ResUpdateCC - CA	Sample ResUpdateCC - US
<pre> package Canada; import JavaAPI.*; public class TestCanadaResUpdateCC {     public static void main(String[] args)     {         String store_id = "moneris";         String api_token = "hurgle";         String data_key = "vthBJyNlBicbRkdWFZ9flyDP2";         String pan = "4242424242424242";         String expdate = "1901";         String phone = "0000000000";         String email = "bob@smith.com";         String note = "my note";         String cust_id = "customer1";         String crypt_type = "7";         String processing_country_code = "CA";         boolean status_check = false;         AvsInfo avsCheck = new AvsInfo();         avsCheck.setAvsStreetNumber("212");         avsCheck.setAvsStreetName("Payton Street");         avsCheck.setAvsZipCode("M1M1M1");         ResUpdateCC resUpdateCC = new ResUpdateCC();         resUpdateCC.setData(data_key);         resUpdateCC.setAvsInfo(avsCheck);         resUpdateCC.setCustId(cust_id);         resUpdateCC.setPan(pan);         resUpdateCC.setExpdate(expdate);         resUpdateCC.setPhone(phone); </pre>	<pre> package USA; import JavaAPI.*; public class TestUSAResUpdateCC {     public static void main(String[] args)     {         String store_id = "monusqa002";         String api_token = "qatoken";         String data_key = "HiL4u0n0pvjVYSnJc0lpATLla";         String pan = "4242424242424242";         String expdate = "1901"; //YYMM format         String phone = "0000000000";         String email = "bob@smith.com";         String note = "my note";         String cust_id = "customer1";         String crypt_type = "7";         String processing_country_code = "US";         boolean status_check = false;         AvsInfo avsCheck = new AvsInfo();         avsCheck.setAvsStreetNumber("212");         avsCheck.setAvsStreetName("Payton Street");         avsCheck.setAvsZipCode("M1M1M1");         ResUpdateCC usResUpdateCC = new ResUpdateCC();         usResUpdateCC.setAvsInfo(avsCheck);         usResUpdateCC.setCustId(cust_id);         usResUpdateCC.setPan(pan);         usResUpdateCC.setExpdate(expdate);         usResUpdateCC.setPhone(phone);         usResUpdateCC.setEmail(email); </pre>



Sample ResUpdateCC - CA	Sample ResUpdateCC - US
<pre> resUpdateCC.setEmail(email); resUpdateCC.setNote(note); resUpdateCC.setCryptType(crypt_type); HttpsPostRequest mpgReq = new HttpsPostRequest (); mpgReq.setProcCountryCode(processing_country_ code); mpgReq.setTestMode(true); //false or comment out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(resUpdateCC); mpgReq.setStatusCheck(status_check); mpgReq.send(); try { Receipt receipt = mpgReq.getReceipt(); System.out.println("DataKey = " + receipt.getDataKey()); System.out.println("ResponseCode = " + receipt.getResponseCode()); System.out.println("Message = " + receipt.getMessage()); System.out.println("TransDate = " + receipt.getTransDate()); System.out.println("TransTime = " + receipt.getTransTime()); System.out.println("Complete = " + receipt.getComplete()); System.out.println("TimedOut = " + receipt.getTimedOut()); System.out.println("ResSuccess = " + receipt.getResSuccess()); System.out.println("PaymentType = " + receipt.getPaymentType()); System.out.println("Cust ID = " + receipt.getResCustId()); System.out.println("Phone = " + receipt.getResPhone()); System.out.println("Email = " + receipt.getResEmail()); System.out.println("Note = " + receipt.getResNote()); System.out.println("MaskedPan = " + receipt.getResMaskedPan()); System.out.println("Exp Date = " + receipt.getResExpdate()); System.out.println("Crypt Type = " + receipt.getResCryptType()); System.out.println("Avs Street Number = " + receipt.getResAvsStreetNumber()); System.out.println("Avs Street Name = " + receipt.getResAvsStreetName()); System.out.println("Avs Zipcode = " + receipt.getResAvsZipcode()); } catch (Exception e) { </pre>	<pre> usResUpdateCC.setNote(note); usResUpdateCC.setCryptType(crypt_type); usResUpdateCC.setData(data_key); HttpsPostRequest mpgReq = new HttpsPostRequest (); mpgReq.setProcCountryCode(processing_country_ code); mpgReq.setTestMode(true); //false or comment out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(usResUpdateCC); mpgReq.setStatusCheck(status_check); mpgReq.send(); try { Receipt receipt = mpgReq.getReceipt(); System.out.println("DataKey = " + receipt.getDataKey()); System.out.println("ResponseCode = " + receipt.getResponseCode()); System.out.println("Message = " + receipt.getMessage()); System.out.println("TransDate = " + receipt.getTransDate()); System.out.println("TransTime = " + receipt.getTransTime()); System.out.println("Complete = " + receipt.getComplete()); System.out.println("TimedOut = " + receipt.getTimedOut()); System.out.println("ResSuccess = " + receipt.getResSuccess()); System.out.println("PaymentType = " + receipt.getPaymentType()); System.out.println("Cust ID = " + receipt.getResCustId()); System.out.println("Phone = " + receipt.getResPhone()); System.out.println("Email = " + receipt.getResEmail()); System.out.println("Note = " + receipt.getResNote()); System.out.println("MaskedPan = " + receipt.getResMaskedPan()); System.out.println("Exp Date = " + receipt.getResExpdate()); System.out.println("Crypt Type = " + receipt.getResCryptType()); System.out.println("Avs Street Number = " + receipt.getResAvsStreetNumber()); System.out.println("Avs Street Name = " + receipt.getResAvsStreetName()); System.out.println("Avs Zipcode = " + receipt.getResAvsZipcode()); } catch (Exception e) { </pre>

Sample ResUpdateCC - CA	Sample ResUpdateCC - US
<pre>e.printStackTrace(); } } }</pre>	<pre>e.printStackTrace(); } } }</pre>

### Vault response fields

For a list and explanation of (Receipt object) response fields that are available after sending this Vault transaction, see Definition of Response Fields (page 314).

#### 6.3.4.1 Vault Encrypted Update CC - EncResUpdateCC

##### EncResUpdateCC transaction object definition

```
EncResUpdateCC enc_res_update_cc = new EncResUpdateCC ();
```

##### HttpPostRequest object for EncResUpdateCC transaction

```
HttpPostRequest mpgReq = new HttpPostRequest();
```

```
mpgReq.setTransaction(enc_res_update_cc);
```

##### EncResUpdateCC transaction values

For a full description of mandatory and optional values, see "Definition of Request Fields" on page 306

**Table 59: EncResUpdateCC transaction object mandatory values**

Value	Type	Limits	Set method
Data key	String	25-character alpha-numeric	<code>enc_res_update_cc.setData(data_key);</code>

Optional values that are submitted to the ResUpdateCC object are updated, while unsubmitted optional values (with one exception) remain unchanged. This allows you to change only the fields you want.

The exception is that if you are making changes to the payment type, **all** of the variables in the optional values table below must be submitted.

If you update a profile to a different payment type, it is automatically deactivated and a new credit card profile is created and assigned to the data key. The only values from the prior profile that will remain unchanged are the customer ID, phone number, email address, and note.

**EXAMPLE:** If a profile contains AVS information, but a ResUpdateCC transaction is submitted without an AVSInfo object, the existing AVSInfo details are deactivated and the new credit card information is registered without AVS.

**Table 60: EncResUpdateCC transaction optional values**

Value	Type	Limits	Set method
Encrypted Track2 data	String	40-character numeric	<code>enc_res_update_cc.setEncTrack2(enc_track2);</code>
Device type	String	TBD	<code>enc_res_update_cc.setDeviceType(device_type);</code>
E-commerce indicator	String	1-character alpha-numeric	<code>enc_res_update_cc.setCryptType(crypt_type);</code>
Customer ID	String	50-character alpha-numeric	<code>enc_res_update_cc.setCustId(custid);</code>
Status Check	Boolean	true/false	<code>mpgReq.setStatusCheck(status_check);</code>
AVS information	Object	Not applicable. See Appendix E (page 336).	<code>enc_res_update_cc.setAvsInfo(avsCheck);</code>
Email address	String	30-character alpha-numeric	<code>enc_res_update_cc.setEmail(email);</code>
Phone number	String	30-character alpha-numeric	<code>enc_res_update_cc.setPhone(phone);</code>
Note	String	30-character alpha-numeric	<code>enc_res_update_cc.setNote(note);</code>

Sample EncResUpdateCC - CA	Sample EncResUpdateCC - US
<pre> package Canada; import JavaAPI.*; public class TestCanadaEncResUpdateCC {     public static void main(String args[])     {         String store_id = "store1";         String api_token = "yesguy";         String data_key = "PHTM1pun7VOaSCFM2xdeP2Sim";         String enc_track2 = "ENCRYPTEDTRACK2DATA";         String device_type = "idtech_bdk";         String phone = "55555555555";         String email = "test.user@moneris.com";         String note = "my note";         String cust_id = "customer2";         String crypt = "7"; </pre>	<pre> package USA; import JavaAPI.*; public class TestUSAEncResUpdateCC {     public static void main(String args[])     {         String store_id = "monusqa002";         String api_token = "qatoken";         String data_key = "fEp6v0P0OrtsxH3SJV1WJYtDq";         String enc_track2 = "ENCRYPTEDTRACK2DATA";         String device_type = "idtech";         String phone = "55555555555";         String email = "test.user@moneris.com";         String note = "my note";         String cust_id = "customer2";         String crypt = "7"; </pre>

Sample EncResUpdateCC - CA	Sample EncResUpdateCC - US
<pre>String processing_country_code = "CA"; AvsInfo avsinfo = new AvsInfo(); avsinfo.setAvsStreetNumber("212"); avsinfo.setAvsStreetName("Smith Street"); avsinfo.setAvsZipcode("M1M1M1"); EncResUpdateCC enc_res_update_cc = new     EncResUpdateCC (); enc_res_update_cc.setDataKey(data_key); enc_res_update_cc.setAvsInfo(avsinfo); enc_res_update_cc.setCustId(cust_id); enc_res_update_cc.setEncTrack2(enc_track2); enc_res_update_cc.setDeviceType(device_type); enc_res_update_cc.setPhone(phone); enc_res_update_cc.setEmail(email); enc_res_update_cc.setNote(note); enc_res_update_cc.setCryptType(crypt); HttpPostRequest mpgReq = new HttpPostRequest (); mpgReq.setProcCountryCode(processing_country_ code); mpgReq.setTestMode(true); //false or comment     out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(enc_res_update_cc); mpgReq.send(); try { Receipt receipt = mpgReq.getReceipt(); System.out.println("DataKey = " +     receipt.getDataKey()); System.out.println("ResponseCode = " +     receipt.getResponseCode()); System.out.println("Message = " +     receipt.getMessage()); System.out.println("TransDate = " +     receipt.getTransDate()); System.out.println("TransTime = " +     receipt.getTransTime()); System.out.println("Complete = " +     receipt.getComplete()); System.out.println("TimedOut = " +     receipt.getTimedOut()); System.out.println("ResSuccess = " +     receipt.getResSuccess()); System.out.println("PaymentType = " +     receipt.getPaymentType() + "\n"); //Contents of ResolveData System.out.println("Cust ID = " +     receipt.getResCustId()); System.out.println("Phone = " +     receipt.getResPhone()); System.out.println("Email = " +     receipt.getResEmail()); System.out.println("Note = " +     receipt.getResNote()); System.out.println("MaskedPan = " +     receipt.getResMaskedPan());</pre>	<pre>String processing_country_code = "US";  AvsInfo avsinfo = new AvsInfo(); avsinfo.setAvsStreetNumber("212"); avsinfo.setAvsStreetName("Smith Street"); avsinfo.setAvsZipcode("M1M1M1"); EncResUpdateCC enc_res_update_cc = new     EncResUpdateCC (); enc_res_update_cc.setDataKey(data_key); enc_res_update_cc.setAvsInfo(avsinfo); enc_res_update_cc.setCustId(cust_id); enc_res_update_cc.setEncTrack2(enc_track2); enc_res_update_cc.setDeviceType(device_type); enc_res_update_cc.setPhone(phone); enc_res_update_cc.setEmail(email); enc_res_update_cc.setNote(note); enc_res_update_cc.setCryptType(crypt); HttpPostRequest mpgReq = new HttpPostRequest (); mpgReq.setProcCountryCode(processing_country_ code); mpgReq.setTestMode(true); //false or comment     out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(enc_res_update_cc); mpgReq.send();  try { Receipt receipt = mpgReq.getReceipt(); System.out.println("DataKey = " +     receipt.getDataKey()); System.out.println("ResponseCode = " +     receipt.getResponseCode()); System.out.println("Message = " +     receipt.getMessage()); System.out.println("TransDate = " +     receipt.getTransDate()); System.out.println("TransTime = " +     receipt.getTransTime()); System.out.println("Complete = " +     receipt.getComplete()); System.out.println("TimedOut = " +     receipt.getTimedOut()); System.out.println("ResSuccess = " +     receipt.getResSuccess()); System.out.println("PaymentType = " +     receipt.getPaymentType() + "\n"); //Contents of ResolveData System.out.println("Cust ID = " +     receipt.getResCustId()); System.out.println("Phone = " +     receipt.getResPhone()); System.out.println("Email = " +     receipt.getResEmail()); System.out.println("Note = " +     receipt.getResNote());</pre>

Sample EncResUpdateCC - CA	Sample EncResUpdateCC - US
<pre> System.out.println("Exp Date = " +     receipt.getResExpDate()); System.out.println("Crypt Type = " +     receipt.getResCryptType()); System.out.println("Avs Street Number = " +     receipt.getResAvsStreetNumber()); System.out.println("Avs Street Name = " +     receipt.getResAvsStreetName()); System.out.println("Avs Zipcode = " +     receipt.getResAvsZipcode()); } catch (Exception e) {     e.printStackTrace(); } } } </pre>	<pre> System.out.println("MaskedPan = " +     receipt.getResMaskedPan()); System.out.println("Exp Date = " +     receipt.getResExpDate()); System.out.println("Crypt Type = " +     receipt.getResCryptType()); System.out.println("Avs Street Number = " +     receipt.getResAvsStreetNumber()); System.out.println("Avs Street Name = " +     receipt.getResAvsStreetName()); System.out.println("Avs Zipcode = " +     receipt.getResAvsZipcode()); } catch (Exception e) {     e.printStackTrace(); } } } </pre>

## Vault response fields

For a list and explanation of (Receipt object) response fields that are available after sending this Vault transaction, see Definition of Response Fields (page 314).

### 6.3.5 Vault Update ACH - ResUpdateACH

If the profile that is being updated was already an ACH profile, all information contained within it will be updated as indicated by the submitted fields.

If the profile was of a different payment type (e.g., credit card), the old profile is deactivated and the new ACH information is associated with the data key.

## ResUpdateACH transaction object definition

```
ResUpdateAch resUpdateAch = new ResUpdateAch();
```

## HttpPostRequest object for ResUpdateACH transaction

```
HttpPostRequest mpgReq = new HttpPostRequest();
```

```
mpgReq.setTransaction(resUpdateAch);
```

## ResUpdateACH transaction values

For a full description of mandatory and optional values, see "Definition of Request Fields" on page 306

**Table 61: ResUpdateAch transaction object mandatory values**

Value	Type	Limits	Set method
Data key	String	25-character alpha-numeric	<code>resUpdateAch.setData (data_key) ;</code>
ACH Info	Object	Not applicable. See 5.3 (page 82).	<code>resUpdateAch.setAchInfo (achinfo) ;</code>

**Table 62: ResUpdateACH transaction optional values**

Value	Type	Limits	Set method
Customer ID	String	50-character alpha-numeric	<code>resUpdateAch.setCustId (custid) ;</code>
Status Check	Boolean	true/false	<code>mpgReq.setStatusCheck (status_check) ;</code>
Email address	String	30-character alpha-numeric	<code>resUpdateAch.setEmail (email) ;</code>
Phone number	String	30-character alpha-numeric	<code>resUpdateAch.setPhone (phone) ;</code>
Note	String	30-character alpha-numeric	<code>resUpdateAch.setNote (note) ;</code>

**Sample ResUpdateAch**

```

package USA;
import JavaAPI.*;
public class TestUSAResUpdateAch
{
    public static void main(String[] args)
    {
        String store_id = "monusqa002";
        String api_token = "qatoken";
        String data_key = "eRnPURQlABfvEIR44iMO6cN6S";
        String phone = "0000000000";
        String email = "bob@smith.com";
        String note = "my note";
        String cust_id = "customer1";
        //ACHInfo Variables
        String sec = "ppd";
        String cust_first_name = "Christian";
        String cust_last_name = "M";
        String cust_address1 = "3300 Bloor St W";
        String cust_address2 = "4th floor west tower";
    }
}

```

## Sample ResUpdateAch

```

String cust_city = "Toronto";
String cust_state = "ON";
String cust_zip = "M1M1M1";
String routing_num = "490000018";
String account_num = "222222";
String check_num = "11";
String account_type = "checking";
String processing_country_code = "US";
boolean status_check = false;
ACHInfo achinfo = new ACHInfo();
achinfo.setSec(sec);
achinfo.setCustFirstName(cust_first_name);
achinfo.setCustLastName(cust_last_name);
achinfo.setCustAddress1(cust_address1);
achinfo.setCustAddress2(cust_address2);
achinfo.setCustCity(cust_city);
achinfo.setCustState(cust_state);
achinfo.setCustZip(cust_zip);
achinfo.setRoutingNum(routing_num);
achinfo.setAccountNum(account_num);
achinfo.setCheckNum(check_num);
achinfo.setAccountType(account_type);
ResUpdateAch resUpdateAch = new ResUpdateAch();
resUpdateAch.setDataKey(data_key);
resUpdateAch.setAchInfo(achinfo);
resUpdateAch.setCustId(cust_id);
resUpdateAch.setPhone(phone);
resUpdateAch.setEmail(email);
resUpdateAch.setNote(note);
HttpPostRequest mpgReq = new HttpPostRequest();
mpgReq.setProcCountryCode(processing_country_code);
mpgReq.setTestMode(true); //false or comment out this line for production transactions
mpgReq.setStoreId(store_id);
mpgReq.setApiToken(api_token);
mpgReq.setTransaction(resUpdateAch);
mpgReq.setStatusCheck(status_check);
mpgReq.send();
try
{
Receipt receipt = mpgReq.getReceipt();
System.out.println("DataKey = " + receipt.getDataKey());
System.out.println("ResponseCode = " + receipt.getResponseCode());
System.out.println("Message = " + receipt.getMessage());
System.out.println("TransDate = " + receipt.getTransDate());
System.out.println("TransTime = " + receipt.getTransTime());
System.out.println("Complete = " + receipt.getComplete());
System.out.println("TimedOut = " + receipt.getTimedOut());
System.out.println("ResSuccess = " + receipt.getResSuccess());
System.out.println("PaymentType = " + receipt.getPaymentType());
System.out.println("Cust ID = " + receipt.getResCustId());
System.out.println("Phone = " + receipt.getResPhone());
System.out.println("Email = " + receipt.getResEmail());
System.out.println("Note = " + receipt.getResNote());
System.out.println("Sec = " + receipt.getResSec());
System.out.println("Cust First Name = " + receipt.getResCustFirstName());
System.out.println("Cust Last Name = " + receipt.getResCustLastName());
System.out.println("Cust Address 1 = " + receipt.getResCustAddress1());
System.out.println("Cust Address 2 = " + receipt.getResCustAddress2());
System.out.println("Cust City = " + receipt.getResCustCity());

```

**Sample ResUpdateAch**

```

System.out.println("Cust State = " + receipt.getResCustState());
System.out.println("Cust Zip = " + receipt.getResCustZip());
System.out.println("Routing Num = " + receipt.getResRoutingNum());
System.out.println("Masked Account Num = " + receipt.getResMaskedAccountNum());
System.out.println("Check Num = " + receipt.getResCheckNum());
System.out.println("Account Type = " + receipt.getResAccountType());
}
catch (Exception e)
{
e.printStackTrace();
}
}
}

```

**Vault response fields**

For a list and explanation of (Receipt object) response fields that are available after sending this Vault transaction, see Definition of Response Fields (page 314).

**6.3.6 Vault Delete - ResDelete**

**NOTE:** After a profile has been deleted, the details can no longer be retrieved.

**ResDelete transaction object definition**

```
ResDelete resDelete = new ResDelete (data_key);
```

**HttpPostRequest object for ResUpdateCC transaction**

```

HttpPostRequest mpgReq = new HttpPostRequest();
mpgReq.setTransaction(resDelete);

```

**ResDelete transaction values**

For a full description of mandatory and optional values, see "Definition of Request Fields" on page 306

**Table 63: ResDelete transaction object mandatory values**

Value	Type	Limits	Set method
Data key	String	25-character alpha-numeric	Not applicable (passed as argument)



Sample ResDelete - CA	Sample ResDelete - US
<pre> package Canada; import JavaAPI.*; public class TestCanadaResDelete { public static void main(String[] args) { String store_id = "moneris"; String api_token = "hurgle"; String data_key = "DxwdemrvfnoXOlHhmRikfw3gA"; String processing_country_code = "CA"; boolean status_check = false; ResDelete resDelete = new ResDelete(data_key); HttpPostRequest mpgReq = new HttpsPostRequest (); mpgReq.setProcCountryCode(processing_country_ code); mpgReq.setTestMode(true); //false or comment out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(resDelete); mpgReq.setStatusCheck(status_check); mpgReq.send(); try { Receipt receipt = mpgReq.getReceipt(); System.out.println("DataKey = " + receipt.getDataKey()); System.out.println("ResponseCode = " + receipt.getResponseCode()); System.out.println("Message = " + receipt.getMessage()); System.out.println("TransDate = " + receipt.getTransDate()); System.out.println("TransTime = " + receipt.getTransTime()); System.out.println("Complete = " + receipt.getComplete()); System.out.println("TimedOut = " + receipt.getTimedOut()); System.out.println("ResSuccess = " + receipt.getResSuccess()); System.out.println("PaymentType = " + receipt.getPaymentType()); //ResolveData System.out.println("Cust ID = " + receipt.getResCustId()); System.out.println("Phone = " + receipt.getResPhone()); System.out.println("Email = " + receipt.getResEmail()); System.out.println("Note = " + receipt.getResNote()); System.out.println("MaskedPan = " + receipt.getResMaskedPan()); System.out.println("Exp Date = " + receipt.getResExpdate()); System.out.println("Crypt Type = " + </pre>	<pre> package USA; import JavaAPI.*; public class TestUSAResDelete { public static void main(String[] args) { String store_id = "monusqa002"; String api_token = "qatoken"; String data_key = "A7AKitqvoSmSmI3rPTz3SgbCQ"; String processing_country_code = "US"; boolean status_check = false; ResDelete resDelete = new ResDelete(data_key); HttpPostRequest mpgReq = new HttpsPostRequest (); mpgReq.setProcCountryCode(processing_country_ code); mpgReq.setTestMode(true); //false or comment out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(resDelete); mpgReq.setStatusCheck(status_check); mpgReq.send(); try { Receipt receipt = mpgReq.getReceipt(); System.out.println("DataKey = " + receipt.getDataKey()); System.out.println("ResponseCode = " + receipt.getResponseCode()); System.out.println("Message = " + receipt.getMessage()); System.out.println("TransDate = " + receipt.getTransDate()); System.out.println("TransTime = " + receipt.getTransTime()); System.out.println("Complete = " + receipt.getComplete()); System.out.println("TimedOut = " + receipt.getTimedOut()); System.out.println("ResSuccess = " + receipt.getResSuccess()); System.out.println("PaymentType = " + receipt.getPaymentType()); System.out.println("Cust ID = " + receipt.getResCustId()); System.out.println("Phone = " + receipt.getResPhone()); System.out.println("Email = " + receipt.getResEmail()); System.out.println("Note = " + receipt.getResNote()); System.out.println("MaskedPan = " + receipt.getResMaskedPan()); System.out.println("Exp Date = " + receipt.getResExpdate()); System.out.println("Crypt Type = " + receipt.getResCryptType()); </pre>

Sample ResDelete - CA	Sample ResDelete - US
<pre>         receipt.getResCryptType();         System.out.println("Avs Street Number = " +             receipt.getResAvsStreetNumber());         System.out.println("Avs Street Name = " +             receipt.getResAvsStreetName());         System.out.println("Avs Zipcode = " +             receipt.getResAvsZipcode());     }     catch (Exception e)     {         e.printStackTrace();     } } </pre>	<pre>         System.out.println("Avs Street Number = " +             receipt.getResAvsStreetNumber());         System.out.println("Avs Street Name = " +             receipt.getResAvsStreetName());         System.out.println("Avs Zipcode = " +             receipt.getResAvsZipcode());         System.out.println("Presentation Type = " +             receipt.getResPresentationType());         System.out.println("P Account Number = " +             receipt.getResPAccountNumber());         System.out.println("Sec = " +             receipt.getResSec());         System.out.println("Cust First Name = " +             receipt.getResCustFirstName());         System.out.println("Cust Last Name = " +             receipt.getResCustLastName());         System.out.println("Cust Address 1 = " +             receipt.getResCustAddress1());         System.out.println("Cust Address 2 = " +             receipt.getResCustAddress2());         System.out.println("Cust City = " +             receipt.getResCustCity());         System.out.println("Cust State = " +             receipt.getResCustState());         System.out.println("Cust Zip = " +             receipt.getResCustZip());         System.out.println("Routing Num = " +             receipt.getResRoutingNum());         System.out.println("Masked Account Num = " +             receipt.getResMaskedAccountNum());         System.out.println("Check Num = " +             receipt.getResCheckNum());         System.out.println("Account Type = " +             receipt.getResAccountType());     }     catch (Exception e)     {         e.printStackTrace();     } } </pre>

## Vault response fields

For a list and explanation of (Receipt object) response fields that are available after sending this Vault transaction, see Definition of Response Fields (page 314).

### 6.3.7 Vault Lookup Full - ResLookupFull

#### ResLookupFull transaction object definition

```
ResLookupFull resLookupFull = new ResLookupFull(data_key);
```

#### HttpPostRequest object for ResLookupFull transaction

```
HttpPostRequest mpgReq = new HttpPostRequest();
```

```
mpgReq.setTransaction(resLookupFull);
```

## ResLookupFull transaction values

**Table 64: ResLookupFull transaction object mandatory values**

Value	Type	Limits	Set method
Data key	String	25-character alpha-numeric	Not applicable (passed as argument)

**Table 65: ResLookupFull transaction optional values**

Value	Type	Limits	Set method
Status Check	Boolean	true/false	<code>mpgReq.setStatusCheck(status_check);</code>

Sample ResLookupFull - CA	Sample ResLookupFull - US
<pre>package Canada; import JavaAPI.*; public class TestCanadaResLookupFull {     public static void main(String[] args)     {         String store_id = "store1";         String api_token = "yesguy";         String data_key = "pi3ZMzoTTM8pLM9wuwws2KBxw";         String processing_country_code = "CA";         boolean status_check = false;         ResLookupFull resLookupFull = new             ResLookupFull(data_key);         HttpsPostRequest mpgReq = new HttpsPostRequest             ();         mpgReq.setProcCountryCode(processing_country_             code);         mpgReq.setTestMode(true); //false or comment             out this line for production transactions         mpgReq.setStoreId(store_id);         mpgReq.setApiToken(api_token);         mpgReq.setTransaction(resLookupFull);         mpgReq.setStatusCheck(status_check);         mpgReq.send();         try         {             Receipt receipt = mpgReq.getReceipt();             System.out.println("DataKey = " +                 receipt.getDataKey());             System.out.println("ResponseCode = " +                 receipt.getResponseCode());             System.out.println("Message = " +                 receipt.getMessage());             System.out.println("TransDate = " +                 receipt.getTransDate());             System.out.println("TransTime = " +</pre>	<pre>package USA; import JavaAPI.*; public class TestUSAResLookupFull {     public static void main(String[] args)     {         String store_id = "monusqa002";         String api_token = "qatoken";         String data_key = "A7AKitqvoSmSmI3rPTz3SgbCQ";         String processing_country_code = "US";         ResLookupFull resLookupFull = new             ResLookupFull();         resLookupFull.setData(data_key);         HttpsPostRequest mpgReq = new HttpsPostRequest             ();         mpgReq.setProcCountryCode(processing_country_             code);         mpgReq.setTestMode(true); //false or comment             out this line for production transactions         mpgReq.setStoreId(store_id);         mpgReq.setApiToken(api_token);         mpgReq.setTransaction(resLookupFull);         mpgReq.send();         try         {             Receipt receipt = mpgReq.getReceipt();             System.out.println("DataKey = " +                 receipt.getDataKey());             System.out.println("ResponseCode = " +                 receipt.getResponseCode());             System.out.println("Message = " +                 receipt.getMessage());             System.out.println("TransDate = " +                 receipt.getTransDate());             System.out.println("TransTime = " +                 receipt.getTransTime());</pre>

Sample ResLookupFull - CA	Sample ResLookupFull - US
<pre> receipt.getTransTime(); System.out.println("Complete = " +     receipt.getComplete()); System.out.println("TimedOut = " +     receipt.getTimedOut()); System.out.println("ResSuccess = " +     receipt.getResSuccess()); System.out.println("PaymentType = " +     receipt.getPaymentType()); System.out.println("Cust ID = " +     receipt.getResCustId()); System.out.println("Phone = " +     receipt.getResPhone()); System.out.println("Email = " +     receipt.getResEmail()); System.out.println("Note = " +     receipt.getResNote()); System.out.println("Pan = " +     receipt.getResPan()); System.out.println("MaskedPan = " +     receipt.getResMaskedPan()); System.out.println("Exp Date = " +     receipt.getResExpdate()); System.out.println("Crypt Type = " +     receipt.getResCryptType()); System.out.println("Avs Street Number = " +     receipt.getResAvsStreetNumber()); System.out.println("Avs Street Name = " +     receipt.getResAvsStreetName()); System.out.println("Avs Zipcode = " +     receipt.getResAvsZipcode()); } catch (Exception e) { e.printStackTrace(); } } </pre>	<pre> System.out.println("Complete = " +     receipt.getComplete()); System.out.println("TimedOut = " +     receipt.getTimedOut()); System.out.println("ResSuccess = " +     receipt.getResSuccess()); System.out.println("PaymentType = " +     receipt.getPaymentType()); System.out.println("Cust ID = " +     receipt.getResCustId()); System.out.println("Phone = " +     receipt.getResPhone()); System.out.println("Email = " +     receipt.getResEmail()); System.out.println("Note = " +     receipt.getResNote()); System.out.println("Pan = " +     receipt.getResPan()); System.out.println("MaskedPan = " +     receipt.getResMaskedPan()); System.out.println("Exp Date = " +     receipt.getResExpdate()); System.out.println("Crypt Type = " +     receipt.getResCryptType()); System.out.println("Avs Street Number = " +     receipt.getResAvsStreetNumber()); System.out.println("Avs Street Name = " +     receipt.getResAvsStreetName()); System.out.println("Avs Zipcode = " +     receipt.getResAvsZipcode()); System.out.println("Presentation Type = " +     receipt.getResPresentationType()); System.out.println("P Account Number = " +     receipt.getResPAccountNumber()); System.out.println("Sec = " +     receipt.getResSec()); System.out.println("Cust First Name = " +     receipt.getResCustFirstName()); System.out.println("Cust Last Name = " +     receipt.getResCustLastName()); System.out.println("Cust Address 1 = " +     receipt.getResCustAddress1()); System.out.println("Cust Address 2 = " +     receipt.getResCustAddress2()); System.out.println("Cust City = " +     receipt.getResCustCity()); System.out.println("Cust State = " +     receipt.getResCustState()); System.out.println("Cust Zip = " +     receipt.getResCustZip()); System.out.println("Routing Num = " +     receipt.getResRoutingNum()); System.out.println("Account Num = " +     receipt.getResAccountNum()); System.out.println("Masked Account Num = " +     receipt.getResMaskedAccountNum()); System.out.println("Check Num = " + </pre>

Sample ResLookupFull - CA	Sample ResLookupFull - US
	<pre> receipt.getResCheckNum(); System.out.println("Account Type = " +     receipt.getResAccountType()); } catch (Exception e) {     e.printStackTrace(); } } } </pre>

### Vault response fields

For a list and explanation of (Receipt object) response fields that are available after sending this Vault transaction, see Definition of Response Fields (page 314).

## 6.3.8 Vault Lookup Masked - ResLookupMasked

### ResLookupMasked transaction object definition

```
ResLookupMasked resLookupMasked = new ResLookupMasked();
```

### HttpPostRequest object for ResLookupMasked transaction

```
HttpPostRequest mpgReq = new HttpPostRequest();
```

```
mpgReq.setTransaction(resLookupMasked);
```

### ResLookupMasked transaction values

For a full description of mandatory and optional values, see "Definition of Request Fields" on page 306

**Table 66: ResLookupMasked transaction object mandatory values**

Value	Type	Limits	Set method
Data key	String	25-character alpha-numeric	resLookupMasked.setData(data_key);

Sample ResLookupMasked - CA	Sample ResLookupMasked - US
<pre> package Canada; import JavaAPI.*; public class TestCanadaResLookupMasked {     public static void main(String[] args)     {         String store_id = "store1";         String api_token = "yesguy";         String data_key = "pi3ZMZoTTM8pLM9wuwws2KBxw";     } } </pre>	<pre> package USA; import JavaAPI.*; public class TestUSAResLookupMasked {     public static void main(String[] args)     {         String store_id = "monusqa002";         String api_token = "qatoken";         String data_key = "A7AKitqvoSmSmI3rPTz3SgbCQ";     } } </pre>

Sample ResLookupMasked - CA	Sample ResLookupMasked - US
<pre> String processing_country_code = "CA"; boolean status_check = false; ResLookupMasked resLookupMasked = new     ResLookupMasked(); resLookupMasked.setData(data_key); HttpPostRequest mpgReq = new HttpPostRequest     (); mpgReq.setProcCountryCode(processing_country_     code); mpgReq.setTestMode(true); //false or comment     out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(resLookupMasked); mpgReq.setStatusCheck(status_check); mpgReq.send(); try {     Receipt receipt = mpgReq.getReceipt();     System.out.println("DataKey = " +         receipt.getDataKey());     System.out.println("ResponseCode = " +         receipt.getResponseCode());     System.out.println("Message = " +         receipt.getMessage());     System.out.println("TransDate = " +         receipt.getTransDate());     System.out.println("TransTime = " +         receipt.getTransTime());     System.out.println("Complete = " +         receipt.getComplete());     System.out.println("TimedOut = " +         receipt.getTimedOut());     System.out.println("ResSuccess = " +         receipt.getResSuccess());     System.out.println("PaymentType = " +         receipt.getPaymentType());     System.out.println("Cust ID = " +         receipt.getResCustId());     System.out.println("Phone = " +         receipt.getResPhone());     System.out.println("Email = " +         receipt.getResEmail());     System.out.println("Note = " +         receipt.getResNote());     System.out.println("MaskedPan = " +         receipt.getResMaskedPan());     System.out.println("Exp Date = " +         receipt.getResExpdate());     System.out.println("Crypt Type = " +         receipt.getResCryptType());     System.out.println("Avs Street Number = " +         receipt.getResAvsStreetNumber());     System.out.println("Avs Street Name = " +         receipt.getResAvsStreetName());     System.out.println("Avs Zipcode = " +         receipt.getResAvsZipcode()); } </pre>	<pre> String processing_country_code = "US"; ResLookupMasked resLookupMasked = new     ResLookupMasked(); resLookupMasked.setData(data_key); HttpPostRequest mpgReq = new HttpPostRequest     (); mpgReq.setProcCountryCode(processing_country_     code); mpgReq.setTestMode(true); //false or comment     out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(resLookupMasked); mpgReq.send(); try {     Receipt receipt = mpgReq.getReceipt();     System.out.println("DataKey = " +         receipt.getDataKey());     System.out.println("ResponseCode = " +         receipt.getResponseCode());     System.out.println("Message = " +         receipt.getMessage());     System.out.println("TransDate = " +         receipt.getTransDate());     System.out.println("TransTime = " +         receipt.getTransTime());     System.out.println("Complete = " +         receipt.getComplete());     System.out.println("TimedOut = " +         receipt.getTimedOut());     System.out.println("ResSuccess = " +         receipt.getResSuccess());     System.out.println("PaymentType = " +         receipt.getPaymentType());     System.out.println("Cust ID = " +         receipt.getResCustId());     System.out.println("Phone = " +         receipt.getResPhone());     System.out.println("Email = " +         receipt.getResEmail());     System.out.println("Note = " +         receipt.getResNote());     System.out.println("MaskedPan = " +         receipt.getResMaskedPan());     System.out.println("Exp Date = " +         receipt.getResExpdate());     System.out.println("Crypt Type = " +         receipt.getResCryptType());     System.out.println("Avs Street Number = " +         receipt.getResAvsStreetNumber());     System.out.println("Avs Street Name = " +         receipt.getResAvsStreetName());     System.out.println("Avs Zipcode = " +         receipt.getResAvsZipcode());     System.out.println("Presentation Type = " +         receipt.getResPresentationType()); } </pre>

Sample ResLookupMasked - CA	Sample ResLookupMasked - US
<pre> catch (Exception e) { e.printStackTrace(); } } </pre>	<pre> System.out.println("P Account Number = " +     receipt.getResPAccountNumber()); System.out.println("Sec = " +     receipt.getResSec()); System.out.println("Cust First Name = " +     receipt.getResCustFirstName()); System.out.println("Cust Last Name = " +     receipt.getResCustLastName()); System.out.println("Cust Address 1 = " +     receipt.getResCustAddress1()); System.out.println("Cust Address 2 = " +     receipt.getResCustAddress2()); System.out.println("Cust City = " +     receipt.getResCustCity()); System.out.println("Cust State = " +     receipt.getResCustState()); System.out.println("Cust Zip = " +     receipt.getResCustZip()); System.out.println("Routing Num = " +     receipt.getResRoutingNum()); System.out.println("Masked Account Num = " +     receipt.getResMaskedAccountNum()); System.out.println("Check Num = " +     receipt.getResCheckNum()); System.out.println("Account Type = " +     receipt.getResAccountType()); } catch (Exception e) { e.printStackTrace(); } } </pre>

### Vault response fields

For a list and explanation of (Receipt object) response fields that are available after sending this Vault transaction, see Definition of Response Fields (page 314).

## 6.3.9 Vault Get Expiring - ResGetExpiring

### ResGetExpiring transaction object definition

```
ResGetExpiring resGetExpiring = new ResGetExpiring();
```

### HttpPostRequest object for ResLookupFull transaction

```
HttpPostRequest mpgReq = new HttpPostRequest();
```

```
mpgReq.setTransaction(resGetExpiring);
```

### ResGetExpiring transaction values

ResGetExpiring transaction object mandatory values: None.

Sample ResGetExpiring - CA	Sample ResGetExpiring - US
<pre> package Canada; import JavaAPI.*; public class TestCanadaResGetExpiring {     public static void main(String[] args)     {         String store_id = "store1";         String api_token = "yesguy";         String processing_country_code = "CA";         boolean status_check = false;         ResGetExpiring resGetExpiring = new             ResGetExpiring();         HttpsPostRequest mpgReq = new HttpsPostRequest             ();         mpgReq.setProcCountryCode(processing_country_             code);         mpgReq.setTestMode(true); //false or comment             out this line for production transactions         mpgReq.setStoreId(store_id);         mpgReq.setApiToken(api_token);         mpgReq.setTransaction(resGetExpiring);         mpgReq.setStatusCheck(status_check);         mpgReq.send();         try         {             Receipt receipt = mpgReq.getReceipt();             System.out.println("DataKey = " +                 receipt.getDataKey());             System.out.println("ResponseCode = " +                 receipt.getResponseCode());             System.out.println("Message = " +                 receipt.getMessage());             System.out.println("TransDate = " +                 receipt.getTransDate());             System.out.println("TransTime = " +                 receipt.getTransTime());             System.out.println("Complete = " +                 receipt.getComplete());             System.out.println("TimedOut = " +                 receipt.getTimedOut());             System.out.println("ResSuccess = " +                 receipt.getResSuccess());             System.out.println("PaymentType = " +                 receipt.getPaymentType());             //ResolveData             for (int index =0; index &lt;                 receipt.getExpiredCardCount(); index++)             {                 System.out.println("\nDataKey = " + index);                 System.out.println("Payment Type = " +                     receipt.getExpPaymentType(index));                 System.out.println("Cust ID = " +                     receipt.getExpCustId(index));                 System.out.println("Phone = " +                     receipt.getExpPhone(index));                 System.out.println("Email = " +                     receipt.getExpEmail(index));                 System.out.println("Note = " + </pre>	<pre> package USA; import JavaAPI.*; public class TestUSAResGetExpiring {     public static void main(String[] args)     {         String store_id = "monusqa002";         String api_token = "qatoken";         String processing_country_code = "US";         ResGetExpiring resGetExpiring = new             ResGetExpiring();         HttpsPostRequest mpgReq = new HttpsPostRequest             ();         mpgReq.setProcCountryCode(processing_country_             code);         mpgReq.setTestMode(true); //false or comment             out this line for production transactions         mpgReq.setStoreId(store_id);         mpgReq.setApiToken(api_token);         mpgReq.setTransaction(resGetExpiring);         mpgReq.send();         try         {             Receipt receipt = mpgReq.getReceipt();             System.out.println("DataKey = " +                 receipt.getDataKey());             System.out.println("ResponseCode = " +                 receipt.getResponseCode());             System.out.println("Message = " +                 receipt.getMessage());             System.out.println("TransDate = " +                 receipt.getTransDate());             System.out.println("TransTime = " +                 receipt.getTransTime());             System.out.println("Complete = " +                 receipt.getComplete());             System.out.println("TimedOut = " +                 receipt.getTimedOut());             System.out.println("ResSuccess = " +                 receipt.getResSuccess());             System.out.println("PaymentType = " +                 receipt.getPaymentType());             //ResolveData             for (int index = 0; index &lt;                 receipt.getExpiredCardCount(); index++)             {                 System.out.println("\nDataKey = " + index);                 System.out.println("Payment Type = " +                     receipt.getExpPaymentType(index));                 System.out.println("Cust ID = " +                     receipt.getExpCustId(index));                 System.out.println("Phone = " +                     receipt.getExpPhone(index));                 System.out.println("Email = " +                     receipt.getExpEmail(index));                 System.out.println("Note = " +                     receipt.getExpNote(index));                 System.out.println("Masked Pan = " + </pre>



Sample ResGetExpiring - CA	Sample ResGetExpiring - US
<pre> receipt.getExpNote(index)); System.out.println("Masked Pan = " +     receipt.getExpMaskedPan(index)); System.out.println("Exp Date = " +     receipt.getExpExpdate(index)); System.out.println("Crypt Type = " +     receipt.getExpCryptType(index)); System.out.println("Avs Street Number = " +     receipt.getExpAvsStreetNumber(index)); System.out.println("Avs Street Name = " +     receipt.getExpAvsStreetName(index)); System.out.println("Avs Zipcode = " +     receipt.getExpAvsZipCode(index)); } } catch (Exception e) { e.printStackTrace(); } } } </pre>	<pre> receipt.getExpMaskedPan(index)); System.out.println("Exp Date = " +     receipt.getExpExpdate(index)); System.out.println("Crypt Type = " +     receipt.getExpCryptType(index)); System.out.println("Avs Street Number = " +     receipt.getExpAvsStreetNumber(index)); System.out.println("Avs Street Name = " +     receipt.getExpAvsStreetName(index)); System.out.println("Avs Zipcode = " +     receipt.getExpAvsZipCode(index)); System.out.println("Presentation Type = " +     receipt.getExpPresentationType(index)); System.out.println("P Account Number = " +     receipt.getExpPAccountNumber(index)); } } catch (Exception e) { e.printStackTrace(); } } } </pre>

### Vault response fields

For a list and explanation of (Receipt object) response fields that are available after sending this Vault transaction, see Definition of Response Fields (page 314).

## 6.3.10 Vault Is Corporate Card - ResIsCorporateCard

### ResIsCorporateCard transaction object definition

```
ResIsCorporatecard resIsCorporatecard = new ResIsCorporatecard();
```

### HttpPostRequest object for ResIsCorporateCard transaction

```
HttpPostRequest mpgReq = new HttpPostRequest();
```

```
mpgReq.setTransaction(ResIsCorporateCard);
```

### ResIsCorporateCard transaction values

**Table 67: ResIsCorporateCard transaction object mandatory values**

Value	Type	Limits	Set method
Data key	String	25-character alpha-numeric	resIsCorporatecard.setData(data_key);

**Table 68: ResIsCorporateCard transaction optional values**

Value	Type	Limits	Set method
Status Check	Boolean	true/false	mpgReq.setStatusCheck (status_check);

Sample ResIsCorporatecard - CA	Sample ResIsCorporatecard - US
<pre> package Canada; import JavaAPI.*; public class TestCanadaResIsCorporatecard {     public static void main(String[] args)     {         String store_id = "store1";         String api_token = "yesguy";         String data_key = "eLqsADfwqHDxIpJG9vLnELx01";         String processing_country_code = "CA";         boolean status_check = false;         ResIsCorporatecard resIsCorporatecard = new             ResIsCorporatecard();         resIsCorporatecard.setData(data_key);         HttpsPostRequest mpgReq = new HttpsPostRequest             ();         mpgReq.setProcCountryCode(processing_country_             code);         mpgReq.setTestMode(true); //false or comment             out this line for production transactions         mpgReq.setStoreId(store_id);         mpgReq.setApiToken(api_token);         mpgReq.setTransaction(resIsCorporatecard);         mpgReq.setStatusCheck(status_check);         mpgReq.send();         try         {             Receipt receipt = mpgReq.getReceipt();             System.out.println("DataKey = " +                 receipt.getDataKey());             System.out.println("CorporateCard = " +                 receipt.getCorporateCard());             System.out.println("ResponseCode = " +                 receipt.getResponseCode());             System.out.println("Message = " +                 receipt.getMessage());             System.out.println("TransDate = " +                 receipt.getTransDate());             System.out.println("TransTime = " +                 receipt.getTransTime());             System.out.println("Complete = " +                 receipt.getComplete());             System.out.println("TimedOut = " +                 receipt.getTimedOut());             System.out.println("ResSuccess = " +                 receipt.getResSuccess());             System.out.println("PaymentType = " +                 receipt.getPaymentType());         }     } </pre>	<pre> package USA; import JavaAPI.*; public class TestUSAResIsCorporatecard {     public static void main(String[] args)     {         String store_id = "monusqa002";         String api_token = "qatoken";         String data_key = "6iK9Z010IkV2hzKYUCpsREEjB";         String processing_country_code = "US";         boolean status_check = false;         ResIsCorporatecard resIsCorporatecard = new             ResIsCorporatecard();         resIsCorporatecard.setData(data_key);         HttpsPostRequest mpgReq = new HttpsPostRequest             ();         mpgReq.setProcCountryCode(processing_country_             code);         mpgReq.setTestMode(true); //false or comment             out this line for production transactions         mpgReq.setStoreId(store_id);         mpgReq.setApiToken(api_token);         mpgReq.setTransaction(resIsCorporatecard);         mpgReq.setStatusCheck(status_check);         mpgReq.send();         try         {             Receipt receipt = mpgReq.getReceipt();             System.out.println("DataKey = " +                 receipt.getDataKey());             System.out.println("CorporateCard = " +                 receipt.getCorporateCard());             System.out.println("ResponseCode = " +                 receipt.getResponseCode());             System.out.println("Message = " +                 receipt.getMessage());             System.out.println("TransDate = " +                 receipt.getTransDate());             System.out.println("TransTime = " +                 receipt.getTransTime());             System.out.println("Complete = " +                 receipt.getComplete());             System.out.println("TimedOut = " +                 receipt.getTimedOut());             System.out.println("ResSuccess = " +                 receipt.getResSuccess());             System.out.println("PaymentType = " +                 receipt.getPaymentType());         }     } </pre>

Sample ResIsCorporatecard - CA	Sample ResIsCorporatecard - US
<pre> catch (Exception e) {     e.printStackTrace(); } } } </pre>	<pre> catch (Exception e) {     e.printStackTrace(); } } } </pre>

### Vault response fields

For a list and explanation of (Receipt object) response fields that are available after sending this Vault transaction, see Definition of Response Fields (page 314).

### 6.3.11 Vault Add Token - ResAddToken

#### ResAddToken transaction object definition

```
ResAddToken resAddToken = new ResAddToken();
```

#### HttpPostRequest object for ResAddToken transaction

```
HttpPostRequest mpgReq = new HttpPostRequest();
```

```
mpgReq.setTransaction(resAddToken);
```

#### ResAddToken transaction values

For a full description of mandatory and optional values, see "Definition of Request Fields" on page 306

**Table 69: ResAddToken transaction object mandatory values**

Value	Type	Limits	Set method
Data key	String	25-character alpha-numeric	<code>resAddToken.setData(data_key);</code>
E-commerce indicator	String	1-character alpha-numeric	<code>resAddToken.setCryptType(crypt_type);</code>

**Table 70: ResAddToken transaction optional values**

Value	Type	Limits	Set method
Customer ID	String	50-character alpha-numeric	<code>resAddToken.setCustId(cust_id);</code>
AVS information	Object	Not applicable. See Appendix E (page 336).	<code>resAddToken.setAvsInfo(avsCheck);</code>
Email address	String	30-character alpha-numeric	<code>resAddToken.setEmail(email);</code>
Phone number	String	30-character alpha-numeric	<code>resAddToken.setPhone(phone);</code>
Note	String	30-character alpha-numeric	<code>resAddToken.setNote(note);</code>

Sample ResAddToken - CA	Sample ResAddToken - US
<pre> package Canada; import JavaAPI.*; public class TestCanadaResAddToken {     public static void main(String[] args)     {         String store_id = "moneris";         String api_token = "hurgle";         String data_key = "ot-             IPFUqKokKWYzLN0zmzAhNYSCs";         String expdate = "0115";         String phone = "0000000000";         String email = "bob@smith.com";         String note = "my note";         String cust_id = "customer1";         String crypt_type = "7";         String processing_country_code = "CA";         boolean status_check = false;         AvsInfo avsCheck = new AvsInfo();         avsCheck.setAvsStreetNumber("212");         avsCheck.setAvsStreetName("Payton Street");         avsCheck.setAvsZipCode("M1M1M1");         ResAddToken resAddToken = new ResAddToken();         resAddToken.setDataKey(data_key);         resAddToken.setCryptType(crypt_type);         resAddToken.setExpdate(expdate);         resAddToken.setCustId(cust_id);         resAddToken.setPhone(phone);         resAddToken.setEmail(email);         resAddToken.setNote(note);         resAddToken.setAvsInfo(avsCheck);         HttpsPostRequest mpgReq = new HttpsPostRequest             (); </pre>	<pre> package USA; import JavaAPI.*; public class TestUSAResAddToken {     public static void main(String[] args)     {         String store_id = "monusqa002";         String api_token = "qatoken";         String data_key = "ot-             jI3S4L4BeW7RsO7XsRVli9OSQ";         String phone = "0000000000";         String email = "bob@smith.com";         String note = "my note";         String cust_id = "customer1";         String crypt_type = "7";         String processing_country_code = "US";         AvsInfo avsCheck = new AvsInfo();         avsCheck.setAvsStreetNumber("212");         avsCheck.setAvsStreetName("Payton Street");         avsCheck.setAvsZipCode("M1M1M1");         ResAddToken resAddToken = new ResAddToken();         resAddToken.setCustId(cust_id);         resAddToken.setPhone(phone);         resAddToken.setEmail(email);         resAddToken.setNote(note);         resAddToken.setAvsInfo(avsCheck);         resAddToken.setData(data_key);         resAddToken.setCryptType(crypt_type);         HttpsPostRequest mpgReq = new HttpsPostRequest             ();         mpgReq.setProcCountryCode(processing_country_             code);         mpgReq.setTestMode(true); //false or comment </pre>

Sample ResAddToken - CA	Sample ResAddToken - US
<pre> mpgReq.setProcCountryCode(processing_country_ code); mpgReq.setTestMode(true); //false or comment out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(resAddToken); mpgReq.setStatusCheck(status_check); mpgReq.send(); try { Receipt receipt = mpgReq.getReceipt(); System.out.println("DataKey = " + receipt.getDataKey()); System.out.println("ResponseCode = " + receipt.getResponseCode()); System.out.println("Message = " + receipt.getMessage()); System.out.println("TransDate = " + receipt.getTransDate()); System.out.println("TransTime = " + receipt.getTransTime()); System.out.println("Complete = " + receipt.getComplete()); System.out.println("TimedOut = " + receipt.getTimedOut()); System.out.println("ResSuccess = " + receipt.getResSuccess()); System.out.println("PaymentType = " + receipt.getPaymentType()); System.out.println("Cust ID = " + receipt.getResCustId()); System.out.println("Phone = " + receipt.getResPhone()); System.out.println("Email = " + receipt.getResEmail()); System.out.println("Note = " + receipt.getResNote()); System.out.println("MaskedPan = " + receipt.getResMaskedPan()); System.out.println("Exp Date = " + receipt.getResExpdate()); System.out.println("Crypt Type = " + receipt.getResCryptType()); System.out.println("Avs Street Number = " + receipt.getResAvsStreetNumber()); System.out.println("Avs Street Name = " + receipt.getResAvsStreetName()); System.out.println("Avs Zipcode = " + receipt.getResAvsZipcode()); } catch (Exception e) { e.printStackTrace(); } } </pre>	<pre> out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(resAddToken); mpgReq.send(); try { Receipt receipt = mpgReq.getReceipt(); System.out.println("DataKey = " + receipt.getDataKey()); System.out.println("ResponseCode = " + receipt.getResponseCode()); System.out.println("Message = " + receipt.getMessage()); System.out.println("TransDate = " + receipt.getTransDate()); System.out.println("TransTime = " + receipt.getTransTime()); System.out.println("Complete = " + receipt.getComplete()); System.out.println("TimedOut = " + receipt.getTimedOut()); System.out.println("ResSuccess = " + receipt.getResSuccess()); System.out.println("PaymentType = " + receipt.getPaymentType()); System.out.println("Cust ID = " + receipt.getResCustId()); System.out.println("Phone = " + receipt.getResPhone()); System.out.println("Email = " + receipt.getResEmail()); System.out.println("Note = " + receipt.getResNote()); System.out.println("MaskedPan = " + receipt.getResMaskedPan()); System.out.println("Exp Date = " + receipt.getResExpdate()); System.out.println("Crypt Type = " + receipt.getResCryptType()); System.out.println("Avs Street Number = " + receipt.getResAvsStreetNumber()); System.out.println("Avs Street Name = " + receipt.getResAvsStreetName()); System.out.println("Avs Zipcode = " + receipt.getResAvsZipcode()); } catch (Exception e) { e.printStackTrace(); } } </pre>

## Vault response fields

For a list and explanation of (Receipt object) response fields that are available after sending this Vault transaction, see Definition of Response Fields (page 314).

### 6.3.12 Vault Tokenize Credit Card - ResTokenizeCC

Basic transactions that can be tokenized are:

- Purchase
- Preauthorization
- Capture
- Reauth
- Refund
- Purchase Correction
- Independent Refund.

The tokenization process is outlined in Figure 4 .

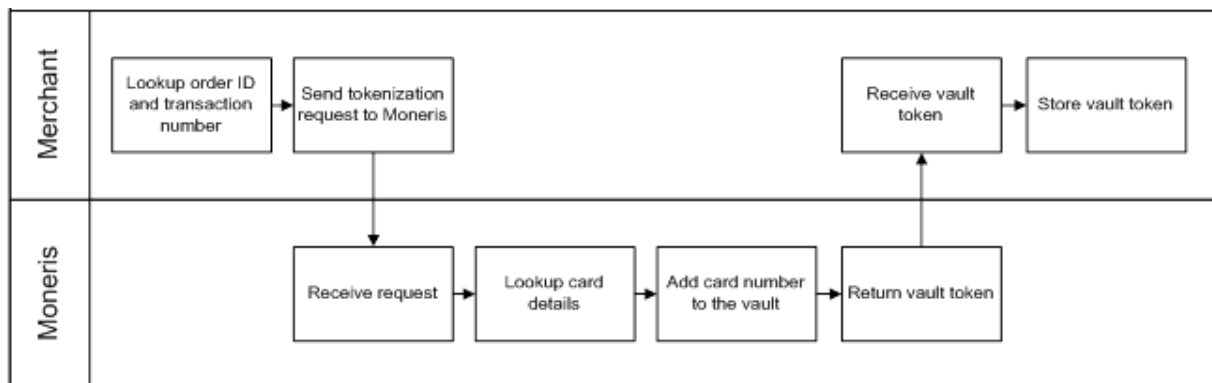


Figure 4: Tokenize process diagram

## ResTokenizeCC transaction object definition

```
ResTokenizeCC resTokenizeCC = new ResTokenizeCC();
```

## HttpPostRequest object for ResTokenizeCC transaction

```
HttpPostRequest mpgReq = new HttpPostRequest();
```

```
mpgReq.setTransaction(resTokenizeCC);
```

## ResTokenizeCC transaction values

**Table 71: ResTokenizeCC transaction object mandatory values**

Value	Type	Limits	Set method
Order ID	String	50-character alpha-numeric	<code>resTokenizeCC.setOrderId(order_id);</code>
Transaction number	String	255-character alpha-numeric	<code>resTokenizeCC.setTxnNumber(txn_number);</code>

These mandatory values reference a previously processed credit card financial transaction. The credit card number, expiry date, and crypt type from the original transaction are registered in the Vault for future financial Vault transactions.

**Table 72: ResTokenizeCC transaction optional values**

Value	Type	Limits	Set method
Customer ID	String	50-character alpha-numeric	<code>resTokenizeCC.setCustId(cust_id);</code>
Email address	String	30-character alpha-numeric	<code>resTokenizeCC.setEmail(email);</code>
Phone number	String	30-character alpha-numeric	<code>resTokenizeCC.setPhone(phone);</code>
Note	String	30-character alpha-numeric	<code>resTokenizeCC.setNote(note);</code>
AVS information	Object	Not applicable. See Appendix E (page 336).	<code>resTokenizeCC.setAvsInfo(avsCheck);</code>

## 6.4 Financial Transactions

After a financial transaction is complete, the response fields indicate all the values that are currently saved under the profile that was used.

### 6.4.1 Customer ID Changes

Some financial transactions take the customer ID as an optional value. The customer ID may or may not already be in the Vault profile when the transaction is sent. Therefore, it is possible to change the value of the customer ID by performing a financial transaction

The table below shows what the customer ID will be in the response field after a financial transaction is performed.

**Table 73: Customer ID use in response fields**

Already in profile?	Passed in?	Version used in response
No	No	Customer ID not used in transaction
No	Yes	Passed in
Yes	No	Profile
Yes	Yes	Passed in

## 6.4.2 Purchase with Vault - ResPurchaseCC

### ResPurchaseCC transaction object definition

```
ResPurchaseCC resPurchaseCC = new ResPurchaseCC();
```

### HttpPostRequest object for ResPurchaseCC transaction

```
HttpPostRequest mpgReq = new HttpPostRequest();
```

```
mpgReq.setTransaction(resPurchaseCC);
```

### ResPurchaseCC transaction values

For a full description of mandatory and optional values, see "Definition of Request Fields" on page 306

**Table 74: ResPurchaseCC transaction object mandatory values**

Value	Type	Limits	Set method
Data key	String	25-character alpha-numeric	<code>resPurchaseCC.setData(data_key);</code>
Order ID	String	50-character alpha-numeric	<code>resPurchaseCC.setOrderId(order_id);</code>
Amount	String	9-character decimal	<code>resPurchaseCC.setAmount(amount);</code>
E-commerce indicator	String	1-character alpha-numeric	<code>resPurchaseCC.setCryptType(crypt_type);</code>



Table 75: ResPurchaseCC transaction optional values

Value	Type	Limits	Set method
Status Check	Boolean	true/false	<code>mpgReq.setStatusCheck(status_check);</code>
Expiry date	String	4-character numeric YYMM format.  (Note that this is reversed from the date displayed on the card, which is MMY)	<code>resPurchaseCC.setExpDate(expdate);</code>
Customer ID	String	50-character alphanumeric	<code>resPurchaseCC.setCustId(custid);</code>
Dynamic descriptor	String	20-character alphanumeric	<code>resPurchaseCC.setDynamicDescriptor(dynamic_descriptor);</code>
Customer information	Object	Not applicable. See Section Appendix D (page 330).	<code>resPurchaseCC.setCustInfo(customer);</code>
AVS information	Object	Not applicable. See Appendix E (page 336).	<code>resPurchaseCC.setAvsInfo(avsCheck);</code>
CVD information	Object	Not applicable. See Appendix F (page 342) .	<code>resPurchaseCC.setCvdInfo(cvdCheck);</code>
Recurring billing	Object	Not applicable. See Section Appendix G (page 345).	<code>resPurchaseCC.setRecur(recurring_cycle);</code>

Sample ResPurchaseCC - CA	Sample ResPurchaseCC - US
<pre>package Canada; import JavaAPI.*; public class TestCanadaResPurchaseCC {     public static void main(String[] args)     {         java.util.Date createDate = new java.util.Date();         String order_id = "Test"+createDate.getTime();         String store_id = "store5";     } }</pre>	<pre>package USA; import JavaAPI.*; public class TestUSAResPurchaseCC {     public static void main(String[] args)     {         java.util.Date createDate = new java.util.Date();         String order_id = "Test"+createDate.getTime();         String store_id = "monusqa002";     } }</pre>

Sample ResPurchaseCC - CA	Sample ResPurchaseCC - US
<pre> String api_token = "yesguy"; String data_key = "ot-   APGL4zwRErtVQqeTn7ZwFSGJo"; String amount = "1.00"; String cust_id = "customer1"; //if sent will   be submitted, otherwise cust_id from   profile will be used String crypt_type = "1"; String descriptor = "my descriptor"; String processing_country_code = "CA"; String expdate = "1512"; //For Temp Token boolean status_check = false; ResPurchaseCC resPurchaseCC = new   ResPurchaseCC(); resPurchaseCC.setData(data_key); resPurchaseCC.setOrderId(order_id); resPurchaseCC.setCustId(cust_id); resPurchaseCC.setAmount(amount); resPurchaseCC.setCryptType(crypt_type); //resPurchaseCC.setDynamicDescriptor   (descriptor); resPurchaseCC.setExpDate(expdate); //Temp   Tokens only HttpPostRequest mpgReq = new HttpPostRequest   (); mpgReq.setProcCountryCode(processing_country_   code); mpgReq.setTestMode(true); //false or comment   out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(resPurchaseCC); mpgReq.setStatusCheck(status_check); mpgReq.send(); try { Receipt receipt = mpgReq.getReceipt(); System.out.println("DataKey = " +   receipt.getDataKey()); System.out.println("ReceiptId = " +   receipt.getReceiptId()); System.out.println("ReferenceNum = " +   receipt.getReferenceNum()); System.out.println("ResponseCode = " +   receipt.getResponseCode()); System.out.println("AuthCode = " +   receipt.getAuthCode()); System.out.println("Message = " +   receipt.getMessage()); System.out.println("TransDate = " +   receipt.getTransDate()); System.out.println("TransTime = " +   receipt.getTransTime()); System.out.println("TransType = " +   receipt.getTransType()); System.out.println("Complete = " +   receipt.getComplete()); System.out.println("TransAmount = " + </pre>	<pre> String api_token = "qatoken"; String data_key = "1P5C4C6bNPGg5xGb4ZFfaOTt8"; String amount = "1.00"; String cust_id = "customer1"; //if sent will   be submitted, otherwise cust_id from   profile will be used String crypt_type = "1"; String descriptor = "my descriptor"; String processing_country_code = "US"; String commcard_invoice =   "123456789123456789"; String commcard_tax_amount = "1.00"; boolean status_check = false; ResPurchaseCC resPurchaseCC = new   ResPurchaseCC(); resPurchaseCC.setData(data_key); resPurchaseCC.setOrderId(order_id); resPurchaseCC.setCustId(cust_id); resPurchaseCC.setAmount(amount); resPurchaseCC.setCryptType(crypt_type); resPurchaseCC.setDynamicDescriptor   (descriptor); resPurchaseCC.setCommcardInvoice(commcard_   invoice); resPurchaseCC.setCommcardTaxAmount(commcard_   tax_amount); HttpPostRequest mpgReq = new HttpPostRequest   (); mpgReq.setProcCountryCode(processing_country_   code); mpgReq.setTestMode(true); //false or comment   out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(resPurchaseCC); mpgReq.setStatusCheck(status_check); mpgReq.send(); try { Receipt receipt = mpgReq.getReceipt(); System.out.println("DataKey = " +   receipt.getDataKey()); System.out.println("ReceiptId = " +   receipt.getReceiptId()); System.out.println("ReferenceNum = " +   receipt.getReferenceNum()); System.out.println("ResponseCode = " +   receipt.getResponseCode()); System.out.println("AuthCode = " +   receipt.getAuthCode()); System.out.println("Message = " +   receipt.getMessage()); System.out.println("TransDate = " +   receipt.getTransDate()); System.out.println("TransTime = " +   receipt.getTransTime()); System.out.println("TransType = " +   receipt.getTransType()); </pre>

Sample ResPurchaseCC - CA	Sample ResPurchaseCC - US
<pre> receipt.getTransAmount(); System.out.println("CardType = " +     receipt.getCardType()); System.out.println("TxnNumber = " +     receipt.getTxnNumber()); System.out.println("TimedOut = " +     receipt.getTimedOut()); System.out.println("ResSuccess = " +     receipt.getResSuccess()); System.out.println("PaymentType = " +     receipt.getPaymentType()); System.out.println("IsVisaDebit = " +     receipt.getIsVisaDebit()); System.out.println("Cust ID = " +     receipt.getResCustId()); System.out.println("Phone = " +     receipt.getResPhone()); System.out.println("Email = " +     receipt.getResEmail()); System.out.println("Note = " +     receipt.getResNote()); System.out.println("Masked Pan = " +     receipt.getResMaskedPan()); System.out.println("Exp Date = " +     receipt.getResExpdate()); System.out.println("Crypt Type = " +     receipt.getResCryptType()); System.out.println("Avs Street Number = " +     receipt.getResAvsStreetNumber()); System.out.println("Avs Street Name = " +     receipt.getResAvsStreetName()); System.out.println("Avs Zipcode = " +     receipt.getResAvsZipcode()); } catch (Exception e) { e.printStackTrace(); } } } </pre>	<pre> System.out.println("Complete = " +     receipt.getComplete()); System.out.println("TransAmount = " +     receipt.getTransAmount()); System.out.println("CardType = " +     receipt.getCardType()); System.out.println("TxnNumber = " +     receipt.getTxnNumber()); System.out.println("TimedOut = " +     receipt.getTimedOut()); System.out.println("ResSuccess = " +     receipt.getResSuccess()); System.out.println("PaymentType = " +     receipt.getPaymentType()); System.out.println("IsVisaDebit = " +     receipt.getIsVisaDebit()); System.out.println("Cust ID = " +     receipt.getResCustId()); System.out.println("Phone = " +     receipt.getResPhone()); System.out.println("Email = " +     receipt.getResEmail()); System.out.println("Note = " +     receipt.getResNote()); System.out.println("Masked Pan = " +     receipt.getResMaskedPan()); System.out.println("Exp Date = " +     receipt.getResExpdate()); System.out.println("Crypt Type = " +     receipt.getResCryptType()); System.out.println("Avs Street Number = " +     receipt.getResAvsStreetNumber()); System.out.println("Avs Street Name = " +     receipt.getResAvsStreetName()); System.out.println("Avs Zipcode = " +     receipt.getResAvsZipcode()); } catch (Exception e) { e.printStackTrace(); } } } </pre>

## Vault response fields

For a list and explanation of (Receipt object) response fields that are available after sending this Vault transaction, see Definition of Response Fields (page 314).

## 6.4.3 Purchase with Vault and ACH - ResPurchaseACH

### ResPurchaseACH transaction object definition

```
ResPurchaseAch resPurchaseAch = new ResPurchaseAch();
```

**HttpPostRequest object for ResPurchaseACH transaction**

```
HttpPostRequest mpgReq = new HttpPostRequest();
mpgReq.setTransaction(resPurchaseAch);
```

**ResPurchaseACH transaction values**

For a full description of mandatory and optional values, see "Definition of Request Fields" on page 306

**Table 76: ResPurchaseACH transaction object mandatory values**

Value	Type	Limits	Set method
Data key	String	25-character alpha-numeric	resPurchaseAch.setDataKey(data_key);
Order ID	String	50-character alpha-numeric	resPurchaseAch.setOrderId(order_id);
Amount	String	9-character decimal	resPurchaseAch.setAmount(amount);

**Table 77: ResPurchaseACH transaction optional values**

Value	Type	Limits	Set method
Customer ID	String	50-character alpha-numeric	resPurchaseAch.setCustId(custid);
Customer information	Object	Not applicable. See Section Appendix D (page 330).	resPurchaseAch.setCustInfo(customer);
Recurring billing	Object	Not applicable. See Section Appendix G (page 345).	resPurchaseAch.setRecur(recurring_cycle);

**Sample ResPurchaseAch - US**

```
package USA;
import JavaAPI.*;
public class TestUSAResPurchaseAch
{
    public static void main(String args[])
    {
        /***** Request Variables *****/
        String store_id = "monusqa002";
        String api_token = "gatoken";
        /***** Transaction Variables *****/
```

## Sample ResPurchaseAch - US

```

java.util.Date createDate = new java.util.Date();
String order_id = "Test"+createDate.getTime();
String data_key = "QM1fZodHBk5K102EKnoyobs1N";
String cust_id = "Hilton_1";
String amount = "1.00";
String processing_country_code = "US";
/***** Request Object *****/
ResPurchaseAch resPurchaseAch = new ResPurchaseAch();
resPurchaseAch.setDataKey(data_key);
resPurchaseAch.setOrderId(order_id);
resPurchaseAch.setCustId(cust_id);
resPurchaseAch.setAmount(amount);

HttpPostRequest mpgReq = new HttpPostRequest();
mpgReq.setProcCountryCode(processing_country_code);
mpgReq.setTestMode(true); //false or comment out this line for production transactions
mpgReq.setStoreId(store_id);
mpgReq.setApiToken(api_token);
mpgReq.setTransaction(resPurchaseAch);
mpgReq.send();
/***** Receipt Object *****/
try
{
Receipt receipt = mpgReq.getReceipt();

System.out.println("DataKey = " + receipt.getDataKey());
System.out.println("ReceiptId = " + receipt.getReceiptId());
System.out.println("ReferenceNum = " + receipt.getReferenceNum());
System.out.println("ResponseCode = " + receipt.getResponseCode());
System.out.println("AuthCode = " + receipt.getAuthCode());
System.out.println("Message = " + receipt.getMessage());
System.out.println("TransDate = " + receipt.getTransDate());
System.out.println("TransTime = " + receipt.getTransTime());
System.out.println("TransType = " + receipt.getTransType());
System.out.println("Complete = " + receipt.getComplete());
System.out.println("TransAmount = " + receipt.getTransAmount());
System.out.println("CardType = " + receipt.getCardType());
System.out.println("TxnNumber = " + receipt.getTxnNumber());
System.out.println("TimedOut = " + receipt.getTimedOut());
System.out.println("ResSuccess = " + receipt.getResSuccess());
System.out.println("PaymentType = " + receipt.getPaymentType() + "\n");
System.out.println("Cust ID = " + receipt.getResCustId());
System.out.println("Phone = " + receipt.getResPhone());
System.out.println("Email = " + receipt.getResEmail());
System.out.println("Note = " + receipt.getResNote());
System.out.println("Sec = " + receipt.getResSec());
System.out.println("Cust First Name = " + receipt.getResCustFirstName());
System.out.println("Cust Last Name = " + receipt.getResCustLastName());
System.out.println("Cust Address1 = " + receipt.getResCustAddress1());
System.out.println("Cust Address2 = " + receipt.getResCustAddress2());
System.out.println("Cust City = " + receipt.getResCustCity());
System.out.println("Cust State = " + receipt.getResCustState());
System.out.println("Cust Zip = " + receipt.getResCustZip());
System.out.println("Routing Num = " + receipt.getResRoutingNum());
System.out.println("Account Num = " + receipt.getResAccountNum());
System.out.println("Masked Account Num = " + receipt.getResMaskedAccountNum());
System.out.println("Check Num = " + receipt.getResCheckNum());
System.out.println("Account Type = " + receipt.getResAccountType());
}

```

### Sample ResPurchaseAch - US

```
catch (Exception e)
{
    e.printStackTrace();
}
}
```

### Vault response fields

For a list and explanation of (Receipt object) response fields that are available after sending this Vault transaction, see Definition of Response Fields (page 314).

## 6.4.4 Pre-Authorization with Vault - ResPreauthCC

### ResPreauthCC transaction object definition

```
ResPreauthCC resPreauthCC = new ResPreauthCC();
```

### HttpPostRequest object for ResPreauthCC transaction

```
HttpPostRequest mpgReq = new HttpPostRequest();
```

```
mpgReq.setTransaction(resPreauthCC);
```

### ResPreauthCC transaction values

**Table 1: ResPreauthCC transaction object mandatory values**

Value	Type	Limits	Set method
Data key	String	25- character alpha-numeric	<code>resPreauthCC.setData(data_key);</code>
Order ID	String	50-character alpha-numeric	<code>resPreauthCC.setOrderId(order_id);</code>
Amount	String	9-character decimal	<code>resPreauthCC.setAmount(amount);</code>
E-commerce indicator	String	1-character alpha-numeric	<code>resPreauthCC.setCryptType(crypt_type);</code>

**Table 2: ResPreauthCC transaction optional values**

Value	Type	Limits	Set method
Status Check	Boolean	true/false	<code>mpgReq.setStatusCheck(status_check);</code>
Expiry date	String	4-character alpha-numeric (YYMM format)	<code>resPreauthCC.setExpDate(expdate);</code>
Customer ID	String	50-character alpha-numeric	<code>resPreauthCC.setCustId(custid);</code>
Customer information	Object	Not applicable. See Section Appendix D (page 330).	<code>resPreauthCC.setCustInfo(customer);</code>
AVS information	Object	Not applicable. See Appendix E (page 336).	<code>resPreauthCC.setAvsInfo(avsCheck);</code>
CVD information	Object	Not applicable. See Appendix F (page 342).	<code>resPreauthCC.setCvdInfo(cvdCheck);</code>

Sample ResPreauthCC - CA	Sample ResPreauthCC - US
<pre> package Canada; import JavaAPI.*; public class TestCanadaResPreauthCC {     public static void main(String[] args)     {         java.util.Date createDate = new java.util.Date             ();         String order_id = "Test"+createDate.getTime();         String store_id = "store5";         String api_token = "yesguy";         String data_key = "ot-             bPKO547Rqeb4ImweGGkLQUW3K";         String amount = "1.00";         String cust_id = "customer1"; //if sent will             be submitted, otherwise cust_id from             profile will be used         String crypt_type = "1";         String dynamic_descriptor = "my descriptor";         String processing_country_code = "CA";         String expdate = "1712"; //For Temp Token         boolean status_check = false;         ResPreauthCC resPreauthCC = new ResPreauthCC             ();         resPreauthCC.setData(data_key);         resPreauthCC.setOrderId(order_id);         resPreauthCC.setCustId(cust_id); </pre>	<pre> package USA; import JavaAPI.*; public class TestUSAResPreAuthCC {     public static void main(String args[])     {         /***** Request Variables             *****/         String store_id = "monusqa002";         String api_token = "qatoken";         /***** Transaction Variables             *****/         java.util.Date createDate = new java.util.Date             ();         String order_id = "Test"+createDate.getTime();         String data_key = "1P5C4C6bNPGg5xGb4ZFfaOTt8";         String cust_id = "Hilton_1";         String amount = "1.00";         String crypt = "7";         //String dynamic_descriptor = "123456";         String processing_country_code = "US";         /***** Request Object             *****/         ResPreauthCC res_preauth_cc = new ResPreauthCC             ();         res_preauth_cc.setOrderId(order_id);         res_preauth_cc.setAmount(amount); </pre>

Sample ResPreauthCC - CA	Sample ResPreauthCC - US
<pre> resPreauthCC.setAmount(amount); resPreauthCC.setCryptType(crypt_type); resPreauthCC.setDynamicDescriptor(dynamic_     descriptor); //resPreauthCC.setExpDate(expdate); //Temp     Tokens only HttpPostRequest mpgReq = new HttpPostRequest     (); mpgReq.setProcCountryCode(processing_country_     code); mpgReq.setTestMode(true); //false or comment     out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(resPreauthCC); mpgReq.setStatusCheck(status_check); mpgReq.send(); try { Receipt receipt = mpgReq.getReceipt(); System.out.println("DataKey = " +     receipt.getDataKey()); System.out.println("ReceiptId = " +     receipt.getReceiptId()); System.out.println("ReferenceNum = " +     receipt.getReferenceNum()); System.out.println("ResponseCode = " +     receipt.getResponseCode()); System.out.println("AuthCode = " +     receipt.getAuthCode()); System.out.println("Message = " +     receipt.getMessage()); System.out.println("TransDate = " +     receipt.getTransDate()); System.out.println("TransTime = " +     receipt.getTransTime()); System.out.println("TransType = " +     receipt.getTransType()); System.out.println("Complete = " +     receipt.getComplete()); System.out.println("TransAmount = " +     receipt.getTransAmount()); System.out.println("CardType = " +     receipt.getCardType()); System.out.println("TxnNumber = " +     receipt.getTxnNumber()); System.out.println("TimedOut = " +     receipt.getTimedOut()); System.out.println("ResSuccess = " +     receipt.getResSuccess()); System.out.println("PaymentType = " +     receipt.getPaymentType()); System.out.println("IsVisaDebit = " +     receipt.getIsVisaDebit()); System.out.println("Cust ID = " +     receipt.getResCustId()); System.out.println("Phone = " + </pre>	<pre> res_preauth_cc.setData(data_key); res_preauth_cc.setCryptType(crypt); res_preauth_cc.setCustId(cust_id); //usResPreauthCC.setDynamicDescriptor(dynamic_     descriptor); HttpPostRequest mpgReq = new HttpPostRequest     (); mpgReq.setProcCountryCode(processing_country_     code); mpgReq.setTestMode(true); //false or comment     out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(res_preauth_cc); mpgReq.send(); /***** Receipt Object     *****/ try { Receipt receipt = mpgReq.getReceipt(); System.out.println("DataKey = " +     receipt.getDataKey()); System.out.println("ReceiptId = " +     receipt.getReceiptId()); System.out.println("ReferenceNum = " +     receipt.getReferenceNum()); System.out.println("ResponseCode = " +     receipt.getResponseCode()); System.out.println("AuthCode = " +     receipt.getAuthCode()); System.out.println("Message = " +     receipt.getMessage()); System.out.println("TransDate = " +     receipt.getTransDate()); System.out.println("TransTime = " +     receipt.getTransTime()); System.out.println("TransType = " +     receipt.getTransType()); System.out.println("Complete = " +     receipt.getComplete()); System.out.println("TransAmount = " +     receipt.getTransAmount()); System.out.println("CardType = " +     receipt.getCardType()); System.out.println("TxnNumber = " +     receipt.getTxnNumber()); System.out.println("TimedOut = " +     receipt.getTimedOut()); System.out.println("ResSuccess = " +     receipt.getResSuccess()); System.out.println("PaymentType = " +     receipt.getPaymentType() + "\n"); //Contents of ResolveData System.out.println("Cust ID = " +     receipt.getResCustId()); System.out.println("Phone = " +     receipt.getResPhone()); </pre>



Sample ResPreauthCC - CA	Sample ResPreauthCC - US
<pre> receipt.getResPhone(); System.out.println("Email = " +     receipt.getResEmail()); System.out.println("Note = " +     receipt.getResNote()); System.out.println("Masked Pan = " +     receipt.getResMaskedPan()); System.out.println("Exp Date = " +     receipt.getResExpdate()); System.out.println("Crypt Type = " +     receipt.getResCryptType()); System.out.println("Avs Street Number = " +     receipt.getResAvsStreetNumber()); System.out.println("Avs Street Name = " +     receipt.getResAvsStreetName()); System.out.println("Avs Zipcode = " +     receipt.getResAvsZipcode()); } catch (Exception e) {     e.printStackTrace(); } } } </pre>	<pre> System.out.println("Email = " +     receipt.getResEmail()); System.out.println("Note = " +     receipt.getResNote()); System.out.println("MaskedPan = " +     receipt.getResMaskedPan()); System.out.println("Exp Date = " +     receipt.getResExpDate()); System.out.println("Crypt Type = " +     receipt.getResCryptType()); System.out.println("Avs Street Number = " +     receipt.getResAvsStreetNumber()); System.out.println("Avs Street Name = " +     receipt.getResAvsStreetName()); System.out.println("Avs Zipcode = " +     receipt.getResAvsZipcode()); } catch (Exception e) {     e.printStackTrace(); } } } </pre>

### Vault response fields

For a list and explanation of (Receipt object) response fields that are available after sending this Vault transaction, see Definition of Response Fields (page 314).

## 6.4.5 Vault Independent Refund - ResIndRefundCC

### ResIndRefundCC transaction object definition

```
ResIndRefundCC resIndRefundCC = new ResIndRefundCC();
```

### HttpPostRequest object for ResIndRefundCC transaction

```
HttpPostRequest mpgReq = new HttpPostRequest();
```

```
mpgReq.setTransaction(resIndRefundCC);
```

### ResIndRefundCC transaction values

For a full description of mandatory and optional values, see "Definition of Request Fields" on page 306

**Table 78: ResIndRefundCC transaction object mandatory values**

Value	Type	Limits	Set method
Data key	String	25-character alpha-numeric	<code>resIndRefundCC.setData(data_key);</code>
Order ID	String	50-character alpha-numeric	<code>resIndRefundCC.setOrderId(order_id);</code>
Amount	String	9-character decimal	<code>resIndRefundCC.setAmount(amount);</code>
E-commerce indicator	String	1-character alpha-numeric	<code>resIndRefundCC.setCryptType(crypt_type);</code>

**Table 79: ResIndRefundCC transaction optional values**

Value	Type	Limits	Set method
Customer ID	String	50-character alphanumeric	<code>resIndRefundCC.setCustId(custid);</code>
Expiry date	String	4-character alphanumeric (YYMM format)	<code>resIndRefundCC.setExpDate(expdate);</code>
Status Check	Boolean	true/false	<code>mpgReq.setStatusCheck(status_check);</code>
Dynamic descriptor	String	20-character alphanumeric	<code>resIndRefundCC.setDynamicDescriptor(dynamic_descriptor);</code>

Sample ResIndRefundCC - CA	Sample ResIndRefundCC - US
<pre> package Canada; import JavaAPI.*; public class TestCanadaResIndRefundCC {     public static void main(String[] args)     {         java.util.Date createDate = new java.util.Date         ();         String order_id = "Test"+createDate.getTime();         String store_id = "moneris";         String api_token = "hurgle";         String data_key = "eRNr6lU1RD6jmgS9OPqmmmbVrk";         String amount = "1.00";         String cust_id = "customer1"; </pre>	<pre> package USA; import JavaAPI.*; public class TestUSAResIndRefundCC {     public static void main(String[] args)     {         java.util.Date createDate = new java.util.Date         ();         String order_id = "Test"+createDate.getTime();         String store_id = "monusqa002";         String api_token = "qatoken";         String data_key = "yhJ7kVwUDwhZRS7dwaB98ETMm";         String amount = "1.00";         String cust_id = "customer1"; </pre>

Sample ResIndRefundCC - CA	Sample ResIndRefundCC - US
<pre> String crypt_type = "1"; String processing_country_code = "CA"; boolean status_check = false; ResIndRefundCC resIndRefundCC = new     ResIndRefundCC(); resIndRefundCC.setOrderId(order_id); resIndRefundCC.setCustId(cust_id); resIndRefundCC.setAmount(amount); resIndRefundCC.setCryptType(crypt_type); resIndRefundCC.setData(data_key); HttpPostRequest mpgReq = new HttpPostRequest (); mpgReq.setProcCountryCode(processing_country_ code); mpgReq.setTestMode(true); //false or comment     out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(resIndRefundCC); mpgReq.setStatusCheck(status_check); mpgReq.send(); try { Receipt receipt = mpgReq.getReceipt(); System.out.println("DataKey = " +     receipt.getDataKey()); System.out.println("ReceiptId = " +     receipt.getReceiptId()); System.out.println("ReferenceNum = " +     receipt.getReferenceNum()); System.out.println("ResponseCode = " +     receipt.getResponseCode()); System.out.println("AuthCode = " +     receipt.getAuthCode()); System.out.println("Message = " +     receipt.getMessage()); System.out.println("TransDate = " +     receipt.getTransDate()); System.out.println("TransTime = " +     receipt.getTransTime()); System.out.println("TransType = " +     receipt.getTransType()); System.out.println("Complete = " +     receipt.getComplete()); System.out.println("TransAmount = " +     receipt.getTransAmount()); System.out.println("CardType = " +     receipt.getCardType()); System.out.println("TxnNumber = " +     receipt.getTxnNumber()); System.out.println("TimedOut = " +     receipt.getTimedOut()); System.out.println("ResSuccess = " +     receipt.getResSuccess()); System.out.println("PaymentType = " +     receipt.getPaymentType()); System.out.println("IsVisaDebit = " +     receipt.getIsVisaDebit()); </pre>	<pre> String crypt_type = "1"; String dynamic_descriptor = "123456"; String processing_country_code = "US"; ResIndRefundCC resIndRefundCC = new     ResIndRefundCC(); resIndRefundCC.setOrderId(order_id); resIndRefundCC.setCustId(cust_id); resIndRefundCC.setAmount(amount); resIndRefundCC.setCryptType(crypt_type); resIndRefundCC.setData(data_key); resIndRefundCC.setDynamicDescriptor(dynamic_ descriptor); HttpPostRequest mpgReq = new HttpPostRequest (); mpgReq.setProcCountryCode(processing_country_ code); mpgReq.setTestMode(true); //false or comment     out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(resIndRefundCC); mpgReq.send(); try { Receipt receipt = mpgReq.getReceipt(); System.out.println("DataKey = " +     receipt.getDataKey()); System.out.println("ReceiptId = " +     receipt.getReceiptId()); System.out.println("ReferenceNum = " +     receipt.getReferenceNum()); System.out.println("ResponseCode = " +     receipt.getResponseCode()); System.out.println("AuthCode = " +     receipt.getAuthCode()); System.out.println("Message = " +     receipt.getMessage()); System.out.println("TransDate = " +     receipt.getTransDate()); System.out.println("TransTime = " +     receipt.getTransTime()); System.out.println("TransType = " +     receipt.getTransType()); System.out.println("Complete = " +     receipt.getComplete()); System.out.println("TransAmount = " +     receipt.getTransAmount()); System.out.println("CardType = " +     receipt.getCardType()); System.out.println("TxnNumber = " +     receipt.getTxnNumber()); System.out.println("TimedOut = " +     receipt.getTimedOut()); System.out.println("ResSuccess = " +     receipt.getResSuccess()); System.out.println("PaymentType = " +     receipt.getPaymentType()); System.out.println("Cust ID = " + </pre>

Sample ResIndRefundCC - CA	Sample ResIndRefuncCC - US
<pre> System.out.println("Cust ID = " +     receipt.getResCustId()); System.out.println("Phone = " +     receipt.getResPhone()); System.out.println("Email = " +     receipt.getResEmail()); System.out.println("Note = " +     receipt.getResNote()); System.out.println("Masked Pan = " +     receipt.getResMaskedPan()); System.out.println("Exp Date = " +     receipt.getResExpdate()); System.out.println("Crypt Type = " +     receipt.getResCryptType()); System.out.println("Avs Street Number = " +     receipt.getResAvsStreetNumber()); System.out.println("Avs Street Name = " +     receipt.getResAvsStreetName()); System.out.println("Avs Zipcode = " +     receipt.getResAvsZipcode()); } catch (Exception e) {     e.printStackTrace(); } } } </pre>	<pre>         receipt.getResCustId()); System.out.println("Phone = " +     receipt.getResPhone()); System.out.println("Email = " +     receipt.getResEmail()); System.out.println("Note = " +     receipt.getResNote()); System.out.println("Masked Pan = " +     receipt.getResMaskedPan()); System.out.println("Exp Date = " +     receipt.getResExpdate()); System.out.println("Crypt Type = " +     receipt.getResCryptType()); System.out.println("Avs Street Number = " +     receipt.getResAvsStreetNumber()); System.out.println("Avs Street Name = " +     receipt.getResAvsStreetName()); System.out.println("Avs Zipcode = " +     receipt.getResAvsZipcode()); } catch (Exception e) {     e.printStackTrace(); } } } </pre>

### Vault response fields

For a list and explanation of (Receipt object) response fields that are available after sending this Vault transaction, see Definition of Response Fields (page 314).

## 6.4.6 ResIndRefundAch

### ResIndRefundAch transaction object definition

```
ResIndRefundAch resIndRefundAch = new ResIndRefundAch();
```

### HttpPostRequest object for ResIndRefundAch transaction

```
HttpPostRequest mpgReq = new HttpPostRequest();
```

```
mpgReq.setTransaction(resIndRefundAch);
```

### ResIndRefundAch transaction values

For a full description of mandatory and optional values, see "Definition of Request Fields" on page 306

**Table 80: ResIndRefundAch transaction object mandatory values**

Value	Type	Limits	Set method
Data key	String	25-character alpha-numeric	<code>resIndRefundAch.setData(data_key);</code>
Order ID	String	50-character alpha-numeric	<code>resIndRefundAch.setOrderId(order_id);</code>
Amount	String	9-character decimal	<code>resIndRefundAch.setAmount(amount);</code>

**Table 81: ResIndRefundCC transaction optional values**

Value	Type	Limits	Set method
Customer ID	String	50-character alpha-numeric	<code>resIndRefundAch.setCustId(custid);</code>

**Sample ResIndRefundAch - US**

```

package USA;
import JavaAPI.*;
public class TestUSAResIndRefundAch
{
    public static void main(String[] args)
    {
        java.util.Date createDate = new java.util.Date();
        String order_id = "Test"+createDate.getTime();
        String store_id = "monusqa002";
        String api_token = "qatoken";
        String data_key = "hYa5CcGERZkfzzWReCa1XzB0e";
        String amount = "1.00";
        String cust_id = "customer1";
        String processing_country_code = "US";
        ResIndRefundAch resIndRefundAch = new ResIndRefundAch();
        resIndRefundAch.setOrderId(order_id);
        resIndRefundAch.setCustId(cust_id);
        resIndRefundAch.setAmount(amount);
        resIndRefundAch.setData(data_key);
        HttpsPostRequest mpgReq = new HttpsPostRequest();
        mpgReq.setProcCountryCode(processing_country_code);
        mpgReq.setTestMode(true); //false or comment out this line for production transactions
        mpgReq.setStoreId(store_id);
        mpgReq.setApiToken(api_token);
        mpgReq.setTransaction(resIndRefundAch);
        mpgReq.send();
        try
        {
            Receipt receipt = mpgReq.getReceipt();
            System.out.println("DataKey = " + receipt.getDataKey());
            System.out.println("ReceiptId = " + receipt.getReceiptId());
            System.out.println("ReferenceNum = " + receipt.getReferenceNum());
            System.out.println("ResponseCode = " + receipt.getResponseCode());
        }
    }
}

```

### Sample ResIndRefundAch - US

```

System.out.println("AuthCode = " + receipt.getAuthCode());
System.out.println("Message = " + receipt.getMessage());
System.out.println("TransDate = " + receipt.getTransDate());
System.out.println("TransTime = " + receipt.getTransTime());
System.out.println("TransType = " + receipt.getTransType());
System.out.println("Complete = " + receipt.getComplete());
System.out.println("TransAmount = " + receipt.getTransAmount());
System.out.println("CardType = " + receipt.getCardType());
System.out.println("TxnNumber = " + receipt.getTxnNumber());
System.out.println("TimedOut = " + receipt.getTimedOut());
System.out.println("ResSuccess = " + receipt.getResSuccess());
System.out.println("PaymentType = " + receipt.getPaymentType());
System.out.println("Cust ID = " + receipt.getResCustId());
System.out.println("Phone = " + receipt.getResPhone());
System.out.println("Email = " + receipt.getResEmail());
System.out.println("Note = " + receipt.getResNote());
System.out.println("Sec = " + receipt.getResSec());
System.out.println("Cust First Name = " + receipt.getResCustFirstName());
System.out.println("Cust Last Name = " + receipt.getResCustLastName());
System.out.println("Cust Address 1 = " + receipt.getResCustAddress1());
System.out.println("Cust Address 2 = " + receipt.getResCustAddress2());
System.out.println("Cust City = " + receipt.getResCustCity());
System.out.println("Cust State = " + receipt.getResCustState());
System.out.println("Cust Zip = " + receipt.getResCustZip());
System.out.println("Routing Num = " + receipt.getResRoutingNum());
System.out.println("Masked Account Num = " + receipt.getResMaskedAccountNum());
System.out.println("Check Num = " + receipt.getResCheckNum());
System.out.println("Account Type = " + receipt.getResAccountType());
}
catch (Exception e)
{
    e.printStackTrace();
}
}
}

```

### Vault response fields

For a list and explanation of (Receipt object) response fields that are available after sending this Vault transaction, see [Definition of Response Fields \(page 314\)](#).



## 6.5 Hosted Tokenization

Moneris Hosted Tokenization is a solution for online e-commerce merchants who do not want to handle credit card numbers directly on their websites, yet want the ability to fully customize their check-out web page appearance.

When an hosted tokenization transaction is initiated, the Moneris Gateway displays (on the merchant's behalf) a single text box on the merchant's checkout page. The cardholder can then securely enter the credit card information into the text box. Upon submission of the payment information on the checkout page, Moneris Gateway returns a temporary token representing the credit card number to the merchant. This is then used in an API call to process a financial transaction directly with Moneris to charge the card. After receiving a response to the financial transaction, the merchant generates a receipt and allows the cardholder to continue with online shopping.

For more details on how to implement the Moneris Hosted Tokenization feature, see the Hosted Solutions Integration Guide. The guide can be downloaded from the Moneris Developer Portal (<https://developer.moneris.com>).



## 7 Mag Swipe Transaction Set

- 7.1 Mag Swipe Transaction Definitions
- 7.2 Mag Swipe Purchase
  - 7.2.1 Encrypted Mag Swipe Purchase
- 7.3 Mag Swipe Pre-Authorization
  - 7.3.1 Encrypted Mag Swipe Pre-Authorization
- 7.4 Mag Swipe Completion
- 7.5 Mag Swipe Force Post
  - 7.5.1 Encrypted Mag Swipe Force Post
- 7.6 Mag Swipe Purchase Correction
- 7.7 Mag Swipe Refund
- 7.8 Mag Swipe Independent Refund
  - 7.8.1 Encrypted Mag Swipe Independent Refund

Mag Swipe transactions allow customers to swipe a credit card and submit the Track2 details.

These transactions support the submission of Track2 as well as a manual entry of the credit card number and expiry date. If all three fields are submitted, the Track2 details are used to process the transaction.

### 7.1 Mag Swipe Transaction Definitions

#### **Purchase**

Verifies funds on the customer's card, removes the funds and prepares them for deposit into the merchant's account.

#### **Pre-Authorization**

Verifies and locks funds on the customer's credit card. The funds are locked for a specified amount of time based on the card issuer.

To retrieve the funds that have been locked by a Pre-Authorization transaction so that they may be settled in the merchant's account, a Completion transaction must be performed. A Pre-Authorization may only be "completed" once.

#### **Completion**

Retrieves funds that have been locked (by a Mag Swipe Pre-Authorization transaction), and prepares them for settlement into the merchant's account.

#### **Force Post**

Retrieves the locked funds and prepares them for settlement into the merchant's account.

This is used when a merchant obtains the authorization number directly from the issuer by a third-party authorization method (such as by phone).

#### **Purchase Correction**

Restores the **full** amount of a previous Mag Swipe Purchase or Mag Swipe Completion transaction to the cardholder's card, and removes any record of it from the cardholder's statement. The order ID and transaction number from the original transaction are required, but the credit card does not need to be re-swiped.

This transaction can be used against a Purchase or Completion transaction that occurred same day provided that the batch containing the original transaction remains open. When using the automated closing feature, Batch Close occurs daily between 10 and 11 pm Eastern Time.

This transaction is sometimes referred to as "void".

**Refund**

Restores all or part of the funds from a Mag Swipe Purchase or Mag Swipe Completion transaction to the cardholder's card. Unlike a Purchase Correction, there is a record of the refund.

**Independent Refund**

Credits a specified amount to the cardholder's credit card.

This does not require a previous transaction (such as Mag Swipe Purchase) to be logged in the Moneris Gateway. However, a credit card must be swiped to provide the Track2 data.

### 7.1.1 Encrypted Mag Swipe Transactions

Encrypted Mag Swipe transactions allow the customer to swipe or key in a credit card using a Moneris-provided encrypted mag swipe reader, and submit the encrypted Track2 details.

The encrypted mag swipe reader can be used for processing:

- Swiped card-present transactions
- Manually keyed card-present transactions
- Manually keyed card-not-present transactions.

Encrypted Mag Swipe transactions are identical to the regular Mag Swipe transactions from the customer's perspective. However, the card data must be swiped or keyed in via a Moneris-provided encrypted mag swipe reader. Contact Moneris for more details.

Only Mag Swipe Purchase and Mag Swipe Pre-Authorization have encrypted versions. Their explanations appear in this document as subsections of the regular (unencrypted) Mag Swipe Purchase and Mag Swipe Pre-Authorization transactions respectively.

## 7.2 Mag Swipe Purchase

**Track2Purchase transaction object definition**

```
Track2Purchase track2purchase = new Track2Purchase();
```

**HttpPostRequest object for Track2Purchase transaction**

```
HttpPostRequest mpgReq = new HttpPostRequest();  
mpgReq.setTransaction(track2purchase);
```

**Mag Swipe Purchase transaction values**

For a full description of mandatory and optional values, see "Definition of Request Fields" on page 306

**Table 82: Mag Swipe Purchase transaction object mandatory values**

Value	Type	Limits	Set method
Order ID	String	50-character alpha-numeric	<code>track2purchase</code>
Amount	String	9-character decimal	<code>track2purchase.setAmount(amount);</code>
Credit card number OR Track2 data	String	20-character numeric OR 40-character numeric	<code>track2purchase.setPan(pan);</code>  OR <code>track2purchase.setTrack2(track2);</code>
Expiry date	String	4-character alpha-numeric (YYMM format)	<code>track2purchase.setExpDate(expdate);</code>
POS code	String	2-character numeric	<code>track2purchase.setPosCode(pos_code);</code>

**Table 83: Mag Swipe Purchase transaction optional values**

Value	Type	Limits	Set method
AVS information	Object	Not applicable. See Appendix E (page 336).	<code>track2purchase.setAvsInfo(avsCheck);</code>
Commcard invoice	String	17-character alpha-numeric	<code>track2purchase.setCommcardInvoice(commcard_invoice);</code>
Commcard tax amount	String	9-character decimal	<code>track2purchase.setCommcardTaxAmount(commcard_tax_amount);</code>
Customer ID	String	50-character alpha-numeric	<code>track2purchase.setCustId(custid);</code>

**Table 83: Mag Swipe Purchase transaction optional values**

Value	Type	Limits	Set method
CVD information	Object	Not applicable. See Section 1 (page 1).	<code>track2purchase.setCvdInfo(cvdCheck);</code>
Dynamic descriptor	String	20-character alphanumeric	<code>track2purchase.setDynamicDescriptor(dynamic_descriptor);</code>
Status Check	Boolean	true/false	<code>mpgReq.setStatusCheck(status_check);</code>

Sample Track2Purchase - CA	Sample Track2Purchase - US
<pre> package Canada; import JavaAPI.*; public class TestCanadaTrack2Purchase {     public static void main(String[] args)     {         String store_id = "store1";         String api_token = "yesguy";         java.util.Date createDate = new java.util.Date         ();         String order_id = "Test"+createDate.getTime();         String cust_id = "LBriggs";         String amount = "1.00";         String track2 =             ";5258968987035454=06061015454001060101?";         String pan = "";         String exp = ""; //must send '0000' if swiped         String pos_code = "00";         String commcard_invoice = "INV98798";         String commcard_tax_amount = "1.00";         String processing_country_code = "CA";         boolean status_check = false;         Track2Purchase track2purchase = new             Track2Purchase();         track2purchase.setOrderId(order_id);         track2purchase.setCustId(cust_id);         track2purchase.setAmount(amount);         track2purchase.setTrack2(track2);         track2purchase.setPan(pan);         track2purchase.setExpdate(exp);         track2purchase.setPosCode(pos_code);         track2purchase.setCommcardInvoice(commcard_             invoice);         track2purchase.setCommcardTaxAmount(commcard_             tax_amount);         HttpsPostRequest mpgReq = new HttpsPostRequest         ();         mpgReq.setProcCountryCode(processing_country_             code);         mpgReq.setTestMode(true); //false or comment </pre>	<pre> package USA; import JavaAPI.*; public class TestUSATrack2Purchase {     public static void main(String[] args)     {         String store_id = "monusqa002";         String api_token = "qatoken";         java.util.Date createDate = new java.util.Date         ();         String order_id = "Test"+createDate.getTime();         String cust_id = "LBriggs";         String amount = "1.00";         String track2 =             ";5258968987035454=06061015454001060101?";         String pan = "";         String exp = ""; //must send '0000' if swiped         String pos_code = "00";         String commcard_invoice = "INV98798";         String commcard_tax_amount = "1.00";         String descriptor = "my descriptor";         String processing_country_code = "US";         boolean status_check = false;         Track2Purchase track2purchase = new             Track2Purchase();         track2purchase.setOrderId(order_id);         track2purchase.setCustId(cust_id);         track2purchase.setAmount(amount);         track2purchase.setTrack2(track2);         track2purchase.setPan(pan);         track2purchase.setExpdate(exp);         track2purchase.setPosCode(pos_code);         track2purchase.setDynamicDescriptor             (descriptor);         track2purchase.setCommcardInvoice(commcard_             invoice);         track2purchase.setCommcardTaxAmount(commcard_             tax_amount);         HttpsPostRequest mpgReq = new HttpsPostRequest         (); </pre>

Sample Track2Purchase - CA	Sample Track2Purchase - US
<pre>         out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(track2purchase); mpgReq.setStatusCheck(status_check); mpgReq.send(); try { Receipt receipt = mpgReq.getReceipt(); System.out.println("CardType = " +     receipt.getCardType()); System.out.println("TransAmount = " +     receipt.getTransAmount()); System.out.println("TxnNumber = " +     receipt.getTxnNumber()); System.out.println("ReceiptId = " +     receipt.getReceiptId()); System.out.println("TransType = " +     receipt.getTransType()); System.out.println("ReferenceNum = " +     receipt.getReferenceNum()); System.out.println("ResponseCode = " +     receipt.getResponseCode()); System.out.println("BankTotals = " +     receipt.getBankTotals()); System.out.println("Message = " +     receipt.getMessage()); System.out.println("AuthCode = " +     receipt.getAuthCode()); System.out.println("Complete = " +     receipt.getComplete()); System.out.println("TransDate = " +     receipt.getTransDate()); System.out.println("TransTime = " +     receipt.getTransTime()); System.out.println("Ticket = " +     receipt.getTicket()); System.out.println("TimedOut = " +     receipt.getTimedOut()); //System.out.println("StatusCode = " +     receipt.getStatusCode()); //System.out.println("StatusMessage = " +     receipt.getStatusMessage()); } catch (Exception e) { e.printStackTrace(); } } </pre>	<pre> mpgReq.setProcCountryCode(processing_country_     code); mpgReq.setTestMode(true); //false or comment     out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(track2purchase); mpgReq.setStatusCheck(status_check); mpgReq.send(); try { Receipt receipt = mpgReq.getReceipt(); System.out.println("CardType = " +     receipt.getCardType()); System.out.println("TransAmount = " +     receipt.getTransAmount()); System.out.println("TxnNumber = " +     receipt.getTxnNumber()); System.out.println("ReceiptId = " +     receipt.getReceiptId()); System.out.println("TransType = " +     receipt.getTransType()); System.out.println("ReferenceNum = " +     receipt.getReferenceNum()); System.out.println("ResponseCode = " +     receipt.getResponseCode()); System.out.println("BankTotals = " +     receipt.getBankTotals()); System.out.println("Message = " +     receipt.getMessage()); System.out.println("AuthCode = " +     receipt.getAuthCode()); System.out.println("Complete = " +     receipt.getComplete()); System.out.println("TransDate = " +     receipt.getTransDate()); System.out.println("TransTime = " +     receipt.getTransTime()); System.out.println("Ticket = " +     receipt.getTicket()); System.out.println("TimedOut = " +     receipt.getTimedOut()); //System.out.println("StatusCode = " +     receipt.getStatusCode()); //System.out.println("StatusMessage = " +     receipt.getStatusMessage()); } catch (Exception e) { e.printStackTrace(); } } </pre>

## 7.2.1 Encrypted Mag Swipe Purchase

### Encrypted Mag Swipe Purchase transaction object definition

```
EncTrack2Purchase encpurchase = new EncTrack2Purchase();
```

### HttpPostRequest object for Encrypted Mag Swipe Purchase transaction

```
HttpPostRequest mpgReq = new HttpPostRequest();
```

```
mpgReq.setTransaction(encpurchase);
```

### Encrypted Mag Swipe Purchase transaction values

For a full description of mandatory and optional values, see "Definition of Request Fields" on page 306

**Table 84: Encrypted Mag Swipe Purchase transaction object mandatory values**

Value	Type	Limits	Set method
Order ID	String	50-character alpha-numeric	encpurchase
Amount	String	9-character decimal	encpurchase..setAmount(amount);
Encrypted Track2 data	String	40-character numeric	encpurchase.setEncTrack2(enc_track2);
POS code	String	2-character numeric	encpurchase.setPosCode(pos_code);
Device type	String	TBD	encpurchase.setDeviceType(device_type);

**Table 85: Encrypted Mag Swipe Purchase transaction optional values**

Value	Type	Limits	Set method
Customer ID	String	50-character alpha-numeric	encpurchase.setCustId(custid);
Status Check	Boolean	true/false	mpgReq.setStatusCheck(status_check);
AVS information	Object	Not applicable. See Appendix E (page 336).	encpurchase.setAvsInfo(avsCheck);
Dynamic descriptor	String	20-character alpha-numeric	encpurchase.setDynamicDescriptor(dynamic_descriptor);

Sample Encrypted Mag Swipe Purchase - CA	Sample Encrypted Mag Swipe Purchase - US
<pre> package Canada; import JavaAPI.*; public class TestCanadaEncTrack2Purchase { public static void main(String args[]) { java.util.Date createDate = new java.util.Date (); String order_id = "Test"+createDate.getTime(); String store_id = "moneris"; String api_token = "hurgle"; String amount = "1.00"; String enc_track2 = "ENCRYPTEDTRACK2DATA"; String pan = ""; String expdate = ""; String pos_code = "00"; String device_type = "idtech_bdk"; String processing_country_code = "CA"; EncTrack2Preauth enc_track2_preauth = new EncTrack2Preauth (); enc_track2_preauth.setOrderId(order_id); enc_track2_preauth.setAmount(amount); enc_track2_preauth.setEncTrack2(enc_track2); enc_track2_preauth.setPan(pan); enc_track2_preauth.setExpdate(expdate); enc_track2_preauth.setPosCode(pos_code); enc_track2_preauth.setDeviceType(device_type); HttpsPostRequest mpgReq = new HttpsPostRequest (); mpgReq.setProcCountryCode(processing_country_ code); mpgReq.setTestMode(true); //false or comment out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(enc_track2_preauth); mpgReq.send(); try { Receipt receipt = mpgReq.getReceipt(); System.out.println("CardType = " + receipt.getCardType()); System.out.println("TransAmount = " + receipt.getTransAmount()); System.out.println("TxnNumber = " + receipt.getTxnNumber()); System.out.println("ReceiptId = " + receipt.getReceiptId()); System.out.println("TransType = " + receipt.getTransType()); System.out.println("ReferenceNum = " + receipt.getReferenceNum()); System.out.println("ResponseCode = " + receipt.getResponseCode()); System.out.println("ISO = " + receipt.getISO ()); System.out.println("BankTotals = " + receipt.getBankTotals()); </pre>	<pre> package USA; import JavaAPI.*; public class TestUSAEncTrack2Purchase { public static void main(String[] args) { String store_id = "monusqa002"; String api_token = "qatoken"; java.util.Date createDate = new java.util.Date (); String order_id = "Test"+createDate.getTime(); String cust_id = "LBriggs"; String amount = "1.00"; String pos_code = "00"; String device_type = "idtech"; String processing_country_code = "US"; boolean status_check = false; String dynamic_descriptor = "my descriptor"; String enc_track2 = "ENCRYPTEDTRACK2DATA"; EncTrack2Purchase encpurchase = new EncTrack2Purchase(); encpurchase.setOrderId(order_id); encpurchase.setCustId(cust_id); encpurchase.setAmount(amount); encpurchase.setEncTrack2(enc_track2); encpurchase.setPosCode(pos_code); encpurchase.setDeviceType(device_type); encpurchase.setDynamicDescriptor(dynamic_ descriptor); AvsInfo avsCheck = new AvsInfo(); avsCheck.setAvsStreetNumber("212"); avsCheck.setAvsStreetName("Payton Street"); avsCheck.setAvsZipCode("M1M1M1"); encpurchase.setAvsInfo(avsCheck); HttpsPostRequest mpgReq = new HttpsPostRequest (); mpgReq.setProcCountryCode(processing_country_ code); mpgReq.setTestMode(true); //false or comment out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(encpurchase); mpgReq.setStatusCheck(status_check); mpgReq.send(); try { Receipt receipt = mpgReq.getReceipt(); System.out.println("CardType = " + receipt.getCardType()); System.out.println("TransAmount = " + receipt.getTransAmount()); System.out.println("TxnNumber = " + receipt.getTxnNumber()); System.out.println("ReceiptId = " + receipt.getReceiptId()); System.out.println("TransType = " + receipt.getTransType()); </pre>

Sample Encrypted Mag Swipe Purchase - CA	Sample Encrypted Mag Swipe Purchase - US
<pre> System.out.println("Message = " +     receipt.getMessage()); System.out.println("AuthCode = " +     receipt.getAuthCode()); System.out.println("Complete = " +     receipt.getComplete()); System.out.println("TransDate = " +     receipt.getTransDate()); System.out.println("TransTime = " +     receipt.getTransTime()); System.out.println("Ticket = " +     receipt.getTicket()); System.out.println("TimedOut = " +     receipt.getTimedOut()); } catch (Exception e) { e.printStackTrace(); } } } </pre>	<pre> System.out.println("ReferenceNum = " +     receipt.getReferenceNum()); System.out.println("ResponseCode = " +     receipt.getResponseCode()); System.out.println("BankTotals = " +     receipt.getBankTotals()); System.out.println("Message = " +     receipt.getMessage()); System.out.println("AuthCode = " +     receipt.getAuthCode()); System.out.println("Complete = " +     receipt.getComplete()); System.out.println("TransDate = " +     receipt.getTransDate()); System.out.println("TransTime = " +     receipt.getTransTime()); System.out.println("Ticket = " +     receipt.getTicket()); System.out.println("TimedOut = " +     receipt.getTimedOut()); System.out.println("MaskedPan = " +     receipt.getMaskedPan()); System.out.println("CardLevelResult = " +     receipt.getCardLevelResult()); System.out.println("AVS Response = " +     receipt.getAvsResultCode()); } catch (Exception e) { e.printStackTrace(); } } } </pre>

## 7.3 Mag Swipe Pre-Authorization

### Track2PreAuth transaction object definition

```
Track2PreAuth track2preauth = new Track2PreAuth();
```

### HttpPostRequest object for Track2PreAuth transaction

```
HttpPostRequest mpgReq = new HttpPostRequest();
```

```
mpgReq.setTransaction(track2preauth);
```

### Mag Swipe Pre-Authorization transaction values

For a full description of mandatory and optional values, see "Definition of Request Fields" on page 306



**Table 86: Track2PreAuth transaction object mandatory values**

Value	Type	Limits	Set method
Order ID	String	50-character alpha-numeric	<code>track2preauth.setOrderId(order_id);</code>
Amount	String	9-character decimal	<code>track2preauth.setAmount(amount);</code>
Credit card number OR Track2 data	String	20-character numeric OR 40-character numeric	<code>track2preauth.setPan(pan);</code>  <code>track2preauth.setPan(pan);</code>
Expiry date	String	4-character alpha-numeric (YYMM format)	<code>track2preauth.setExpDate(expdate);</code>
POS code	String	2-character numeric	<code>track2preauth.setPosCode(pos_code);</code>

**Table 87: Mag Swipe Pre-Authorization transaction optional values**

Value	Type	Limits	Set method
Customer ID	String	50-character alpha-numeric	<code>track2preauth.setCustId(custid);</code>
Dynamic descriptor	String	20-character alpha-numeric	<code>track2preauth.setDynamicDescriptor(dynamic_descriptor);</code>
Status Check	Boolean	true/false	<code>mpgReq.setStatusCheck(status_check);</code>
Commcard invoice <sup>1</sup>	String	17-character alpha-numeric	<code>track2preauth.setCommcardInvoice(commcard_invoice);</code>
Commcard tax amount <sup>2</sup>	String	9-character decimal	<code>track2preauth.setCommcardTaxAmount(commcard_tax_amount);</code>

<sup>1</sup>Available to US integrations only.<sup>2</sup>Available to US integrations only.

Sample Mag Swipe Pre-Authorization - CA	Sample Mag Swipe Pre-Authorization - US
<pre> package Canada; import JavaAPI.*; public class TestCanadaTrack2PreAuth { public static void main(String[] args) { String store_id = "store1"; String api_token = "yesguy"; java.util.Date createDate = new java.util.Date (); String order_id = "Test"+createDate.getTime(); String cust_id = "LBriggs"; String amount = "5.00"; String track2 = ";5258968987035454=06061015454001060101?"; String pan = ""; String exp = "0000"; //must send '0000' if swiped String pos_code = "00"; String processing_country_code = "CA"; boolean status_check = false; Track2PreAuth track2preauth = new Track2PreAuth(); track2preauth.setOrderId(order_id); track2preauth.setCustId(cust_id); track2preauth.setAmount(amount); track2preauth.setTrack2(track2); track2preauth.setPan(pan); track2preauth.setExpdate(exp); track2preauth.setPosCode(pos_code); HttpPostRequest mpgReq = new HttpsPostRequest (); mpgReq.setProcCountryCode(processing_country_ code); mpgReq.setTestMode(true); //false or comment out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(track2preauth); mpgReq.setStatusCheck(status_check); mpgReq.send(); try { Receipt receipt = mpgReq.getReceipt(); System.out.println("CardType = " + receipt.getCardType()); System.out.println("TransAmount = " + receipt.getTransAmount()); System.out.println("TxnNumber = " + receipt.getTxnNumber()); System.out.println("ReceiptId = " + receipt.getReceiptId()); System.out.println("TransType = " + receipt.getTransType()); System.out.println("ReferenceNum = " + receipt.getReferenceNum()); System.out.println("ResponseCode = " + receipt.getResponseCode()); </pre>	<pre> package USA; import JavaAPI.*; public class TestUSATrack2PreAuth { public static void main(String[] args) { String store_id = "monusqa002"; String api_token = "qatoken"; java.util.Date createDate = new java.util.Date (); String order_id = "Test"+createDate.getTime(); String cust_id = "LBriggs"; String amount = "5.00"; String track2 = ";5258968987035454=06061015454001060101?"; String pan = ""; String exp = ""; //must send '0000' if swiped String pos_code = "00"; String commcard_invoice = "INV98798"; String commcard_tax_amount = "1.00"; String descriptor = "my descriptor"; String processing_country_code = "US"; boolean status_check = false; Track2PreAuth track2preauth = new Track2PreAuth(); track2preauth.setOrderId(order_id); track2preauth.setCustId(cust_id); track2preauth.setAmount(amount); track2preauth.setTrack2(track2); track2preauth.setPan(pan); track2preauth.setExpdate(exp); track2preauth.setPosCode(pos_code); track2preauth.setDynamicDescriptor (descriptor); track2preauth.setCommcardInvoice(commcard_ invoice); track2preauth.setCommcardTaxAmount(commcard_ tax_amount); HttpPostRequest mpgReq = new HttpsPostRequest (); mpgReq.setProcCountryCode(processing_country_ code); mpgReq.setTestMode(true); //false or comment out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(track2preauth); mpgReq.setStatusCheck(status_check); mpgReq.send(); try { Receipt receipt = mpgReq.getReceipt(); System.out.println("CardType = " + receipt.getCardType()); System.out.println("TransAmount = " + receipt.getTransAmount()); System.out.println("TxnNumber = " + receipt.getTxnNumber()); </pre>

Sample Mag Swipe Pre-Authorization - CA	Sample Mag Swipe Pre-Authorization - US
<pre> System.out.println("ISO = " + receipt.getISO ()); System.out.println("BankTotals = " +     receipt.getBankTotals()); System.out.println("Message = " +     receipt.getMessage()); System.out.println("AuthCode = " +     receipt.getAuthCode()); System.out.println("Complete = " +     receipt.getComplete()); System.out.println("TransDate = " +     receipt.getTransDate()); System.out.println("TransTime = " +     receipt.getTransTime()); System.out.println("Ticket = " +     receipt.getTicket()); System.out.println("TimedOut = " +     receipt.getTimedOut()); //System.out.println("StatusCode = " +     receipt.getStatusCode()); //System.out.println("StatusMessage = " +     receipt.getStatusMessage()); } catch (Exception e) { e.printStackTrace(); } } } </pre>	<pre> System.out.println("ReceiptId = " +     receipt.getReceiptId()); System.out.println("TransType = " +     receipt.getTransType()); System.out.println("ReferenceNum = " +     receipt.getReferenceNum()); System.out.println("ResponseCode = " +     receipt.getResponseCode()); System.out.println("ISO = " + receipt.getISO ()); System.out.println("BankTotals = " +     receipt.getBankTotals()); System.out.println("Message = " +     receipt.getMessage()); System.out.println("AuthCode = " +     receipt.getAuthCode()); System.out.println("Complete = " +     receipt.getComplete()); System.out.println("TransDate = " +     receipt.getTransDate()); System.out.println("TransTime = " +     receipt.getTransTime()); System.out.println("Ticket = " +     receipt.getTicket()); System.out.println("TimedOut = " +     receipt.getTimedOut()); //System.out.println("StatusCode = " +     receipt.getStatusCode()); //System.out.println("StatusMessage = " +     receipt.getStatusMessage()); } catch (Exception e) { e.printStackTrace(); } } } </pre>

### 7.3.1 Encrypted Mag Swipe Pre-Authorization

#### EncTrack2Preauth transaction object definition

```
EncTrack2Preauth enc_track2_preauth = new EncTrack2Preauth ();
```

#### HttpPostRequest object for EncTrack2Preauth transaction

```
HttpPostRequest mpgReq = new HttpPostRequest();
```

```
mpgReq.setTransaction(enc_track2_preauth);
```

#### Encrypted Mag Swipe Pre-Authorization transaction values

For a full description of mandatory and optional values, see "Definition of Request Fields" on page 306

**Table 88: EncTrack2Preauth transaction object mandatory values**

Value	Type	Limits	Set method
Order ID	String	50-character alpha-numeric	enc_track2_preauth
Amount	String	9-character decimal	enc_track2_preauth.setAmount(amount);
Credit card number OR Track2	String	20-character numeric OR 40-character numeric	enc_track2_preauth.setPan(pan);  OR enc_track2_preauth.setTrack2(track2);
Expiry date	String	4-character alpha-numeric (YYMM format)	enc_track2_preauth.setExpDate(expdate);
POS code	String	2-character numeric	enc_track2_preauth.setPosCode(pos_code);
Device type	String	30-character alpha-numeric	enc_track2_preauth.setDeviceType(device_type);

**Table 89: EncTrack2Preauth transaction optional values**

Value	Type	Limits	Set method
Customer ID	String	50-character alpha-numeric	enc_track2_preauth.setCustId(custid);
Status Check	Boolean	true/false	mpgReq.setStatusCheck(status_check);

Sample Encrypted Mag Swipe Preauth - CA	Sample Encrypted Mag Swipe Preauth - US
<pre>package Canada; import JavaAPI.*; public class TestCanadaEncTrack2Preauth {     public static void main(String args[])     {         String host = "esqa.moneris.com";         String store_id = "store1";     } }</pre>	<pre>package USA; import JavaAPI.*; public class TestUSAEncTrack2PreAuth {     public static void main(String[] args)     {         String store_id = "monusqa002";         String api_token = "qatoken";     } }</pre>

Sample Encrypted Mag Swipe Preauth - CA	Sample Encrypted Mag Swipe Preauth - US
<pre>String api_token = "yesguy"; java.util.Date createDate = new java.util.Date (); String order_id = "Test"+createDate.getTime(); String amount = "1.00"; String enc_track2 = "ENCRYPTEDTRACK2DATA"; String pan = ""; String expdate = ""; String pos_code = "00"; String device_type = "idtech_bdk"; String processing_country_code = "CA"; EncTrack2Preauth enc_track2_preauth = new     EncTrack2Preauth (); enc_track2_preauth.setOrderId(order_id); enc_track2_preauth.setAmount(amount); enc_track2_preauth.setEncTrack2(enc_track2); enc_track2_preauth.setPan(pan); enc_track2_preauth.setExpdate(expdate); enc_track2_preauth.setPosCode(pos_code); enc_track2_preauth.setDeviceType(device_type); HttpPostRequest mpgReq = new HttpPostRequest (); mpgReq.setProcCountryCode(processing_country_ code); mpgReq.setTestMode(true); //false or comment     out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(enc_track2_preauth); mpgReq.send(); try { Receipt receipt = mpgReq.getReceipt(); System.out.println("CardType = " +     receipt.getCardType()); System.out.println("TransAmount = " +     receipt.getTransAmount()); System.out.println("TxnNumber = " +     receipt.getTxnNumber()); System.out.println("ReceiptId = " +     receipt.getReceiptId()); System.out.println("TransType = " +     receipt.getTransType()); System.out.println("ReferenceNum = " +     receipt.getReferenceNum()); System.out.println("ResponseCode = " +     receipt.getResponseCode()); System.out.println("ISO = " + receipt.getISO ()); System.out.println("BankTotals = " +     receipt.getBankTotals()); System.out.println("Message = " +     receipt.getMessage()); System.out.println("AuthCode = " +     receipt.getAuthCode()); System.out.println("Complete = " +     receipt.getComplete()); System.out.println("TransDate = " +</pre>	<pre>java.util.Date createDate = new java.util.Date (); String order_id = "Test"+createDate.getTime(); String cust_id = "LBriggs"; String amount = "5.00"; String pos_code = "00"; String device_type = "idtech"; String processing_country_code = "US"; boolean status_check = false; String enc_track2 = "ENCRYPTEDTRACK2DATA"; EncTrack2Preauth enctrack2preauth = new     EncTrack2Preauth (); enctrack2preauth.setOrderId(order_id); enctrack2preauth.setCustId(cust_id); enctrack2preauth.setAmount(amount); enctrack2preauth.setEncTrack2(enc_track2); enctrack2preauth.setPosCode(pos_code); enctrack2preauth.setDeviceType(device_type); HttpPostRequest mpgReq = new HttpPostRequest (); mpgReq.setProcCountryCode(processing_country_ code); mpgReq.setTestMode(true); //false or comment     out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(enctrack2preauth); mpgReq.setStatusCheck(status_check); mpgReq.send(); try { Receipt receipt = mpgReq.getReceipt(); System.out.println("CardType = " +     receipt.getCardType()); System.out.println("TransAmount = " +     receipt.getTransAmount()); System.out.println("TxnNumber = " +     receipt.getTxnNumber()); System.out.println("ReceiptId = " +     receipt.getReceiptId()); System.out.println("TransType = " +     receipt.getTransType()); System.out.println("ReferenceNum = " +     receipt.getReferenceNum()); System.out.println("ResponseCode = " +     receipt.getResponseCode()); System.out.println("ISO = " + receipt.getISO ()); System.out.println("BankTotals = " +     receipt.getBankTotals()); System.out.println("Message = " +     receipt.getMessage()); System.out.println("AuthCode = " +     receipt.getAuthCode()); System.out.println("Complete = " +     receipt.getComplete()); System.out.println("TransDate = " +     receipt.getTransDate());</pre>

Sample Encrypted Mag Swipe Preauth - CA	Sample Encrypted Mag Swipe Preauth - US
<pre> receipt.getTransDate(); System.out.println("TransTime = " +     receipt.getTransTime()); System.out.println("Ticket = " +     receipt.getTicket()); System.out.println("TimedOut = " +     receipt.getTimedOut()); receipt = null; } catch (Exception e) { e.printStackTrace(); } } } </pre>	<pre> System.out.println("TransTime = " +     receipt.getTransTime()); System.out.println("Ticket = " +     receipt.getTicket()); System.out.println("TimedOut = " +     receipt.getTimedOut()); System.out.println("MaskedPan = " +     receipt.getMaskedPan()); System.out.println("CardLevelResult = " +     receipt.getCardLevelResult()); } catch (Exception e) { e.printStackTrace(); } } } </pre>

## 7.4 Mag Swipe Completion

### Track2Completion transaction object definition

```
Track2Completion track2completion = new Track2Completion();
```

### HttpPostRequest object for Track2Completion transaction

```
HttpPostRequest mpgReq = new HttpPostRequest();
```

```
mpgReq.setTransaction(track2completion);
```

### Mag Swipe Completion transaction values

For a full description of mandatory and optional values, see "Definition of Request Fields" on page 306

**Table 90: Track2Completion transaction object mandatory values**

Value	Type	Limits	Set method
Order ID	String	50-character alpha-numeric	<code>track2completion.setOrderId(order_id);</code>
Transaction number	String	255-character variable character	<code>track2completion.setTxnNumber(txn_number);</code>
Amount	String	9-character decimal	<code>track2completion.setAmount(amount);</code>
POS code	String	2-character numeric	<code>track2completion.setPosCode(pos_code);</code>

**Table 91: Mag Swipe Completion transaction optional values**

Value	Type	Limits	Set method
Customer ID	String	50-character alpha-numeric	<code>track2completion.setCustId(custid);</code>
Status Check	Boolean	true/false	<code>mpgReq.setStatusCheck(status_check);</code>
Dynamic descriptor	String	20-character alpha-numeric	<code>track2completion.setDynamicDescriptor(dynamic_descriptor);</code>
Commcard invoice <sup>1</sup>	String	17-character alpha-numeric	<code>track2completion.setCommcardInvoice(commcard_invoice);</code>
Commcard tax amount <sup>2</sup>	String	9-character decimal	<code>track2completion.setCommcardTaxAmount(commcard_tax_amount);</code>

Sample Mag Swipe Completion - CA	Sample Mag Swipe Completion - US
<pre> package Canada; import JavaAPI.*; public class TestCanadaTrack2Completion { public static void main(String[] args) { String store_id = "store1"; String api_token = "yesguy"; String order_id = "Test1432091015817"; String txn_number = "16540-0_10"; String amount = "1.00"; String pos_code = "00"; String dynamic_descriptor = "123456"; String processing_country_code = "CA"; boolean status_check = false; Track2Completion track2completion = new     Track2Completion(); track2completion.setOrderId(order_id); track2completion.setTxnNumber(txn_number); track2completion.setAmount(amount); track2completion.setPosCode(pos_code); track2completion.setDynamicDescriptor(dynamic_     descriptor); HttpPostRequest mpgReq = new HttpsPostRequest     (); mpgReq.setProcCountryCode(processing_country_     code); mpgReq.setTestMode(true); //false or comment     out this line for production transactions </pre>	<pre> package USA; import JavaAPI.*; public class TestUSATrack2Completion { public static void main(String[] args) { String store_id = "monusqa002"; String api_token = "qatoken"; String order_id = "Test1432091954389"; String txn_number = "123898-0_25"; String amount = "1.00"; String pos_code = "00"; String commcard_invoice = "INVC090"; String commcard_tax_amount = "1.00"; String dynamic_descriptor = "123456"; String cust_id = "my customer id"; String processing_country_code = "US"; boolean status_check = false; Track2Completion track2completion = new     Track2Completion(); track2completion.setOrderId(order_id); track2completion.setCustId(cust_id); track2completion.setTxnNumber(txn_number); track2completion.setAmount(amount); track2completion.setPosCode(pos_code); track2completion.setCommcardInvoice(commcard_     invoice); track2completion.setCommcardTaxAmount     (commcard_tax_amount); </pre>

<sup>1</sup>Available to US integrations only.<sup>2</sup>Available to US integrations only.

Sample Mag Swipe Completion - CA	Sample Mag Swipe Completion - US
<pre> mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(track2completion); mpgReq.setStatusCheck(status_check); mpgReq.send(); try { Receipt receipt = mpgReq.getReceipt(); System.out.println("CardType = " +     receipt.getCardType()); System.out.println("TransAmount = " +     receipt.getTransAmount()); System.out.println("TxnNumber = " +     receipt.getTxnNumber()); System.out.println("ReceiptId = " +     receipt.getReceiptId()); System.out.println("TransType = " +     receipt.getTransType()); System.out.println("ReferenceNum = " +     receipt.getReferenceNum()); System.out.println("ResponseCode = " +     receipt.getResponseCode()); System.out.println("ISO = " + receipt.getISO ()); System.out.println("BankTotals = " +     receipt.getBankTotals()); System.out.println("Message = " +     receipt.getMessage()); System.out.println("AuthCode = " +     receipt.getAuthCode()); System.out.println("Complete = " +     receipt.getComplete()); System.out.println("TransDate = " +     receipt.getTransDate()); System.out.println("TransTime = " +     receipt.getTransTime()); System.out.println("Ticket = " +     receipt.getTicket()); System.out.println("TimedOut = " +     receipt.getTimedOut()); //System.out.println("StatusCode = " +     receipt.getStatusCode()); //System.out.println("StatusMessage = " +     receipt.getStatusMessage()); } catch (Exception e) { e.printStackTrace(); } } } </pre>	<pre> track2completion.setDynamicDescriptor(dynamic_ descriptor); HttpPostRequest mpgReq = new HttpsPostRequest (); mpgReq.setProcCountryCode(processing_country_ code); mpgReq.setTestMode(true); //false or comment     out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(track2completion); mpgReq.setStatusCheck(status_check); mpgReq.send(); try { Receipt receipt = mpgReq.getReceipt(); System.out.println("CardType = " +     receipt.getCardType()); System.out.println("TransAmount = " +     receipt.getTransAmount()); System.out.println("TxnNumber = " +     receipt.getTxnNumber()); System.out.println("ReceiptId = " +     receipt.getReceiptId()); System.out.println("TransType = " +     receipt.getTransType()); System.out.println("ReferenceNum = " +     receipt.getReferenceNum()); System.out.println("ResponseCode = " +     receipt.getResponseCode()); System.out.println("ISO = " + receipt.getISO ()); System.out.println("BankTotals = " +     receipt.getBankTotals()); System.out.println("Message = " +     receipt.getMessage()); System.out.println("AuthCode = " +     receipt.getAuthCode()); System.out.println("Complete = " +     receipt.getComplete()); System.out.println("TransDate = " +     receipt.getTransDate()); System.out.println("TransTime = " +     receipt.getTransTime()); System.out.println("Ticket = " +     receipt.getTicket()); System.out.println("TimedOut = " +     receipt.getTimedOut()); //System.out.println("StatusCode = " +     receipt.getStatusCode()); //System.out.println("StatusMessage = " +     receipt.getStatusMessage()); } catch (Exception e) { e.printStackTrace(); } } </pre>



## 7.5 Mag Swipe Force Post

### Track2ForcePost transaction object definition

```
Track2ForcePost track2forcePost = new Track2ForcePost();
```

### HttpPostRequest object for Track2ForcePost transaction

```
HttpPostRequest mpgReq = new HttpPostRequest();
```

```
mpgReq.setTransaction(track2forcePost);
```

### Mag Swipe Force Post transaction mandatory arguments

For a full description of mandatory and optional values, see "Definition of Request Fields" on page 306

**Table 92: Track2ForcePost transaction object mandatory values**

Value	Type	Limits	Set method
Order ID	String	50-character alpha-numeric	<code>track2forcePost.setOrderId(order_id);</code>
Amount	String	9-character decimal	<code>track2forcePost.setAmount(amount);</code>
Credit card number OR Track2 data	String	20-character numeric OR 40-character numeric	<code>track2forcePost.setPan(pan);</code>  OR <code>track2forcePost.setTrack2(track2);</code>
Expiry date	String	4-character alpha-numeric (YYMM format)	<code>track2forcePost.setExpDate(expdate);</code>
POS code	String	2-character numeric	<code>track2forcePost.setPosCode(pos_code);</code>
Authorization code	String	8-character alpha-numeric	<code>track2forcePost.setAuthCode(auth_code);</code>

**Table 93: Mag Swipe Force Post transaction optional values**

Value	Type	Limits	Set method
Customer ID	String	50-character alpha-numeric	track2forcePost.setCustId(custid);
Status Check	Boolean	true/false	mpgReq.setStatusCheck(status_check);

Sample Mag Swipe Force Post - CA	Sample Mag Swipe Force Post - US
<pre> package Canada; import JavaAPI.*; public class TestCanadaTrack2ForcePost {     public static void main(String[] args)     {         String store_id = "moneris";         String api_token = "hurgle";         java.util.Date createDate = new java.util.Date         ();         String order_id = "Test"+createDate.getTime();         String amount = "1.00";         String track2 =             ";5258968987035454=06061015454001060101?";         String auth_code = "123456";         String processing_country_code = "CA";         boolean status_check = false;         Track2ForcePost track2forcePost = new             Track2ForcePost();         track2forcePost.setOrderId(order_id);         track2forcePost.setAmount(amount);         track2forcePost.setTrack2(track2);         track2forcePost.setAuthCode(auth_code);         HttpsPostRequest mpgReq = new HttpsPostRequest         ();         mpgReq.setProcCountryCode(processing_country_             code);         mpgReq.setTestMode(true); //false or comment             out this line for production transactions         mpgReq.setStoreId(store_id);         mpgReq.setApiToken(api_token);         mpgReq.setTransaction(track2forcePost);         mpgReq.setStatusCheck(status_check);         mpgReq.send();         try         {             Receipt receipt = mpgReq.getReceipt();             System.out.println("CardType = " +                 receipt.getCardType());             System.out.println("TransAmount = " +                 receipt.getTransAmount());             System.out.println("TxnNumber = " +                 receipt.getTxnNumber());             System.out.println("ReceiptId = " +                 receipt.getReceiptId());         }     } } </pre>	<pre> package USA; import JavaAPI.*; public class TestUSATrack2ForcePost {     public static void main(String[] args)     {         String store_id = "monusqa002";         String api_token = "qatoken";         java.util.Date createDate = new java.util.Date         ();         String order_id = "Test"+createDate.getTime();         String amount = "10.00";         String track2 = "";         String pan = "4242424242424242";         String expiry_date = "1212";         String pos_code = "00";         String auth_code = "AU4R6";         String processing_country_code = "US";         boolean status_check = false;         Track2ForcePost track2forcePost = new             Track2ForcePost();         track2forcePost.setOrderId(order_id);         track2forcePost.setAmount(amount);         track2forcePost.setTrack2(track2);         track2forcePost.setPan(pan);         track2forcePost.setExpdate(expiry_date);         track2forcePost.setPosCode(pos_code);         track2forcePost.setAuthCode(auth_code);         HttpsPostRequest mpgReq = new HttpsPostRequest         ();         mpgReq.setProcCountryCode(processing_country_             code);         mpgReq.setTestMode(true); //false or comment             out this line for production transactions         mpgReq.setStoreId(store_id);         mpgReq.setApiToken(api_token);         mpgReq.setTransaction(track2forcePost);         mpgReq.setStatusCheck(status_check);         mpgReq.send();         try         {             Receipt receipt = mpgReq.getReceipt();             System.out.println("CardType = " +                 receipt.getCardType());             System.out.println("TransAmount = " +                 receipt.getTransAmount());         }     } } </pre>

Sample Mag Swipe Force Post - CA	Sample Mag Swipe Force Post - US
<pre> System.out.println("TransType = " +     receipt.getTransType()); System.out.println("ReferenceNum = " +     receipt.getReferenceNum()); System.out.println("ResponseCode = " +     receipt.getResponseCode()); System.out.println("ISO = " + receipt.getISO ()); System.out.println("BankTotals = " +     receipt.getBankTotals()); System.out.println("Message = " +     receipt.getMessage()); System.out.println("AuthCode = " +     receipt.getAuthCode()); System.out.println("Complete = " +     receipt.getComplete()); System.out.println("TransDate = " +     receipt.getTransDate()); System.out.println("TransTime = " +     receipt.getTransTime()); System.out.println("Ticket = " +     receipt.getTicket()); System.out.println("TimedOut = " +     receipt.getTimedOut()); //System.out.println("StatusCode = " +     receipt.getStatusCode()); //System.out.println("StatusMessage = " +     receipt.getStatusMessage()); } catch (Exception e) {     e.printStackTrace(); } } </pre>	<pre> System.out.println("TxnNumber = " +     receipt.getTxnNumber()); System.out.println("ReceiptId = " +     receipt.getReceiptId()); System.out.println("TransType = " +     receipt.getTransType()); System.out.println("ReferenceNum = " +     receipt.getReferenceNum()); System.out.println("ResponseCode = " +     receipt.getResponseCode()); System.out.println("ISO = " + receipt.getISO ()); System.out.println("BankTotals = " +     receipt.getBankTotals()); System.out.println("Message = " +     receipt.getMessage()); System.out.println("AuthCode = " +     receipt.getAuthCode()); System.out.println("Complete = " +     receipt.getComplete()); System.out.println("TransDate = " +     receipt.getTransDate()); System.out.println("TransTime = " +     receipt.getTransTime()); System.out.println("Ticket = " +     receipt.getTicket()); System.out.println("TimedOut = " +     receipt.getTimedOut()); //System.out.println("StatusCode = " +     receipt.getStatusCode()); //System.out.println("StatusMessage = " +     receipt.getStatusMessage()); } catch (Exception e) {     e.printStackTrace(); } } </pre>

### 7.5.1 Encrypted Mag Swipe Force Post

The Encrypted Mag Swipe Force Post is used when a merchant obtains the authorization number directly from the issuer using a phone or any third-party authorization method. This transaction does not require that an existing order be logged in the Moneris Gateway. However, the credit card must be swiped or keyed in using a Moneris-provided encrypted mag swipe reader, and the encrypted Track2 details must be submitted. There are also optional fields that may be submitted such as `cust_id` and `dynamic_descriptor`.

To complete the transaction, the authorization number obtained from the issuer must be entered.

#### Encrypted Mag Swipe Force Post transaction object definition

```
EncTrack2Forcepost enctrack2fp = new EncTrack2Forcepost();
```

**HttpsPostRequest object for Encrypted Mag Swipe Force Post transaction**

```
HttpsPostRequest mpgReq = new HttpsPostRequest();

mpgReq.setTransaction(enctrack2fp);
```

**Encrypted Mag Swipe Force Post transaction object values****Table 1: Encrypted Mag Swipe Force Post transaction object mandatory values**

Value	Type	Limits	Set Method
Order ID	String	50-character alpha-numeric	enctrack2fp.setOrderId(order_id);
Amount	String	9-character decimal	enctrack2fp.setAmount(amount);
Encrypted Track2 data	String	40-character numeric	enctrack2fp.setEncTrack2(enc_track2);
POS Code	String	2-character numeric	enctrack2fp.setPosCode(pos_code);
Device type	String	30-character alpha-numeric	enctrack2fp.setDeviceType(device_type);
Authorization Code	String	8-character alpha-numeric	enctrack2fp.setAuthCode(auth_code);

**Table 2: Encrypted Mag Swipe Force Post transaction object optional values**

Value	Type	Limits	Set Method
Status Check	Boolean	true/false	mpgReq.setStatusCheck(status_check);
Customer ID	String	50-character alpha-numeric	enctrack2fp.setCustId(custid);
Dynamic descriptor	String	20-character alpha-numeric	enctrack2fp.setDynamicDescriptor(dynamic_descriptor);

Sample Encrypted Mag Swipe Force Post - CA	Sample Encrypted Mag Swipe Force Post - US
<pre>package Canada; import JavaAPI.*; public class TestCanadaEncTrack2Forcepost</pre>	<pre>package USA; import JavaAPI.*; public class TestUSAEncTrack2Forcepost</pre>

Sample Encrypted Mag Swipe Force Post - CA	Sample Encrypted Mag Swipe Force Post - US
<pre> {     public static void main(String[] args)     {         String store_id = "moneris";         String api_token = "hurgle";         java.util.Date createDate = new java.util.Date             ();         String order_id = "Test"+createDate.getTime();         String cust_id = "my customer id";         String amount = "5.00";         String pos_code = "00";         String device_type = "idtech_bdk";         String auth_code = "123456";         String processing_country_code = "CA";         boolean status_check = false;         String descriptor = "my descriptor";         String enc_track2 =             "02D901801F4F2800039B%*4924*****4030^TESTCA             RD/MONERIS             ^*****" +             "***?*,4924*****4030=*****             *?A7150C78335A5024949516FDA9A68A91C4FBAB1             279DD1DE2283D" +             "BEBB2C6B3FDEACF7B5B314219D76C00890F347A96             40EFE90023E31622F5FD95C14C0362DD2EAB28ADEB             46B8B577DA1A1" +             "8B707BCC7E48068EFF1882CFB4B369BDC4BB646C8             70D6083239860B23837EA91DB3F1D8AD066DAAACE2             B2DA18D563E4F" +             "1EF997696337B8999E9C707DEC4CB0410B887291C             AF2EE449573D01613484B80760742A3506C3141593             9320000A00028" + "3C5E03";         EncTrack2Forcepost enctrack2fp = new             EncTrack2Forcepost();         enctrack2fp.setOrderId(order_id);         enctrack2fp.setCustId(cust_id);         enctrack2fp.setAmount(amount);         enctrack2fp.setEncTrack2(enc_track2);         enctrack2fp.setPosCode(pos_code);         enctrack2fp.setDeviceType(device_type);         enctrack2fp.setAuthCode(auth_code);         enctrack2fp.setDynamicDescriptor(descriptor);         HttpsPostRequest mpgReq = new HttpsPostRequest             ();         mpgReq.setProcCountryCode(processing_country_             code);         mpgReq.setTestMode(true); //false or comment             out this line for production transactions         mpgReq.setStoreId(store_id);         mpgReq.setApiToken(api_token);         mpgReq.setTransaction(enctrack2fp);         mpgReq.setStatusCheck(status_check);         mpgReq.send(); </pre>	<pre> {     public static void main(String[] args)     {         String store_id = "monusqa002";         String api_token = "qatoken";         java.util.Date createDate = new java.util.Date             ();         String order_id = "Test"+createDate.getTime();         String cust_id = "my customer id";         String amount = "5.00";         String pos_code = "00";         String device_type = "idtech";         String auth_code = "123456";         String processing_country_code = "US";         boolean status_check = false;         String descriptor = "my descriptor";         String enc_track2 =             "02D901801F4F2800039B%*4924*****4030^TESTCA             RD/MONERIS             ^*****" +             "***?*,4924*****4030=*****             *?A7150C78335A5024949516FDA9A68A91C4FBAB1             279DD1DE2283D" +             "BEBB2C6B3FDEACF7B5B314219D76C00890F347A96             40EFE90023E31622F5FD95C14C0362DD2EAB28ADEB             46B8B577DA1A1" +             "8B707BCC7E48068EFF1882CFB4B369BDC4BB646C8             70D6083239860B23837EA91DB3F1D8AD066DAAACE2             B2DA18D563E4F" +             "1EF997696337B8999E9C707DEC4CB0410B887291C             AF2EE449573D01613484B80760742A3506C3141593             9320000A00028" + "3C5E03";         EncTrack2Forcepost enctrack2fp = new             EncTrack2Forcepost();         enctrack2fp.setOrderId(order_id);         enctrack2fp.setCustId(cust_id);         enctrack2fp.setAmount(amount);         enctrack2fp.setEncTrack2(enc_track2);         enctrack2fp.setPosCode(pos_code);         enctrack2fp.setDeviceType(device_type);         enctrack2fp.setAuthCode(auth_code);         enctrack2fp.setDynamicDescriptor(descriptor);         HttpsPostRequest mpgReq = new HttpsPostRequest             ();         mpgReq.setProcCountryCode(processing_country_             code);         mpgReq.setTestMode(true); //false or comment             out this line for production transactions         mpgReq.setStoreId(store_id);         mpgReq.setApiToken(api_token);         mpgReq.setTransaction(enctrack2fp);         mpgReq.setStatusCheck(status_check);         mpgReq.send(); </pre>

Sample Encrypted Mag Swipe Force Post - CA	Sample Encrypted Mag Swipe Force Post - US
<pre> try { Receipt receipt = mpgReq.getReceipt(); System.out.println("CardType = " +     receipt.getCardType()); System.out.println("TransAmount = " +     receipt.getTransAmount()); System.out.println("TxnNumber = " +     receipt.getTxnNumber()); System.out.println("ReceiptId = " +     receipt.getReceiptId()); System.out.println("TransType = " +     receipt.getTransType()); System.out.println("ReferenceNum = " +     receipt.getReferenceNum()); System.out.println("ResponseCode = " +     receipt.getResponseCode()); System.out.println("ISO = " + receipt.getISO ()); System.out.println("BankTotals = " +     receipt.getBankTotals()); System.out.println("Message = " +     receipt.getMessage()); System.out.println("AuthCode = " +     receipt.getAuthCode()); System.out.println("Complete = " +     receipt.getComplete()); System.out.println("TransDate = " +     receipt.getTransDate()); System.out.println("TransTime = " +     receipt.getTransTime()); System.out.println("Ticket = " +     receipt.getTicket()); System.out.println("TimedOut = " +     receipt.getTimedOut()); System.out.println("MaskedPan = " +     receipt.getMaskedPan()); System.out.println("CardLevelResult = " +     receipt.getCardLevelResult()); } catch (Exception e) { e.printStackTrace(); } } </pre>	<pre> try { Receipt receipt = mpgReq.getReceipt(); System.out.println("CardType = " +     receipt.getCardType()); System.out.println("TransAmount = " +     receipt.getTransAmount()); System.out.println("TxnNumber = " +     receipt.getTxnNumber()); System.out.println("ReceiptId = " +     receipt.getReceiptId()); System.out.println("TransType = " +     receipt.getTransType()); System.out.println("ReferenceNum = " +     receipt.getReferenceNum()); System.out.println("ResponseCode = " +     receipt.getResponseCode()); System.out.println("ISO = " + receipt.getISO ()); System.out.println("BankTotals = " +     receipt.getBankTotals()); System.out.println("Message = " +     receipt.getMessage()); System.out.println("AuthCode = " +     receipt.getAuthCode()); System.out.println("Complete = " +     receipt.getComplete()); System.out.println("TransDate = " +     receipt.getTransDate()); System.out.println("TransTime = " +     receipt.getTransTime()); System.out.println("Ticket = " +     receipt.getTicket()); System.out.println("TimedOut = " +     receipt.getTimedOut()); System.out.println("MaskedPan = " +     receipt.getMaskedPan()); System.out.println("CardLevelResult = " +     receipt.getCardLevelResult()); } catch (Exception e) { e.printStackTrace(); } } </pre>

## 7.6 Mag Swipe Purchase Correction

### Track2PurchaseCorrection transaction object definition

```
Track2PurchaseCorrection track2purchasecorrection = new Track-
2PurchaseCorrection();
```

**HttpPostRequest object for Track2PurchaseCorrection transaction**

```
HttpPostRequest mpgReq = new HttpPostRequest();
mpgReq.setTransaction(track2purchasecorrection);
```

**Mag Swipe Purchase Correction transaction values**

For a full description of mandatory and optional values, see "Definition of Request Fields" on page 306

**Table 94: Track2PurchaseCorrection transaction object mandatory values**

Value	Type	Limits	Set method
Order ID	String	50-character alpha-numeric	track2void.setOrderId(order_id);
Transaction number	String	255-character alpha-numeric	track2void.setTxnNumber(txn_number);

**Table 95: Mag Swipe Purchase Correction transaction optional values**

Value	Type	Limits	Set method
Customer ID	String	50-character alpha-numeric	track2void.setCustId(custid);
Status Check	Boolean	true/false	mpgReq.setStatusCheck(status_check);
Dynamic descriptor	String	20-character alpha-numeric	track2void.setDynamicDescriptor(dynamic_descriptor);

Sample Mag Swipe Purchase Correction - CA	Sample Mag Swipe Purchase Correction - US
<pre>package Canada; import JavaAPI.*; public class     TestCanadaTrack2PurchaseCorrection {     public static void main(String[] args)     {         String store_id = "store1";         String api_token = "yesguy";         String order_id = "Test1432090631783";         String txn_number = "16522-0_10";         String dynamic_descriptor = "123456";         String cust_id = "my customer id";         String processing_country_code = "CA";         boolean status_check = false;         Track2PurchaseCorrection track2void = new             Track2PurchaseCorrection();</pre>	<pre>package USA; import JavaAPI.*; public class TestUSATrack2PurchaseCorrection {     public static void main(String[] args)     {         String store_id = "monusqa002";         String api_token = "qatoken";         String order_id = "Test1432092066726";         String txn_number = "837881-0_25";         String dynamic_descriptor = "123456";         String cust_id = "my customer id";         String processing_country_code = "US";         boolean status_check = false;         Track2PurchaseCorrection track2void = new             Track2PurchaseCorrection();         track2void.setOrderId(order_id);</pre>

Sample Mag Swipe Purchase Correction - CA	Sample Mag Swipe Purchase Correction - US
<pre> track2void.setOrderId(order_id); track2void.setCustId(cust_id); track2void.setTxnNumber(txn_number); track2void.setDynamicDescriptor(dynamic_     descriptor); HttpPostRequest mpgReq = new HttpPostRequest     (); mpgReq.setProcCountryCode(processing_country_     code); mpgReq.setTestMode(true); //false or comment     out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(track2void); mpgReq.setStatusCheck(status_check); mpgReq.send(); try {     Receipt receipt = mpgReq.getReceipt();     System.out.println("CardType = " +         receipt.getCardType());     System.out.println("TransAmount = " +         receipt.getTransAmount());     System.out.println("TxnNumber = " +         receipt.getTxnNumber());     System.out.println("ReceiptId = " +         receipt.getReceiptId());     System.out.println("TransType = " +         receipt.getTransType());     System.out.println("ReferenceNum = " +         receipt.getReferenceNum());     System.out.println("ResponseCode = " +         receipt.getResponseCode());     System.out.println("ISO = " + receipt.getISO         ());     System.out.println("BankTotals = " +         receipt.getBankTotals());     System.out.println("Message = " +         receipt.getMessage());     System.out.println("AuthCode = " +         receipt.getAuthCode());     System.out.println("Complete = " +         receipt.getComplete());     System.out.println("TransDate = " +         receipt.getTransDate());     System.out.println("TransTime = " +         receipt.getTransTime());     System.out.println("Ticket = " +         receipt.getTicket());     System.out.println("TimedOut = " +         receipt.getTimedOut());     //System.out.println("StatusCode = " +         receipt.getStatusCode());     //System.out.println("StatusMessage = " +         receipt.getStatusMessage()); } catch (Exception e) { </pre>	<pre> track2void.setTxnNumber(txn_number); track2void.setCustId(cust_id); track2void.setDynamicDescriptor(dynamic_     descriptor); HttpPostRequest mpgReq = new HttpPostRequest     (); mpgReq.setProcCountryCode(processing_country_     code); mpgReq.setTestMode(true); //false or comment     out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(track2void); mpgReq.setStatusCheck(status_check); mpgReq.send(); try {     Receipt receipt = mpgReq.getReceipt();     System.out.println("CardType = " +         receipt.getCardType());     System.out.println("TransAmount = " +         receipt.getTransAmount());     System.out.println("TxnNumber = " +         receipt.getTxnNumber());     System.out.println("ReceiptId = " +         receipt.getReceiptId());     System.out.println("TransType = " +         receipt.getTransType());     System.out.println("ReferenceNum = " +         receipt.getReferenceNum());     System.out.println("ResponseCode = " +         receipt.getResponseCode());     System.out.println("ISO = " + receipt.getISO         ());     System.out.println("BankTotals = " +         receipt.getBankTotals());     System.out.println("Message = " +         receipt.getMessage());     System.out.println("AuthCode = " +         receipt.getAuthCode());     System.out.println("Complete = " +         receipt.getComplete());     System.out.println("TransDate = " +         receipt.getTransDate());     System.out.println("TransTime = " +         receipt.getTransTime());     System.out.println("Ticket = " +         receipt.getTicket());     System.out.println("TimedOut = " +         receipt.getTimedOut());     //System.out.println("StatusCode = " +         receipt.getStatusCode());     //System.out.println("StatusMessage = " +         receipt.getStatusMessage()); } catch (Exception e) {     e.printStackTrace(); </pre>



Sample Mag Swipe Purchase Correction - CA	Sample Mag Swipe Purchase Correction - US
<pre>e.printStackTrace(); } } }</pre>	<pre>} } }</pre>

## 7.7 Mag Swipe Refund

### Track2Refundtransaction object definition

```
Track2Refund track2refund = new Track2Refund();
```

### HttpPostRequest object for Track2Refund transaction

```
HttpPostRequest mpgReq = new HttpPostRequest();
```

```
mpgReq.setTransaction(track2refund);
```

### Mag Swipe Refund transaction values

For a full description of mandatory and optional values, see "Definition of Request Fields" on page 306

**Table 96: Track2Refund transaction object mandatory values**

Value	Type	Limits	Set method
Order ID	String	50-character alpha-numeric	<code>track2refund.setOrderId(order_id);</code>
Amount	String	9-character decimal	<code>track2refund.setAmount(amount);</code>
Transaction number	String	255-character alpha-numeric	<code>track2refund.setTxnNumber(txn_number);</code>

**Table 97: Mag Swipe Refund transaction optional values**

Value	Type	Limits	Set method
Customer ID	String	50-character alpha-numeric	<code>track2refund.setCustId(custid);</code>
Status Check	Boolean	true/false	<code>mpgReq.setStatusCheck(status_check);</code>
Dynamic descriptor	String	20-character alpha-numeric	<code>track2refund.setDynamicDescriptor(dynamic_descriptor);</code>

Sample Mag Swipe Refund - CA	Sample Mag Swipe Refund - US
<pre> package Canada; import JavaAPI.*; public class TestCanadaTrack2Refund {     public static void main(String[] args)     {         String store_id = "store1";         String api_token = "yesguy";         String order_id = "Test1432090722923"; //will             prompt user for input         String txn_number = "16524-0_10";         String amount = "1.00";         String dynamic_descriptor = "123456";         String cust_id = "customer id";         String processing_country_code = "CA";         boolean status_check = false;         Track2Refund track2refund = new Track2Refund             ();         track2refund.setOrderId(order_id);         track2refund.setAmount(amount);         track2refund.setCustId(cust_id);         track2refund.setTxnNumber(txn_number);         track2refund.setDynamicDescriptor(dynamic_             descriptor);         HttpsPostRequest mpgReq = new HttpsPostRequest             ();         mpgReq.setProcCountryCode(processing_country_             code);         mpgReq.setTestMode(true); //false or comment             out this line for production transactions         mpgReq.setStoreId(store_id);         mpgReq.setApiToken(api_token);         mpgReq.setTransaction(track2refund);         mpgReq.setStatusCheck(status_check);         mpgReq.send();         try         {             Receipt receipt = mpgReq.getReceipt();             System.out.println("CardType = " +                 receipt.getCardType());             System.out.println("TransAmount = " +                 receipt.getTransAmount());             System.out.println("TxnNumber = " +                 receipt.getTxnNumber());             System.out.println("ReceiptId = " +                 receipt.getReceiptId());             System.out.println("TransType = " +                 receipt.getTransType());             System.out.println("ReferenceNum = " +                 receipt.getReferenceNum());             System.out.println("ResponseCode = " +                 receipt.getResponseCode());             System.out.println("ISO = " + receipt.getISO                 ());             System.out.println("BankTotals = " +                 receipt.getBankTotals());             System.out.println("Message = " +                 receipt.getMessage()); </pre>	<pre> package USA; import JavaAPI.*; public class TestUSATrack2Refund {     public static void main(String[] args)     {         String store_id = "monusqa002";         String api_token = "qatoken";         String order_id = "Test1432092115456";         String txn_number = "123901-0_25";         String amount = "1.00";         String dynamic_descriptor = "123456";         String processing_country_code = "US";         boolean status_check = false;         Track2Refund track2refund = new Track2Refund             ();         track2refund.setOrderId(order_id);         track2refund.setAmount(amount);         track2refund.setTxnNumber(txn_number);         track2refund.setDynamicDescriptor(dynamic_             descriptor);         HttpsPostRequest mpgReq = new HttpsPostRequest             ();         mpgReq.setProcCountryCode(processing_country_             code);         mpgReq.setTestMode(true); //false or comment             out this line for production transactions         mpgReq.setStoreId(store_id);         mpgReq.setApiToken(api_token);         mpgReq.setTransaction(track2refund);         mpgReq.setStatusCheck(status_check);         mpgReq.send();         try         {             Receipt receipt = mpgReq.getReceipt();             System.out.println("CardType = " +                 receipt.getCardType());             System.out.println("TransAmount = " +                 receipt.getTransAmount());             System.out.println("TxnNumber = " +                 receipt.getTxnNumber());             System.out.println("ReceiptId = " +                 receipt.getReceiptId());             System.out.println("TransType = " +                 receipt.getTransType());             System.out.println("ReferenceNum = " +                 receipt.getReferenceNum());             System.out.println("ResponseCode = " +                 receipt.getResponseCode());             System.out.println("ISO = " + receipt.getISO                 ());             System.out.println("BankTotals = " +                 receipt.getBankTotals());             System.out.println("Message = " +                 receipt.getMessage());             System.out.println("AuthCode = " +                 receipt.getAuthCode());             System.out.println("Complete = " + </pre>

Sample Mag Swipe Refund - CA	Sample Mag Swipe Refund - US
<pre> System.out.println("AuthCode = " +     receipt.getAuthCode()); System.out.println("Complete = " +     receipt.getComplete()); System.out.println("TransDate = " +     receipt.getTransDate()); System.out.println("TransTime = " +     receipt.getTransTime()); System.out.println("Ticket = " +     receipt.getTicket()); System.out.println("TimedOut = " +     receipt.getTimedOut()); //System.out.println("StatusCode = " +     receipt.getStatusCode()); //System.out.println("StatusMessage = " +     receipt.getStatusMessage()); } catch (Exception e) { e.printStackTrace(); } } } </pre>	<pre>     receipt.getComplete()); System.out.println("TransDate = " +     receipt.getTransDate()); System.out.println("TransTime = " +     receipt.getTransTime()); System.out.println("Ticket = " +     receipt.getTicket()); System.out.println("TimedOut = " +     receipt.getTimedOut()); //System.out.println("StatusCode = " +     receipt.getStatusCode()); //System.out.println("StatusMessage = " +     receipt.getStatusMessage()); } catch (Exception e) { e.printStackTrace(); } } } </pre>

## 7.8 Mag Swipe Independent Refund

**NOTE:** If you receive a TRANSACTION NOT ALLOWED error, it may mean the Mag Swipe Independent Refund transaction is not supported on your account. Contact Moneris to have it temporarily (re-)enabled.

### Track2IndependentRefund transaction object definition

```
Track2IndependentRefund track2indrefund = new Track2IndependentRefund();
```

### HttpPostRequest object for Track2IndependentRefund transaction

```

HttpPostRequest mpgReq = new HttpPostRequest();

mpgReq.setTransaction(track2indrefund);

```

### Mag Swipe Independent Refund transaction values

For a full description of mandatory and optional values, see "Definition of Request Fields" on page 306

**Table 98: Mag Swipe Independent Refund transaction object mandatory values**

Value	Type	Limits	Set method
Order ID	String	50-character alpha-numeric	<code>track2indrefund.setOrderId(order_id);</code>
Amount	String	9-character decimal	<code>track2indrefund.setAmount(amount);</code>
Credit card number	String	20-character numeric	<code>track2indrefund.setPan(pan);</code>
Track2 data	String	40-character numeric	<code>track2indrefund.setTrack2(track2);</code>
Expiry date	String	4-character alpha-numeric (YYMM format)	<code>track2indrefund.setExpDate(expdate);</code>
POS code	String	2-character numeric	<code>track2indrefund.setPosCode(pos_code);</code>

**Table 99: Mag Swipe Independent Refund transaction optional values**

Value	Type	Limits	Set method
Customer ID	String	50-character alpha-numeric	<code>track2indrefund.setCustId(custid);</code>
Dynamic descriptor	String	20-character alpha-numeric	<code>track2indrefund.setDynamicDescriptor(dynamic_descriptor);</code>
Status Check	Boolean	true/false	<code>mpgReq.setStatusCheck(status_check);</code>

Sample Mag Swipe Independent Refund - CA	Sample Mag Swipe Independent Refund - US
<pre>package Canada; import JavaAPI.*; public class TestCanadaTrack2IndependentRefund {     public static void main(String[] args)     {         String store_id = "store1";         String api_token = "yesguy";         java.util.Date createDate = new java.util.Date();         String order_id = "Test"+createDate.getTime();         String cust_id = "Ced_Benson32";         String amount = "5.00";</pre>	<pre>package USA; import JavaAPI.*; public class TestUSATrack2IndependentRefund {     public static void main(String[] args)     {         String store_id = "monusqa002";         String api_token = "qatoken";         java.util.Date createDate = new java.util.Date();         String order_id = "Test"+createDate.getTime();         String cust_id = "Ced_Benson32";         String amount = "5.00";</pre>

Sample Mag Swipe Independent Refund - CA	Sample Mag Swipe Independent Refund - US
<pre> String track2 =     ";5258968987035454=06061015454001060101?"; String pan = ""; String exp_date = "0000"; String pos_code = "00"; String processing_country_code = "CA"; String dynamic_descriptor = "my descriptor"; boolean status_check = false; Track2IndependentRefund track2indrefund = new     Track2IndependentRefund(); track2indrefund.setOrderId(order_id); track2indrefund.setCustId(cust_id); track2indrefund.setAmount(amount); track2indrefund.setTrack2(track2); track2indrefund.setPan(pan); track2indrefund.setExpdate(exp_date); track2indrefund.setPosCode(pos_code); track2indrefund.setDynamicDescriptor(dynamic_     descriptor); HttpPostRequest mpgReq = new HttpsPostRequest     (); mpgReq.setProcCountryCode(processing_country_     code); mpgReq.setTestMode(true); //false or comment     out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(track2indrefund); mpgReq.setStatusCheck(status_check); mpgReq.send(); try { Receipt receipt = mpgReq.getReceipt(); System.out.println("CardType = " +     receipt.getCardType()); System.out.println("TransAmount = " +     receipt.getTransAmount()); System.out.println("TxnNumber = " +     receipt.getTxnNumber()); System.out.println("ReceiptId = " +     receipt.getReceiptId()); System.out.println("TransType = " +     receipt.getTransType()); System.out.println("ReferenceNum = " +     receipt.getReferenceNum()); System.out.println("ResponseCode = " +     receipt.getResponseCode()); System.out.println("ISO = " + receipt.getISO     ()); System.out.println("BankTotals = " +     receipt.getBankTotals()); System.out.println("Message = " +     receipt.getMessage()); System.out.println("AuthCode = " +     receipt.getAuthCode()); System.out.println("Complete = " +     receipt.getComplete()); System.out.println("TransDate = " + </pre>	<pre> String track2 =     ";5258968987035454=06061015454001060101?"; String pan = ""; String exp_date = ""; //YMMM format String pos_code = "00"; String processing_country_code = "US"; String dynamic_descriptor = "my descriptor"; boolean status_check = false; Track2IndependentRefund track2indrefund = new     Track2IndependentRefund(); track2indrefund.setOrderId(order_id); track2indrefund.setCustId(cust_id); track2indrefund.setAmount(amount); track2indrefund.setTrack2(track2); track2indrefund.setPan(pan); track2indrefund.setExpdate(exp_date); track2indrefund.setPosCode(pos_code); track2indrefund.setDynamicDescriptor(dynamic_     descriptor); HttpPostRequest mpgReq = new HttpsPostRequest     (); mpgReq.setProcCountryCode(processing_country_     code); mpgReq.setTestMode(true); //false or comment     out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(track2indrefund); mpgReq.setStatusCheck(status_check); mpgReq.send(); try { Receipt receipt = mpgReq.getReceipt(); System.out.println("CardType = " +     receipt.getCardType()); System.out.println("TransAmount = " +     receipt.getTransAmount()); System.out.println("TxnNumber = " +     receipt.getTxnNumber()); System.out.println("ReceiptId = " +     receipt.getReceiptId()); System.out.println("TransType = " +     receipt.getTransType()); System.out.println("ReferenceNum = " +     receipt.getReferenceNum()); System.out.println("ResponseCode = " +     receipt.getResponseCode()); System.out.println("ISO = " + receipt.getISO     ()); System.out.println("BankTotals = " +     receipt.getBankTotals()); System.out.println("Message = " +     receipt.getMessage()); System.out.println("AuthCode = " +     receipt.getAuthCode()); System.out.println("Complete = " +     receipt.getComplete()); System.out.println("TransDate = " + </pre>

Sample Mag Swipe Independent Refund - CA	Sample Mag Swipe Independent Refund - US
<pre> receipt.getTransDate(); System.out.println("TransTime = " +     receipt.getTransTime()); System.out.println("Ticket = " +     receipt.getTicket()); System.out.println("TimedOut = " +     receipt.getTimedOut()); //System.out.println("StatusCode = " +     receipt.getStatusCode()); //System.out.println("StatusMessage = " +     receipt.getStatusMessage()); } catch (Exception e) {     e.printStackTrace(); } } } </pre>	<pre> receipt.getTransDate(); System.out.println("TransTime = " +     receipt.getTransTime()); System.out.println("Ticket = " +     receipt.getTicket()); System.out.println("TimedOut = " +     receipt.getTimedOut()); //System.out.println("StatusCode = " +     receipt.getStatusCode()); //System.out.println("StatusMessage = " +     receipt.getStatusMessage()); } catch (Exception e) {     e.printStackTrace(); } } } </pre>

### 7.8.1 Encrypted Mag Swipe Independent Refund

The Encrypted Mag Swipe Independent Refund credits a specified amount to the cardholder's credit card. The Encrypted Mag Swipe Independent Refund does not require an existing order to be logged in the Moneris Gateway. However, the credit card must be swiped using the Moneris-provided encrypted mag swipe reader to provide the encrypted track2 details.

There are also optional fields that may be submitted such as `cust_id` and `dynamic_descriptor`. The transaction format is almost identical to Encrypted Mag Swipe Purchase and Encrypted Mag Swipe PreAuth.

#### NOTE:

The Encrypted Mag Swipe Independent Refund transaction may not be supported on your account. This may yield a TRANSACTION NOT ALLOWED error when attempting the transaction.

To temporarily enable (or re-enable) the Independent Refund transaction type, contact Moneris

### Encrypted Mag Swipe Independent Refund transaction object definition

```
EncTrack2IndependentRefund encindrefund = new EncTrack2IndependentRefund();
```

### HttpPostRequest object for Encrypted Mag Swipe Independent Refund transaction

```
HttpPostRequest mpgReq = new HttpPostRequest();
```

```
mpgReq.setTransaction(encindrefund);
```

**Encrypted Mag Swipe Independent Refund transaction object values****Table 1: Encrypted Mag Swipe Independent Refund transaction object mandatory values**

Value	Type	Limits	Set Method
Order ID	String	50-character alpha-numeric	encindrefund.setOrderId (order_id);
Amount	String	9-character decimal	encindrefund.setAmount (amount);
Encrypted Track 2 data	String	40-character numeric	encindrefund.setEncTrack2 (enc_track2);
Device Type	String	30-character alpha-numeric	encindrefund.setDeviceType (device_type);
POS Code	String	2-character numeric	encindrefund.setPosCode (pos_code);

**Table 2: Encrypted Mag Swipe Independent Refund transaction object optional values**

Value	Type	Limits	Set Method
Status Check	Boolean	true/false	mpgReq.setStatusCheck (status_check);
Customer ID	String	50-character alpha-numeric	encindrefund.setCustId (custid);

Sample Encrypted Mag Swipe Ind Refund - CA	Sample Encrypted Mag Swipe Ind Refund - US
<pre> package Canada; import JavaAPI.*; public class     TestCanadaEncTrack2IndependentRefund     {     public static void main(String[] args)     {     String store_id = "moneris";     String api_token = "hurgle";     java.util.Date createDate = new java.util.Date         ();     String order_id = "Test"+createDate.getTime();     String cust_id = "my customer id";     String amount = "5.00";     String pos_code = "00";     String device_type = "idtech_bdk";     String processing_country_code = "CA";     String enc_track2 =         "02D901801F4F2800039B%*4924*****4030^TESTCA         RD/MONERIS </pre>	<pre> package USA; import JavaAPI.*; public class TestUSAEncTrack2IndependentRefund {     public static void main(String[] args)     {     String store_id = "monusqa002";     String api_token = "qatoken";     java.util.Date createDate = new java.util.Date         ();     String order_id = "Test"+createDate.getTime();     String cust_id = "my customer id";     String amount = "5.00";     String pos_code = "00";     String device_type = "idtech";     String processing_country_code = "US";     String enc_track2 =         "02D901801F4F2800039B%*4924*****4030^TESTCA         RD/MONERIS         ^*****" </pre>

Sample Encrypted Mag Swipe Ind Refund - CA	Sample Encrypted Mag Swipe Ind Refund - US
<pre> ^*****" + "***?*,4924*****4030=***** *?A7150C78335A5024949516FDA9A68A91C4FBAB1 279DD1DE2283D" + "BEBB2C6B3FDEACF7B5B314219D76C00890F347A96 40EFE90023E31622F5FD95C14C0362DD2EAB28ADEB 46B8B577DA1A1" + "8B707BCC7E48068EFF1882CFB4B369BDC4BB646C8 70D6083239860B23837EA91DB3F1D8AD066DAAACE2 B2DA18D563E4F" + "1EF997696337B8999E9C707DEC4CB0410B887291C AF2EE449573D01613484B80760742A3506C3141593 9320000A00028" + "3C5E03"; EncTrack2IndependentRefund encindrefund = new     EncTrack2IndependentRefund(); encindrefund.setOrderId(order_id); encindrefund.setCustId(cust_id); encindrefund.setAmount(amount); encindrefund.setEncTrack2(enc_track2); encindrefund.setPosCode(pos_code); encindrefund.setDeviceType(device_type); HttpsPostRequest mpgReq = new HttpsPostRequest (); mpgReq.setProcCountryCode(processing_country_ code); mpgReq.setTestMode(true); //false or comment     out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(encindrefund); mpgReq.send(); try {     Receipt receipt = mpgReq.getReceipt();     System.out.println("CardType = " +         receipt.getCardType());     System.out.println("TransAmount = " +         receipt.getTransAmount());     System.out.println("TxnNumber = " +         receipt.getTxnNumber());     System.out.println("ReceiptId = " +         receipt.getReceiptId());     System.out.println("TransType = " +         receipt.getTransType());     System.out.println("ReferenceNum = " +         receipt.getReferenceNum());     System.out.println("ResponseCode = " +         receipt.getResponseCode());     System.out.println("ISO = " + receipt.getISO ());     System.out.println("BankTotals = " +         receipt.getBankTotals()); </pre>	<pre> + "***?*,4924*****4030=***** *?A7150C78335A5024949516FDA9A68A91C4FBAB1 279DD1DE2283D" + "BEBB2C6B3FDEACF7B5B314219D76C00890F347A96 40EFE90023E31622F5FD95C14C0362DD2EAB28ADEB 46B8B577DA1A1" + "8B707BCC7E48068EFF1882CFB4B369BDC4BB646C8 70D6083239860B23837EA91DB3F1D8AD066DAAACE2 B2DA18D563E4F" + "1EF997696337B8999E9C707DEC4CB0410B887291C AF2EE449573D01613484B80760742A3506C3141593 9320000A00028" + "3C5E03"; EncTrack2IndependentRefund encindrefund = new     EncTrack2IndependentRefund(); encindrefund.setOrderId(order_id); encindrefund.setCustId(cust_id); encindrefund.setAmount(amount); encindrefund.setEncTrack2(enc_track2); encindrefund.setPosCode(pos_code); encindrefund.setDeviceType(device_type); HttpsPostRequest mpgReq = new HttpsPostRequest (); mpgReq.setProcCountryCode(processing_country_ code); mpgReq.setTestMode(true); //false or comment     out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(encindrefund); mpgReq.send(); try {     Receipt receipt = mpgReq.getReceipt();     System.out.println("CardType = " +         receipt.getCardType());     System.out.println("TransAmount = " +         receipt.getTransAmount());     System.out.println("TxnNumber = " +         receipt.getTxnNumber());     System.out.println("ReceiptId = " +         receipt.getReceiptId());     System.out.println("TransType = " +         receipt.getTransType());     System.out.println("ReferenceNum = " +         receipt.getReferenceNum());     System.out.println("ResponseCode = " +         receipt.getResponseCode());     System.out.println("ISO = " + receipt.getISO ());     System.out.println("BankTotals = " +         receipt.getBankTotals());     System.out.println("Message = " + </pre>



Sample Encrypted Mag Swipe Ind Refund - CA	Sample Encrypted Mag Swipe Ind Refund - US
<pre> System.out.println("Message = " +     receipt.getMessage()); System.out.println("AuthCode = " +     receipt.getAuthCode()); System.out.println("Complete = " +     receipt.getComplete()); System.out.println("TransDate = " +     receipt.getTransDate()); System.out.println("TransTime = " +     receipt.getTransTime()); System.out.println("Ticket = " +     receipt.getTicket()); System.out.println("TimedOut = " +     receipt.getTimedOut()); System.out.println("MaskedPan = " +     receipt.getMaskedPan()); System.out.println("CardLevelResult = " +     receipt.getCardLevelResult()); } catch (Exception e) {     e.printStackTrace(); } } </pre>	<pre>         receipt.getMessage()); System.out.println("AuthCode = " +     receipt.getAuthCode()); System.out.println("Complete = " +     receipt.getComplete()); System.out.println("TransDate = " +     receipt.getTransDate()); System.out.println("TransTime = " +     receipt.getTransTime()); System.out.println("Ticket = " +     receipt.getTicket()); System.out.println("TimedOut = " +     receipt.getTimedOut()); System.out.println("MaskedPan = " +     receipt.getMaskedPan()); System.out.println("CardLevelResult = " +     receipt.getCardLevelResult()); } catch (Exception e) {     e.printStackTrace(); } } </pre>

## 8 Transaction Risk Management Tool

- 8.1 About the Transaction Risk Management Tool
- 8.2 Introduction to Queries
- 8.3 Session Query
- 8.4 Attribute Query
- 8.6 Inserting the Profiling Tags Into Your Website
- 8.6 Inserting the Profiling Tags Into Your Website

Any of the transaction objects that are defined in this section can be passed to the `HttpPostRequest` connection object defined in Section 12.5 (page 286).

The Transaction Risk Management Tool (TRMT) is available to **Canadian integrations** only.

### 8.1 About the Transaction Risk Management Tool

The Transaction Risk Management Tool provides additional information to assist in identifying fraudulent transactions. To maximize the benefits from the Transaction Risk Management Tool, it is highly recommended that you:

- Carefully consider the business logic and processes that you need to implement surrounding the handling of response information the Transaction Risk Management Tool provides.
- Implement the other fraud tools available through Moneris Gateway (such as AVS, CVD, Verified by Visa, MasterCard SecureCode and American Express SafeKey).

### 8.2 Introduction to Queries

There are two types of transactions associated with the Transaction Risk Management Tool (TRMT):

- Session Query (page 186)
- Attribute Query (page 192)

The Session Query and Attribute Query are used at the time of the transaction to obtain the risk assessment.

Moneris recommends that you use the Session Query as much as possible for obtaining your risk assessment because it uses the device fingerprint as well as other transaction information when providing the risk scores.

To use the Session Query, you must implement two components:

- Tags on your website to collect the device fingerprinting information
- Session Query transaction.

If you are not able to collect the necessary information for the Session Query (such as the device fingerprint), then use the Attribute Query.

### 8.3 Session Query

Once a device profiling session has been initiated upon a client device, the Session Query API is used at the time of the transaction or even to obtain a device identifier or 'fingerprint', attribute list and risk assessment for the client device.

**SessionQuery transaction object definition**

```
SessionQuery sq = new SessionQuery();
```

**HttpPostRequest object for SessionQuery transaction**

```
HttpPostRequest mpgReq = new HttpPostRequest();
```

```
mpgReq.setTransaction(sq);
```

**Session Query transaction values****Table 100: SessionQuery transaction object mandatory values**

Value	Type	Limits	Set method
	Description		
Session ID	String	9-character decimal	<code>sq.setSessionId(session_id);</code>
		Permitted characters: [a-z], [A-Z], 0-9, _, -	
		Web server session identifier generated when device profiling was initiated.	
Service type	String	TBD	<code>sq.setServiceType(service_type);</code>
		Which output fields are returned. session -- returns IP and device related attributes.	
Event type	String	TBD	<code>sq.setEventType(service_type);</code>
		Defines the type of transaction or event for reporting purposes. payment - Purchasing of goods/services.	
Account login	String	TBD	<code>sq.setAccountLogin("13195417-8CA0-46cd-960D-14C158E4DBB2");</code>
		TBD	
Password hash	String	TBD	<code>sq.setPasswordHash("489c830f10f7c601d30599a0deaf66e64d2aa50a");</code>
		TBD	
Account number	String	TBD	<code>sq.setAccountNumber("3E17A905-AC8A-4c8d-A417-3DADA2A55220");</code>
		TBD	
Account name	String	TBD	<code>sq.setAccountName("4590FCC0-DF4A-44d9-A57B-AF9DE98B84DD");</code>
		TBD	

Table 100: SessionQuery transaction object mandatory values (continued)

Value	Type	Limits	Set method
	Description		
Account email	String	30-character alphanumeric	<code>sq.setAccountEmail("3CAE72EF-6B69-4a25-93FE-2674735E78E8@test.threatmetrix.com");</code>
	TBD		
Credit card number	String	20-character numeric  No spaces or dashes	<code>sq.setPan(pan);</code>
	Most credit card numbers today are 16 digits, but some 13-digit numbers are still accepted by some issuers. This field has been intentionally expanded to 20 digits in consideration for future expansion and potential support of private label card ranges.		
Account address street 1	String	32-character alphanumeric	<code>sq.setAccountAddressStreet1("3300 Bloor St W");</code>
	First portion of the street address component of the billing address.		
Account Address street 2	String	32-character alphanumeric	<code>sq.setAccountAddressStreet2("4th Flr West Tower");</code>
	Second portion of the street address component of the billing address.		
Account address city	String	50-character alphanumeric	<code>sq.setAccountAddressCity("Toronto");</code>
	The city component of the billing address.		
Account address state/- province	String	64-character alphanumeric	<code>sq.setAccountAddressState("Ontario");</code>
	The state component of the billing address.		
Account address country	String	2-character alphanumeric	<code>sq.setAccountAddressCountry("CA");</code>
	ISO2 country code of the billing addresses.		
Account address zip/- postal code	String	8-character alphanumeric	<code>sq.setAccountAddressZip("M8X2X2");</code>
	Zip/postal code of the billing address.		
Shipping address street 1	String	32-character alphanumeric	<code>sq.setShippingAddressStreet1("3300 Bloor St W");</code>
	First portion of the street address component of the shipping address.		

**Table 100: SessionQuery transaction object mandatory values (continued)**

Value	Type	Limits	Set method
	Description		
Shipping address street 2	String	32-character alphanumeric	<code>sq.setShippingAddressStreet2("4th Flr West Tower");</code>
	Second portion of the street address component of the shipping address.		
Shipping address city	String	50-character alphanumeric	<code>sq.setShippingAddressCity("Toronto");</code>
	City component of the shipping address.		
Shipping address state/- province	String	64-character alphanumeric	<code>sq.setShippingAddressState("Ontario");</code>
	State component of the shipping address.		
Shipping address country	String	2-character alphanumeric	<code>sq.setShippingAddressCountry("CA");</code>
	ISO2 country code of the account address country.		
Shipping address zip	String	8-character alphanumeric	<code>sq.setAccountAddressZip("M8X2X2");</code>
	The zip/postal code component of the shipping address.		
Local attribute 1	String	255-character alphanumeric	<code>sq.setLocalAttrib1("a");</code>
	Can be used to pass custom attribute data. These are used if you wish to correlate some data with the returned device information.		
Local attribute 2	String	255-character alphanumeric	<code>sq.setLocalAttrib2("b");</code>
	Can be used to pass custom attribute data. These are used if you wish to correlate some data with the returned device information.		
Local attribute 3	String	255-character alphanumeric	<code>sq.setLocalAttrib3("c");</code>
	Can be used to pass custom attribute data. These are used if you wish to correlate some data with the returned device information.		
Local attribute 4	String	255-character alphanumeric	<code>sq.setLocalAttrib4("d");</code>
	Can be used to pass custom attribute data. These are used if you wish to correlate some data with the returned device information.		

**Table 100: SessionQuery transaction object mandatory values (continued)**

Value	Type	Limits	Set method
	Description		
Local attribute 5	String	255-character alphanumeric	<code>sq.setLocalAttrib5("e");</code>
	Can be used to pass custom attribute data. These are used if you wish to correlate some data with the returned device information.		
Transaction amount	String	255-character alphanumeric  Must contain 2 decimal places	<code>sq.setTransactionAmount("1.00");</code>
	The numeric currency amount.		
Transaction currency	String	10-character numeric	<code>sq.setTransactionCurrency("CAN");</code>
	<p>The currency type that the transaction was denominated in. If TransactionAmount is passed, the TransactionCurrency is required.</p> <p>Values to be used are:</p> <ul style="list-style-type: none"> <li>• CAD – 124</li> <li>• USD – 840</li> </ul>		

**Sample Session Query - CA**

```

package Canada;
import java.util.Hashtable;
import java.util.Iterator;
import java.util.Map;
import JavaAPI.*;
public class TestCanadaRiskCheckSession
{
    public static void main(String[] args)
    {
        String store_id = "moneris";
        String api_token = "hurgle";
        java.util.Date createDate = new java.util.Date();
        String order_id = "Test"+createDate.getTime();
        String session_id = "abc123";
        String service_type = "session";
        //String event_type = "LOGIN";
        String processing_country_code = "CA";
        boolean status_check = false;
        SessionQuery sq = new SessionQuery();
        sq.setOrderId(order_id);
        sq.setSessionId(session_id);
        sq.setServiceType(service_type);
        sq.setEventType(service_type);
        //sq.setPolicy("");

```

## Sample Session Query - CA

```
//sq.setDeviceId("4EC40DE5-0770-4fa0-BE53-981C067C598D");
sq.setAccountLogin("13195417-8CA0-46cd-960D-14C158E4DBB2");
sq.setPasswordHash("489c830f10f7c601d30599a0deaf66e64d2aa50a");
sq.setAccountNumber("3E17A905-AC8A-4c8d-A417-3DADA2A55220");
sq.setAccountName("4590FCC0-DF4A-44d9-A57B-AF9DE98B84DD");
sq.setAccountEmail("3CAE72EF-6B69-4a25-93FE-2674735E78E8@test.threatmetrix.com");

//sq.setAccountTelephone("5556667777");
sq.setPan("4242424242424242");
//sq.setAccountAddressStreet1("3300 Bloor St W");
//sq.setAccountAddressStreet2("4th Flr West Tower");
//sq.setAccountAddressCity("Toronto");
//sq.setAccountAddressState("Ontario");
//sq.setAccountAddressCountry("CA");
//sq.setAccountAddressZip("M8X2X2");
//sq.setShippingAddressStreet1("3300 Bloor St W");
//sq.setShippingAddressStreet2("4th Flr West Tower");
//sq.setShippingAddressCity("Toronto");
//sq.setShippingAddressState("Ontario");
//sq.setShippingAddressCountry("CA");
//sq.setShippingAddressZip("M8X2X2");
//sq.setLocalAttrib1("a");
//sq.setLocalAttrib2("b");
//sq.setLocalAttrib3("c");
//sq.setLocalAttrib4("d");
//sq.setLocalAttrib5("e");
//sq.setTransactionAmount("1.00");
//sq.setTransactionCurrency("840");
//set SessionAccountInfo
sq.setTransactionCurrency("CAN");
HttpsPostRequest mpgReq = new HttpsPostRequest();
mpgReq.setProcCountryCode(processing_country_code);
mpgReq.setTestMode(true); //false or comment out this line for production transactions
mpgReq.setStoreId(store_id);
mpgReq.setApiToken(api_token);
mpgReq.setTransaction(sq);
mpgReq.setStatusCheck(status_check);
mpgReq.send();
try
{
String[] rules;
Hashtable<String, String> results = new Hashtable<String, String>();
Receipt receipt = mpgReq.getReceipt();
System.out.println("ResponseCode = " + receipt.getResponseCode());
System.out.println("Message = " + receipt.getMessage());
System.out.println("TxnNumber = " + receipt.getTxnNumber());
results = receipt.getRiskResult();
Iterator<Map.Entry<String, String>> response = results.entrySet().iterator();
while (response.hasNext())
{
Map.Entry<String, String> entry = response.next();
System.out.println(entry.getKey().toString() + " = " + entry.getValue().toString());
}
rules = receipt.getRiskRules();
for (int i = 0; i < rules.length; i++)
{
System.out.println("RuleName = " + rules[i]);
System.out.println("RuleCode = " + receipt.getRuleCode(rules[i]));
System.out.println("RuleMessageEn = " + receipt.getRuleMessageEn(rules[i]));
```

## Sample Session Query - CA

```

System.out.println("RuleMessageFr = " + receipt.getRuleMessageFr(rules[i]));
}
}
catch (Exception e)
{
e.printStackTrace();
}
}
}

```

## 8.3.1 Session Query Transaction Flow

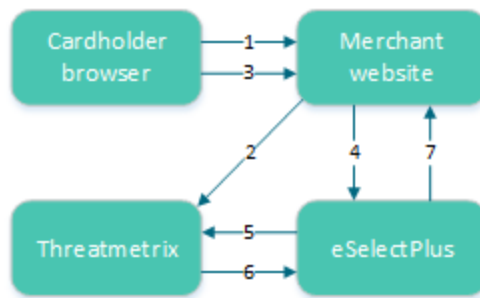


Figure 5: Session Query transaction flow

1. Cardholder logs onto the merchant website.
2. When the page has loaded in the cardholder's browser, special tags within the site allow information from the device to be gathered and sent to ThreatMetrix as the device fingerprint.  
The HTML tags should be placed where the cardholder is resident on the page for a couple of seconds to get the broadest data possible.
3. Customer submits a transaction.
4. Merchant's web application makes a Session Query transaction to the Moneris Gateway using the same session id that was included in the device fingerprint. This call must be made within 30 minutes of profiling (2).
5. Moneris Gateway submits the Session Query data to ThreatMetrix.
6. ThreatMetrix uses the Session Query data and the device fingerprint information to assess the transaction against the rules. A score is generated based on the rules.
7. The merchant uses the returned device information in its risk analysis to make a business decision. The merchant may wish to continue or cancel with the cardholder's payment transaction.

## 8.4 Attribute Query

The Attribute Query is used to obtain a risk assessment of transaction-related identifiers such as the email address and the card number. Unlike the Session Query, the Attribute Query does not require the device fingerprinting information to be provided.



**AttributeQuery transaction object definition**

```
AttributeQuery aq = new AttributeQuery();
```

**HttpPostRequest object for AttributeQuery transaction**

```
HttpPostRequest mpgReq = new HttpPostRequest();
```

```
mpgReq.setTransaction(aq);
```

**Attribute Query transaction values****Table 101: Attribute Query transaction object mandatory values**

Value	Type		Limits	Set method
	Description			
Service type	String	N/A		<code>aq.setServiceType(service_type);</code>
	Which output fields are returned. session -- returns IP and device related attributes.			
Device ID	String	36-character alphanumeric		<code>aq.setDeviceId("");</code>
	Unique device identifier generated by a previous call to the ThreatMetrix session-query API.			
Credit card number	String	20-character numeric		<code>aq.setPan(pan);</code>
		No spaces or dashes		
IP address			Most credit card numbers today are 16 digits, but some 13-digit numbers are still accepted by some issuers. This field has been intentionally expanded to 20 digits in consideration for future expansion and potential support of private label card ranges.	
	String	64-character alphanumeric		<code>aq.setIPAddress("192.168.0.1");</code>
IP forwarded			True IP address. Results will be returned as <code>true_ip_geo</code> , <code>true_ip_score</code> and so on.	
	String	64-character alphanumeric		<code>aq.setIPForwarded("192.168.1.0");</code>
Account address street 1			The IP address of the proxy. If the IPAddress is supplied, results will be returned as <code>proxy_ip_geo</code> and <code>proxy_ip_score</code> .	
			If the IP Address is not supplied, this IP address will be treated as the true IP address and results will be returned as <code>true_ip_geo</code> , <code>true_ip_score</code> and so on	
Account address street 1	String	32-character alphanumeric		<code>aq.setAccountAddressStreet1("3300 Bloor St W");</code>
	First portion of the street address component of the billing address.			

Table 101: Attribute Query transaction object mandatory values (continued)

Value	Type Limits		Set method
	Description		
Account Address Street 2	String	32-character alphanumeric	<code>aq.setAccountAddressStreet2("4th Flr West Tower");</code>
	Second portion of the street address component of the billing address.		
Account address city	String	50-character alphanumeric	<code>aq.setAccountAddressCity("Toronto");</code>
	The city component of the billing address.		
Account address state/- province	String	64-character alphanumeric	<code>aq.setAccountAddressState("Ontario");</code>
	The state component of the billing address.		
Account address country	String	2-character alphanumeric	<code>aq.setAccountAddressCountry("CA");</code>
	ISO2 country code of the billing addresses.		
Account address zip/- postal code	String	8-character alphanumeric	<code>aq.setAccountAddressZip("M8X2X2");</code>
	Zip/postal code of the billing address.		
Shipping address street 1	String	32-character alphanumeric	<code>aq.setShippingAddressStreet1("3300 Bloor St W");</code>
	Account address country		
Shipping Address Street 2	String	32-character alphanumeric	<code>aq.setShippingAddressStreet2("4th Flr West Tower");</code>
	Second portion of the street address component of the shipping address.		
Shipping Address City	String	50-character alphanumeric	<code>aq.setShippingAddressCity("Toronto");</code>
	City component of the shipping address.		
Shipping Address State/Province	String	64-character alphanumeric	<code>aq.setShippingAddressState("Ontario");</code>
	State/Province component of the shipping address.		
Shipping Address Country	String	2-character alphanumeric	<code>aq.setShippingAddressCountry("CA");</code>
	ISO2 country code of the account address country.		
Shipping Address zip/- postal code	String	8-character alphanumeric	<code>aq.setAccountAddressZip("M8X2X2");</code>
	The zip/postal code component of the shipping address.		

## Sample Attribute Query - CA

```

String store_id = "moneris";
String api_token = "hurgle";
java.util.Date createDate = new java.util.Date();
String order_id = "Test"+createDate.getTime();
String service_type = "session";
String processing_country_code = "CA";
boolean status_check = false;

AttributeQuery aq = new AttributeQuery();
aq.setOrderId(order_id);
aq.setServiceType(service_type);
aq.setDeviceId("");
aq.setAccountLogin("13195417-8CA0-46cd-960D-14C158E4DBB2");
aq.setPasswordHash("489c830f10f7c601d30599a0deaf66e64d2aa50a");
aq.setAccountNumber("3E17A905-AC8A-4c8d-A417-3DADA2A55220");
aq.setAccountName("4590FCC0-DF4A-44d9-A57B-AF9DE98B84DD");
aq.setAccountEmail("3CAE72EF-6B69-4a25-93FE-2674735E78E8@test.threatmetrix.com");
//aq.setCCNumberHash("4242424242424242");
//aq.setIPAddress("192.168.0.1");
//aq.setIPForwarded("192.168.1.0");
aq.setAccountAddressStreet1("3300 Bloor St W");
aq.setAccountAddressStreet2("4th Flr West Tower");
aq.setAccountAddressCity("Toronto");
aq.setAccountAddressState("Ontario");
aq.setAccountAddressCountry("CA");
aq.setAccountAddressZip("M8X2X2");
aq.setShippingAddressStreet1("3300 Bloor St W");
aq.setShippingAddressStreet2("4th Flr West Tower");
aq.setShippingAddressCity("Toronto");
aq.setShippingAddressState("Ontario");
aq.setShippingAddressCountry("CA");
aq.setShippingAddressZip("M8X2X2");

HttpPostRequest mpgReq = new HttpPostRequest();
mpgReq.setTransaction(aq);
mpgReq.send();

try
{
    String[] rules;
    Hashtable<String, String> results = new Hashtable<String, String>();
    Receipt receipt = mpgReq.getReceipt();
    System.out.println("ResponseCode = " + receipt.getResponseCode());
    System.out.println("Message = " + receipt.getMessage());
    System.out.println("TxnNumber = " + receipt.getTxnNumber());

    results = receipt.getRiskResult();
    Iterator<Map.Entry<String, String>> response = results.entrySet().iterator();
    while (response.hasNext())
    {
        Map.Entry<String, String> entry = response.next();
        System.out.println(entry.getKey().toString() + " = " + entry.getValue().toString());
    }
    rules = receipt.getRiskRules();
    for (int i = 0; i < rules.length; i++)
    {
        System.out.println("RuleName = " + rules[i]);
        System.out.println("RuleCode = " + receipt.getRuleCode(rules[i]));
        System.out.println("RuleMessageEn = " + receipt.getRuleMessageEn(rules[i]));
    }
}

```

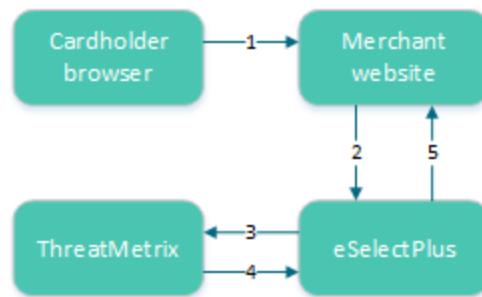
### Sample Attribute Query - CA

```

    System.out.println("RuleMessageFr = " + receipt.getRuleMessageFr(rules[i]));
}
}

```

#### 8.4.1 Attribute Query Transaction Flow



**Figure 6: Attribute query transaction flow**

1. Cardholder logs onto merchant website and submits a transaction.
2. The merchant's web application makes an Attribute Query transaction that includes the session ID to the Moneris Gateway.
3. Moneris Gateway submits Attribute Query data to ThreatMetrix.
4. ThreatMetrix uses the Attribute Query data to assess the transaction against the rules. A score is generated based on the rules.
5. The merchant uses the returned device information in its risk analysis to make a business decision. The merchant may wish to continue or cancel with the cardholder's payment transaction.

#### 8.5 Handling Response Information

When reviewing the response information and determining how to handle the transaction, it is recommended that you (either manually or through automated logic on your site) use the following pieces of information:

- Risk score
- Rules triggered (such as Rule Codes, Rule Names, Rule Messages)
- Results obtained from Verified by Visa, MasterCard Secure Code, AVS, CVD and the financial transaction authorization
- Response codes for the Transaction Risk Management Transaction that are included by automated processes.

## 8.5.1 TRMT Response Fields

**Table 102: Receipt object response values for TRMT**

Value	Type	Limits	Get method
	Definition		
Response Code	String	3-character alpha-numeric	<code>receipt.getResponseCode()</code> ;
	See Table 103 (page 198)		
Message	String	N/A	<code>receipt.getMessage()</code> ;
	Response message		
Event type	String	N/A	
	Type of transaction or event returned in the response.		
Org ID	String	N/A	
	ThreatMetrix-defined unique transaction identifier		
Policy	String	N/A	
	Policy used for the Session Query will be returned with the return request. If the Policy was not included, then the Policy name default is returned.		
Policy score	String	N/A	
	The sum of all the risks weights from triggered rules within the selected policy in the range [-100...100]		
Request duration	String	N/A	
	Length of time it takes for the transaction to be processed.		
Request ID	String	N/A	
	Unique number and will always be returned with the return request.		
Request result	String	N/A	<code>receipt.getRiskResult()</code> ;
	See Table 104 (page 199).		
Review status	String	N/A	
	The transaction status based on the assessments and risk scores.		
Risk rating	String	N/A	
	The rating based on the assessments and risk scores.		
Service type	String	N/A	
	The service type will be returned in the attribute query response.		

**Table 102: Receipt object response values for TRMT (continued)**

Value	Type	Limits	Get method
	Definition		
Session ID	String	N/A	
	Temporary identifier unique to the visitor will be returned in the return request.		
Summary risk score	String	N/A	
	Based on all of the returned values in the range [-100 ... 100]		
Transaction ID	String	N/A	
	This is the transaction identifier and will always be returned in the response when supplied as input.		
Unknown session	String	N/A	
	If present, the value is "yes". It indicates the session ID that was passed was not found.		
ITD Enhanced AVS Response Code	String	1-character alphabetic	
	<p>The ITD (Internet Transaction Data) reviews several methods for performing a credit card transaction online. The ITDReponse indicates the AmEx ITD validation results. Applicable for AmEx and JCB only.</p> <p>Y = data matches  N = data does not match  U = data not checked  R = retry  S = Service not allowed [space] = data not sent</p>		

**Table 103: Response code descriptions**

Value	Definition
001	Success
981	Data error
982	Duplicate order ID
983	Invalid transaction
984	Previously asserted
985	Invalid activity description
986	Invalid impact description
987	Invalid confidence description
988	Cannot find previous

**Table 104: Request result values and descriptions**

Value	Definition
fail_incomplete	ThreatMetrix was unable to process the request due to incomplete or incorrect input data
fail_invalid_telephone_number	Format of the supplied telephone number was invalid
fail_access	ThreatMetrix was unable to process the request because of API verification failing
fail_internal_error	ThreatMetrix encountered an error while processing the request
fail_invalid_device_id	Format of the supplied device_id was invalid
fail_invalid_email_address	Format of the supplied email address was invalid
fail_invalid_ip_address_parameter	Format of a supplied ip_address parameter was invalid
fail_temporarily_unavailable	Request failed because the service is temporarily unavailable
fail_verification	API query limit reached
success	ThreatMetrix was able to process the request successfully

### 8.5.2 Understanding the Risk Score

For each Session Query or Attribute Query, a score with a value between -100 and +100 is returned based on the rules that were triggered for the transaction.

Table 105 defines the risk scores ranges.

**Table 105: Session Query and Attribute Query risk score definitions**

Risk score	Visa definition
-100 to -1	A lower score indicates a higher probability that the transaction is fraudulent.
0	Neutral transaction
1 to 100	<p>A higher score indicates a lower probability that the transaction is fraudulent.</p> <p><b>Note:</b> All e-commerce transactions have some level of risk associated with them. Therefore, it is rare to see risk score in the high positive values.</p>

When evaluating the risk of a transaction, the risk score gives an initial indicator of the potential risk that the transaction is fraudulent. Because some of the rules that are evaluated on each transaction may not be relevant to your business scenario, review the rules that were triggered for the transaction before determining how to handle the transaction.

### 8.5.3 Understanding the Rule Codes, Rule Names and Rule Messages

The rule codes, rule names and rule messages provide details about what rules were triggered during the assessment of the information provided in the Session or Attribute Query. Each rule code has a rule name and rule message. The rule name and rule message are typically similar. Table 106 provides additional information on each rule.

When evaluating the risk of a transaction, it is recommended that you review the rules that were triggered for the transaction and assess the relevance to your business. (That is, how does it relate to the typical buying habits of your customer base?)

If you are automating some or all of the decision-making processes related to handling the responses, you may want to use the rule codes. If you are documenting manual processes, you may want to refer to the more user-friendly rule name or rule message.

**Table 106: Rule names, numbers and messages**

Rule name	Rule number	Rule message
	Rule explanation	
White lists		
DeviceWhitelisted	WL001	Device White Listed
	Device is on the white list. This indicates that the device has been flagged as always "ok".	
	<b>Note:</b> This rule is currently not in use.	
IPWhitelisted	WL002	IP White Listed
	IP address is on the white list. This indicates the device has been flagged as always "ok".	
	<b>Note:</b> This rule is currently not in use.	
EmailWhitelisted	WL003	Email White Listed
	Email address is on the white list. This indicates that the device has been flagged as always "ok".	
	<b>Note:</b> This rule is currently not in use.	
Event velocity		
2DevicePayment	EV003	2 Device Payment Velocity
	Multiple payments were detected from this device in the past 24 hours.	
2IPPaymentVelocity	EV006	2 IP Payment Velocity
	Multiple payments were detected from this IP within the past 24 hours.	



Table 106: Rule names, numbers and messages (continued)

Rule name	Rule number		Rule message	
	Rule explanation			
2ProxyPaymentVelocity	EV008	2 Proxy Payment Velocity		
	The device has used 3 or more different proxies during a 24 hour period. This could be a risk or it could be someone using a legitimate corporate proxy.			
Email				
3EmailPerDeviceDay	EM001	3 Emails for the Device ID in 1 Day		
	This device has presented 3 different email IDs within the past 24 hours.			
3EmailPerDeviceWeek	EM002	3 emails for the Device ID in 1 week		
	This device has presented 3 different email IDs within the past week.			
3DevciePerEmailDay	EM003	3 Device Ids for email address in 1 day		
	This email has been presented from three different devices in the past 24 hours.			
3DevciePerEmailWeek	EM004	3 Device Ids for email address in 1 week		
	This email has been presented from three different devices in the past week.			
EmailDistanceTravelled	EM005	Email Distance Travelled		
	This email address has been associated with different physical locations in a short period of time.			
3EmailPerSmartIDHour	EM006	3 Emails for SmartID in 1 Hour		
	The SmartID for this device has been associated with 3 different email addresses in 1 hour.			
GlobalEMailOverOneMonth	EM007	Global Email over 1 month		
	The e-mail address involved in the transaction over 30 days ago. This generally indicates that the transaction is less risky.			
	<b>Note:</b> This rule is set so that it does not impact the policy score or risk rating.			
ComputerGeneratedEmailAddress	EM008	Computer Generated Email Address		
	This transaction used a computer-generated email address.			
Account Number				
3AccountNumberPerDeviceDay	AN001	3 Account Numbers for device in 1 day		

Table 106: Rule names, numbers and messages (continued)

Rule name	Rule number		Rule message
	Rule explanation		
	This device has presented 3 different user accounts within the past 24 hours.		
3AccountNumberPerDeviceWeek	AN002	3 Account Numbers for device in 1 week	
	This device has presented 3 different user accounts within the past week.		
3DeviciePerAccountNumberDay	AN003	3 Device IDs for account number in 1 day	
	This user account been used from three different devices in the past 24 hours.		
3DeviciePerAccountNumberWeek	AN004	3 Device IDs for account number in 1 week	
	This card number has been used from three different devices in the past week.		
AccountNumberDistanceTravelled	AN005	Account Number distance travelled	
	This card number has been used from a number of physically different locations in a short period of time.		
Credit card/payments			
3CreditCardPerDeviceDay	CP001	3 credit cards for device in 1 day	
	This device has used three credit cards within 24 hours.		
3CreditCardPerDeviceWeek	CP002	3 credit cards for device in 1 week	
	This device has used three credit cards within 1 week.		
3DevicePerCreditCardDay	CP003	3 device ids for credit card in 1 day	
	This credit card has been used on three different devices in 24 hours.		
3DeviciePerCreditCardWeek	CP004	3 device ids for credit card in 1 week	
	This credit card has been used on three different devices in 1 week.		
CredtCardDistanceTravelled	CP005	Credit Card has travelled	
	The credit card has been used at a number of physically different locations in a short period of time.		

**Table 106: Rule names, numbers and messages (continued)**

Rule name	Rule number	Rule message
	Rule explanation	
CreditCardShipAddressGeoMismatch	CP006	Credit Card and Ship Address do not match
	The credit card was issued in a region different from the Ship To Address information provided.	
CreditCardBillAddressGeoMismatch	CP007	Credit Card and Billing Address do not match
	The credit card was issued in a region different from the Billing Address information provided.	
CreditCardDeviceGeoMismatch	CP008	Credit Card and device location do not match
	The device is located in a region different from where the card was issued.	
CreditCardBINShipAddressGeoMismatch	CP009	Credit Card issuing location and Shipping address do not match
	The credit card was issued in a region different from the Ship To Address information provided.	
CreditCardBINBillAddressGeoMismatch	CP010	Credit Card issuing location and Billing address do not match
	The credit card was issued in a region different from the Billing Address information provided.	
CreditCardBINDeviceGeoMismatch	CP011	Credit Card issuing location and location of the device do not match
	The device is located in a region different from where the card was issued.	
TransactionValueDay	CP012	Daily Transaction Value Threshold
	The transaction value exceeds the daily threshold.	
TransactionValueWeek	CP013	Weekly Transaction Value Threshold
	The transaction value exceeds the weekly threshold.	
Proxy rules		
3ProxyPerDeviceDay	PX001	3 Proxy Ips in 1 day
	This device has used three different proxy servers in the past 24 hours.	
AnonymousProxy	PX002	Anonymous Proxy IP
	This device is using an anonymous proxy	

Table 106: Rule names, numbers and messages (continued)

Rule name	Rule message	
	Rule explanation	
UnusualProxyAttributes	PX003	Unusual Proxy Attributes
	This transaction is coming from a source with unusual proxy attributes.	
AnonymousProxy	PX004	Anonymous Proxy
	This device is connecting through an anonymous proxy connection.	
HiddenProxy	PX005	Hidden Proxy
	This device is connecting via a hidden proxy server.	
OpenProxy	PX006	Open Proxy
	This transaction is coming from a source that is using an open proxy.	
TransparentProxy	PX007	Transparent Proxy
	This transaction is coming from a source that is using a transparent proxy.	
DeviceProxyGeoMismatch	PX008	Proxy and True GEO Match
	This device is connecting through a proxy server that didn't match the devices geo-location.	
ProxyTrueISPMismatch	PX009	Proxy and True ISP Match
	This device is connecting through a proxy server that doesn't match the true IP address of the device.	
ProxyTrueOrganizationMismatch	PX010	Proxy and True Org Match
	The Proxy information and True ISP information for this source do not match.	
DeviceProxyRegionMismatch	PX011	Proxy and True Region Match
	The proxy and device region location information do not match.	
ProxyNegativeReputation	PX012	Proxy IP Flagged Risky in Reputation Network
	This device is connecting from a proxy server with a known negative reputation.	
SatelliteProxyISP	PX013	Satellite Proxy
	This transaction is coming from a source that is using a satellite proxy.	

Table 106: Rule names, numbers and messages (continued)

Rule name	Rule number	Rule message
	Rule explanation	
GEO		
DeviceCountriesNotAllowed	GE001	True GEO in Countries Not Allowed blacklist
	This device is connecting from a high-risk geographic location.	
DeviceCountriesNotAllowed	GE002	True GEO in Countries Not Allowed (negative whitelist)
	The device is from a region that is not on the whitelist of regions that are accepted.	
DeviceProxyGeoMismatch	GE003	True GEO different from Proxy GEO
	The true geographical location of this device is different from the proxy geographical location.	
DeviceAccountGeoMismatch	GE004	Account Address different from True GEO
	This device has presented an account billing address that doesn't match the devices geolocation.	
DeviceShipGeoMismatch	GE005	Device and Ship Geo mismatch
	The location of the device and the shipping address do not match.	
DeviceShipGeoMismatch	GE006	Device and Ship Geo mismatch
	The location of the device and the shipping address do not match.	
Device		
SatelliteISP	DV001	Satellite ISP
	This transaction is from a source that is using a satellite ISP.	
MidsessionChange	DV002	Session Changed Mid-session
	This device changed session details and identifiers in the middle of a session.	
LanguageMismatch	DV003	Language Mismatch
	The language of the user does not match the primary language spoken in the location where the True IP is registered.	
NoDeviceID	DV004	No Device ID
	No device ID was available for this transaction.	

Table 106: Rule names, numbers and messages (continued)

Rule name	Rule number Rule message	
	Rule explanation	
Dial-upConnection	DV005	Dial-up connection
	This device uses a less identifiable dial-up connection.	
DeviceNegativeReputation	DV006	Device Blacklisted in Reputational Network
	This device has a known negative reputation as reported to the fraud network.	
DeviceGlobalBlacklist	DV007	Device on the Global Black List
	This device has been flagged on the global blacklist of known problem devices.	
DeviceCompromisedDay	DV008	Device compromised in last day
	This device has been reported as compromised in the last 24 hours.	
DeviceCompromisedHour	DV009	Device compromised in last hour
	This device has been reported as compromised in the last hour.	
FlashImagesCookiesDisabled	DV010	Flash Images Cookies Disabled
	Key browser functions/identifiers have been disabled on this device.	
FlashCookiesDisabled	DV011	Flash Cookies Disabled
	Key browser functions/identifiers have been disabled on this device.	
FlashDisabled	DV012	Flash Disabled
	Key browser functions/identifiers have been disabled on this device.	
ImagesDisabled	DV013	Images Disabled
	Key browser functions/identifiers have been disabled on this device.	
CookiesDisabled	DV014	Cookies Disabled
	Key browser functions/identifiers have been disabled on this device.	
DeviceDistanceTravelled	DV015	Device Distance Travelled
	The device has been used from multiple physical locations in a short period of time.	

**Table 106: Rule names, numbers and messages (continued)**

Rule name	Rule number	Rule message
	Rule explanation	
PossibleCookieWiping	DV016	Cookie Wiping
	This device appears to be deleting cookies after each session.	
PossibleCookieCopying	DV017	Possible Cookie Copying
	This device appears to be copying cookies.	
PossibleVPNConnection	DV018	Possibly using a VPN Connection
	This device may be using a VPN connection	

## 8.5.4 Examples of Risk Response

### 8.5.4.1 Session Query

#### Sample Risk Response - Session Query

```
<?xml version="1.0"?>
<response>
<receipt>
  <ResponseCode>001</ResponseCode>
  <Message>Success</Message>
<Result>
  <session_id>abc123</session_id>
  <unknown_session>yes</unknown_session>
  <event_type>payment</event_type>
  <service_type>session</service_type>
  <policy_score>-25</policy_score>
  <transaction_id>riskcheck42</transaction_id>
  <org_id>11kue096</org_id>
  <request_id>91C1879B-33D4-4D72-8FCB-B60A172B3CAC</request_id>
  <risk_rating>medium</risk_rating>
  <request_result>success</request_result>
  <summary_risk_score>-25</summary_risk_score>
  <Policy>default</policy>
  <review_status>review</review_status>
</Result>
<Rule>
  <RuleName>ComputerGeneratedEMail</RuleName>
  <RuleCode>UN001</RuleCode>
  <RuleMessageEn>Unknown Rule</RuleMessageEn>
  <RuleMessageFr>Regle Inconnus</RuleMessageFr>
</Rule>
<Rule>
  <RuleName>NoDeviceID</RuleName>
  <RuleCode>DV004</RuleCode>
  <RuleMessageEn>No Device ID</RuleMessageEn>
  <RuleMessageFr>null</RuleMessageFr>
</Rule>
</receipt>
</response>
```

### 8.5.4.2 Attribute Query

#### Sample Risk Response - Attribute Query

```
<?xml version="1.0"?>
<response>
<receipt>
  <ResponseCode>001</ResponseCode>
  <Message = Success</Message>
<Result>
  <org_id>11kue096</org_id>
  <request_id>443D7FB5-CC5C-4917-A57E-27EAC824069C</request_id>
  <service_type>session</service_type>
  <risk_rating>medium</risk_rating>
  <summary_risk_score>-25</summary_risk_score>
```



### Sample Risk Response - Attribute Query

```

<request_result>success</request_result>
<policy>default</policy>
<policy_score>-25</policy_score>
<transaction_id>riskcheck19</transaction_id>
<review_status>review</review_status>
</Result>
<Rule>
  <RuleName>ComputerGeneratedEMail</RuleName>
  <RuleCode>UN001</RuleCode>
  <RuleMessageEn>Unknown Rule</RuleMessageEn>
  <RuleMessageFr>Regle Inconnus</RuleMessageFr>
</Rule>
<Rule>
  <RuleName>NoDeviceID</RuleName>
  <RuleCode>DV004</RuleCode>
  <RuleMessageEn>No Device ID</RuleMessageEn>
  <RuleMessageFr>null</RuleMessageFr>
</Rule>
</receipt>
</response>

```

## 8.6 Inserting the Profiling Tags Into Your Website

Place the profiling tags on an HTML page served by your web application such that ThreatMetrix can collect device information from the customer's web browser. The tags must be placed on a page that a visitor would display in a browser window for 3-5 seconds (such as a page that requires a user to input data). After the device is profiled, a Session Query may be used to obtain the detail device information for risk assessment before submitting a financial payment transaction.

There are two profiling tags that require two variables. Those tags are `org_id` and `session_id`. `session_id` must match the session ID value that is to be passed in the Session Query transaction. The valid `org_id` values are:

**11kue096**

QA testing environment.

**lbhqgx47**

Production environment.

Below is an HTML sample of the profiling tags.

**NOTE:** Your site must replace `<my_session_id>` in the sample code with a unique alphanumeric value each time you fingerprint a new customer.

```

<p style="background:url(https://h.online-metrix.net/fp/clear.png?org_id=11kue096&session_id=<my_session_id>&m=1)">
</p>

```

```



```

```

<script src="https://h.onlinemetrix.net/fp/check.js?org_id=11kue096&session_id=<my_session_id>"

```

```
type="text/javascript">
</script>

<object type="application/x-shockwave-flash"

data="https://h.onlinemetrix.net/fp/fp.swf?org_id=11kue096&session_id=<my_session_id>"
width="1" height="1" id="obj_id">
<param name="movie"
value="https://h.onlinemetrix.net/fp/fp.swf?org_id=11kue096&session_id=<my_session_id>" />
<div></div>
</object>
```



## 9 Convenience Fee

- 9.1 About Convenience Fee
- 9.2 Purchase - Convenience Fee
- 9.3 Purchase with Customer Information
- 9.4 ACH Debit - Convenience Fee
- 9.5 ACH Debit with Customer Information
- 9.6 Purchase with VbV, MCSC and Amex SafeKey

### 9.1 About Convenience Fee

The Convenience Fee program was designed to allow merchants to offer the convenience of an alternative payment channel to the cardholder at a charge. This applies only when providing a true "convenience" in the form of an alternative payment channel outside the merchant's customary face-to-face payment channels. The convenience fee will be a separate charge on top of what the consumer is paying for the goods and/or services they were given, and this charge will appear as a separate line item on the consumer's statement.

### 9.2 Purchase - Convenience Fee

**NOTE:** Convenience Fee Purchase with Customer Information is also supported.

#### Convenience Fee Purchase transaction object definition

```
Purchase purchase = new Purchase();
```

#### HttpPostRequest object for Convenience Fee Purchase transaction

```
HttpPostRequest mpgReq = new HttpPostRequest();  
mpgReq.setTransaction(purchase);
```

#### Convenience Fee Purchase transaction object values

For a full description of mandatory and optional values, see "Definition of Request Fields" on page 306

**Table 1: Convenience Fee Purchase transaction object mandatory values**

Value	Type	Limits	Set Method
Order ID	String	50-character alphanumeric	<code>purchase.setOrderId(order_id);</code>
Amount	String	9-character decimal	<code>purchase.setAmount(amount);</code>
Credit card number	String	20-character numeric	<code>purchase.setPan(pan);</code>

**Table 1: Convenience Fee Purchase transaction object mandatory values (continued)**

Value	Type	Limits	Set Method
Expiry date	String	4-character numeric YYMM format	<code>purchase.setExpDate(exp-date);</code>
E-commerce indicator	String	1-character alpha-numeric	<code>purchase.setCryptType(crypt_type);</code>
Convenience fee amount	String	9-character decimal	<code>purchase.setConvFeeInfo(convFeeInfo);</code>

**Table 2: Convenience Fee Purchase transaction object optional values**

Value	Type	Limits	Set Method
Customer ID	String	50-character alpha-numeric	<code>purchase.setCustId(custid);</code>
Dynamic descriptor	String	20-character alpha-numeric	<code>purchase.setDynamicDescriptor(dynamic_descriptor);</code>
Commercial card invoice	String	17-character alpha-numeric	<code>purchase.setCommcardInvoice(commcard_invoice);</code>
Commercial card tax amount	String	9-character decimal	<code>purchase.setCommcardTaxAmount(commcard_tax_amount);</code>
AVS information	Object		<code>AvsInfo avsCheck = new AvsInfo();</code> <code>purchase.setAvsInfo(avsCheck);</code>
CVD information	Object		<code>CvdInfo cvdCheck = new CvdInfo();</code> <code>purchase.setCvdInfo(cvdCheck);</code>
Convenience Fee	Object		<code>ConvFeeInfo convFeeInfo = new ConvFeeInfo();</code> <code>purchase.setConvFeeInfo(convFeeInfo);</code>

Sample Convenience Fee Purchase - CA	Sample Convenience Fee Purchase - US
<pre> package Canada; import JavaAPI.*; public class TestCanadaConvFeePurchase { public static void main(String args[]) { String store_id = "monca00392"; String api_token = "qYdISUHiOdFTr1CLNpN"; String processing_country_code = "CA"; java.util.Date createDate = new java.util.Date (); String order_id = "Test"+createDate.getTime(); String amount = "10.00"; String pan = "4242424242424242"; String expdate = "1911"; String crypt = "7";  ConvFeeInfo convFeeInfo = new ConvFeeInfo(); convFeeInfo.setConvenienceFee("1.00");  Purchase purchase = new Purchase(); purchase.setOrderId(order_id); purchase.setAmount(amount); purchase.setPan(pan); purchase.setExpdate(expdate); purchase.setCryptType(crypt); purchase.setConvFeeInfo(convFeeInfo); HttpsPostRequest mpgReq = new HttpsPostRequest (); mpgReq.setProcCountryCode(processing_country_ code); mpgReq.setTestMode(true); //false or comment out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(purchase); mpgReq.send(); try { Receipt receipt = mpgReq.getReceipt(); System.out.println("CardType = " + receipt.getCardType()); System.out.println("TransAmount = " + receipt.getTransAmount()); System.out.println("TxnNumber = " + receipt.getTxnNumber()); System.out.println("ReceiptId = " + receipt.getReceiptId()); System.out.println("TransType = " + receipt.getTransType()); System.out.println("ReferenceNum = " + receipt.getReferenceNum()); System.out.println("ResponseCode = " + receipt.getResponseCode()); System.out.println("ISO = " + receipt.getISO ()); System.out.println("BankTotals = " + receipt.getBankTotals()); </pre>	<pre> package USA; import JavaAPI.*; public class TestUSAConvFeePurchase { public static void main(String args[]) { String store_id = "monusqal38"; String api_token = "qatoken"; String processing_country_code = "US"; java.util.Date createDate = new java.util.Date (); String order_id = "Test"+createDate.getTime(); String amount = "10.00"; String pan = "4242424242424242"; String expiry_date = "1911"; String crypt = "7"; String commcard_invoice = ""; String commcard_tax_amount = ""; AvsInfo avs = new AvsInfo ("123", "Edgar Street", "M1M1M1"); CvdInfo cvd = new CvdInfo ("1", "099"); Purchase purchase = new Purchase (order_id, amount, pan, expiry_date, crypt, commcard_ invoice, commcard_tax_amount); ConvFeeInfo convFeeInfo = new ConvFeeInfo(); convFeeInfo.setConvenienceFee("5.00"); purchase.setConvFeeInfo(convFeeInfo); HttpsPostRequest mpgReq = new HttpsPostRequest (); mpgReq.setProcCountryCode(processing_country_ code); mpgReq.setTestMode(true); //false or comment out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(purchase); mpgReq.send(); try { Receipt receipt = mpgReq.getReceipt(); System.out.println("CardType = " + receipt.getCardType()); System.out.println("TransAmount = " + receipt.getTransAmount()); System.out.println("TxnNumber = " + receipt.getTxnNumber()); System.out.println("ReceiptId = " + receipt.getReceiptId()); System.out.println("TransType = " + receipt.getTransType()); System.out.println("ReferenceNum = " + receipt.getReferenceNum()); System.out.println("ResponseCode = " + receipt.getResponseCode()); System.out.println("ISO = " + receipt.getISO ()); System.out.println("BankTotals = " + receipt.getBankTotals()); </pre>

Sample Convenience Fee Purchase - CA	Sample Convenience Fee Purchase - US
<pre> System.out.println("Message = " +     receipt.getMessage()); System.out.println("AuthCode = " +     receipt.getAuthCode()); System.out.println("Complete = " +     receipt.getComplete()); System.out.println("TransDate = " +     receipt.getTransDate()); System.out.println("TransTime = " +     receipt.getTransTime()); System.out.println("Ticket = " +     receipt.getTicket()); System.out.println("TimedOut = " +     receipt.getTimedOut()); System.out.println("CfSuccess = " +     receipt.getCfSuccess()); System.out.println("CfStatus = " +     receipt.getCfStatus()); System.out.println("FeeAmount = " +     receipt.getFeeAmount()); System.out.println("FeeRate = " +     receipt.getFeeRate()); System.out.println("FeeType = " +     receipt.getFeeType()); } catch (Exception e) {     e.printStackTrace(); } } </pre>	<pre> System.out.println("Message = " +     receipt.getMessage()); System.out.println("AuthCode = " +     receipt.getAuthCode()); System.out.println("Complete = " +     receipt.getComplete()); System.out.println("TransDate = " +     receipt.getTransDate()); System.out.println("TransTime = " +     receipt.getTransTime()); System.out.println("Ticket = " +     receipt.getTicket()); System.out.println("TimedOut = " +     receipt.getTimedOut()); System.out.println("CfSuccess = " +     receipt.getCfSuccess()); System.out.println("CfStatus = " +     receipt.getCfStatus()); System.out.println("FeeAmount = " +     receipt.getFeeAmount()); System.out.println("FeeRate = " +     receipt.getFeeRate()); System.out.println("FeeType = " +     receipt.getFeeType()); } catch (Exception e) {     e.printStackTrace(); } } </pre>

## 9.3 Purchase with Customer Information

### Convenience Fee Purchase with Customer information transaction object definition

```
Purchase purchase = new Purchase();
```

### HttpRequest object for Convenience Fee Purchase with Customer Info transaction

```
HttpRequest mpgReq = new HttpRequest();
```

```
mpgReq.setTransaction(purchase);
```

### Convenience Fee Purchase with Customer information transaction object values

For a full description of mandatory and optional values, see "Definition of Request Fields" on page 306

**Table 1: Convenience Fee Purchase w/ Customer Info transaction object mandatory values**

Value	Type	Limits	Set Method
Order ID	String	50-character alpha-numeric	<code>purchase.setOrderId(order_id);</code>
Amount	String	9-character decimal	<code>purchase.setAmount(amount);</code>
Credit card number	String	20-character numeric	<code>purchase.setPan(pan);</code>
Expiry date	String	4-character numeric YYMM format	<code>purchase.setExpDate(exp-date);</code>
E-commerce indicator	String	1-character alpha-numeric	<code>purchase.setCryptType(crypt_type);</code>
Convenience fee amount	String	9-character decimal	<code>purchase.setConvFeeInfo(convFeeInfo);</code>
Cardholder Authentication Verification Value (CAVV)	String	50-character alpha-numeric	<code>purchase.setCavv(cavv);</code>

**Table 2: Convenience Fee Purchase w/ Customer Info transaction object optional values**

Value	Type	Limits	Set Method
Customer ID	String	50-character alpha-numeric	<code>purchase.setCustId(custid);</code>
Dynamic descriptor	String	20-character alpha-numeric	<code>purchase.setDynamicDescriptor(dynamic_descriptor);</code>
Commercial card invoice	String	17-character alpha-numeric	<code>purchase.setCommcardInvoice(commcard_invoice);</code>
Commercial card tax amount	String	9-character decimal	<code>purchase.setCommcardTaxAmount(commcard_tax_amount);</code>
Customer information	Object		<code>CustInfo customer = new CustInfo();</code>  <code>purchase.setCustInfo(customer);</code>



**Table 2: Convenience Fee Purchase w/ Customer Info transaction object optional values (continued)**

Value	Type	Limits	Set Method
AVS information	Object		<pre> AvsInfo avsCheck = new AvsInfo();  purchase.setAvsInfo (avsCheck); </pre>
CVD information	Object		<pre> CvdInfo cvdCheck = new CvdInfo();  purchase.setCvdInfo (cvdCheck); </pre>
Convenience Fee	Object		<pre> ConvFeeInfo convFeeInfo = new ConvFeeInfo();  purchase.setConvFeeInfo(con- vFeeInfo); </pre>

Sample Convenience Fee Purchase with Customer Information - CA	Sample Convenience Fee Purchase with Customer Information - US
<pre> package Canada;  import java.util.*; import JavaAPI.*; public class TestCanadaConvFeePurchaseCustInfo {     public static void main(String[] args)     {         String store_id = "monca00392";         String api_token = "qYdISUhHiOdfTr1CLNpN";         java.util.Date createDate = new java.util.Date();         String order_id = "Test"+createDate.getTime();         String amount = "10.00";         String pan = "4242424242424242";         String expdate = "1901"; //YYMM format         String crypt = "7";         String processing_country_code = "CA";         boolean status_check = false;         /***** Billing/Shipping Variables *****/         String first_name = "Bob";         String last_name = "Smith";         String company_name = "ProLine Inc.";         String address = "623 Bears Ave";         String city = "Chicago";         String province = "Illinois";         String postal_code = "M1M2M1";         String country = "Canada";         String phone = "777-999-7777";         String fax = "777-999-7778"; </pre>	<pre> package USA; import JavaAPI.*; public class     TestUSAConvFeePurchaseCust     Info     {         public static void main(String             args[])         {             String store_id =                 "monusqal38";             String api_token = "qatoken";             String processing_country_code                 = "US";             java.util.Date createDate =                 new java.util.Date();             String order_id =                 "Test"+createDate.getTime                 ();             String amount = "10.00";             String pan =                 "4242424242424242";             String expiry_date = "1911";             String crypt = "7";             String commcard_invoice = "";             String commcard_tax_amount =                 "";             /***** Billing/Shipping Variables *****/ </pre>

Sample Convenience Fee Purchase with Customer Information - CA	Sample Convenience Fee Purchase with Customer Information - US
<pre> String tax1 = "10.00"; String tax2 = "5.78"; String tax3 = "4.56"; String shipping_cost = "10.00"; /***** Order Line Item Variables *****/ String[] item_description = new String[] { "Chicago Bears Helmet", "Soldier Field Poster" }; String[] item_quantity = new String[] { "1", "1" }; String[] item_product_code = new String[] { "CB3450", "SF998S" }; String[] item_extended_amount = new String[] { "150.00", "19.79" }; /***** *****/ /* */ /* Customer Information Option 1 */ /* */ /***** *****/ /***** Customer Information Object *****/ CustInfo customer = new CustInfo(); /***** Set Customer Billing Information *****/ customer.setBilling(first_name, last_name, company_name, address, city, province, postal_code, country, phone, fax, tax1, tax2, tax3, shipping_cost); /***** Set Customer Shipping Information *****/ customer.setShipping(first_name, last_name, company_name, address, city, province, postal_code, country, phone, fax, tax1, tax2, tax3, shipping_cost); /***** Order Line Items *****/ customer.setItem(item_description[0], item_quantity[0], item_product_code[0], item_extended_amount[0]); customer.setItem(item_description[1], item_quantity[1], item_product_code[1], item_extended_amount[1]); /***** *****/ /* */ /* Customer Information Option 2 */ /* */ /***** *****/ /***** Customer Information Object *****/ CustInfo customer2 = new CustInfo(); /***** Billing Hashtable *****/ Hashtable&lt;String, String&gt; b = new Hashtable&lt;String, String&gt;(); //billing hashtable b.put("first_name", first_name); </pre>	<pre> *****/ String last_name = "Harris"; String first_name = "Tommie"; String company_name = "Da Bears"; String address = "454 Michigan Ave"; String city = "Chicago"; String province = "Illinois"; String zip_code = "99879"; String country = "USA"; String phone_number = "764- 908-9989"; String fax = "764-908-9990"; String tax1 = "1.00"; String tax2 = "1.00"; String tax3 = "1.00"; String shipping_cost = "2.00"; /***** *****/ Line Item Variables *****/ String[] name = new String[] {"Mini Bears Helmet", "Mini Bills Helmet"}; String[] quantity = new String [] {"1", "2"}; String[] product_code = new String[] {"BEOOWS9", "BUFD099D"}; String[] extended_amount = new String[] {"4.00", "6.00"}; /***** *****/ Miscellaneous Variables *****/ String email = "T.Harris@ChicagoBears.co m"; String instructions = "Must arrive before opening day at Lambeau"; /***** *****/ Transaction Object *****/ Purchase purchase = new Purchase (order_id, amount, pan, expiry_date, crypt, commcard_invoice, commcard_tax_amount); /***** *****/ Billing/Shipping Object *****/ / BillingLocation billingAddress = </pre>

Sample Convenience Fee Purchase with Customer Information - CA	Sample Convenience Fee Purchase with Customer Information - US
<pre> b.put("last_name", last_name); b.put("company_name", company_name); b.put("address", address); b.put("city", city); b.put("province", province); b.put("postal_code", postal_code); b.put("country", country); b.put("phone", phone); b.put("fax", fax); b.put("tax1", tax1); //federal tax b.put("tax2", tax2); //prov tax b.put("tax3", tax3); //luxury tax b.put("shipping_cost", shipping_cost); //shipping cost customer2.setBilling(b); /***** Shipping Hashtable *****/ Hashtable&lt;String, String&gt; s = new Hashtable&lt;String, String&gt;(); //shipping hashtable s.put("first_name", first_name); s.put("last_name", last_name); s.put("company_name", company_name); s.put("address", address); s.put("city", city); s.put("province", province); s.put("postal_code", postal_code); s.put("country", country); s.put("phone", phone); s.put("fax", fax); s.put("tax1", tax1); //federal tax s.put("tax2", tax2); //prov tax s.put("tax3", tax3); //luxury tax s.put("shipping_cost", shipping_cost); //shipping cost customer2.setShipping(s); /***** Order Line Item1 Hashtable *****/ Hashtable&lt;String, String&gt; i1 = new Hashtable&lt;String, String&gt;(); //item hashtable #1 i1.put("name", item_description[0]); i1.put("quantity", item_quantity[0]); i1.put("product_code", item_product_code[0]); i1.put("extended_amount", item_extended_amount[0]); customer2.setItem(i1); /***** Order Line Item2 Hashtable *****/ Hashtable&lt;String, String&gt; i2 = new Hashtable&lt;String, String&gt;(); //item hashtable #2 i2.put("name", "item2's name"); i2.put("quantity", "7"); i2.put("product_code", "item2's product code"); i2.put("extended_amount", "5.01"); customer2.setItem(i2); /***** Miscellaneous Customer Information Methods *****/ customer.setEmail("nick@widget.com"); customer.setInstructions("Make it fast!");  /***** Convenience Fee *****/ </pre>	<pre> new BillingLocation (last_name, first_name, company_name, address, city, province, zip_code, country, phone_number, fax, tax1, tax2, tax3, shipping_cost); ShippingLocation shippingAddress = new ShippingLocation (last_name, first_name, company_name, address, city, province, zip_code, country, phone_number, fax, tax1, tax2, tax3, shipping_cost); /***** Line Item Object *****/ Item[] lineItems = new Item[] {new Item(name[0], quantity[0], product_code[0], extended_amount[0]), new Item(name[1], quantity[1], product_code[1], extended_amount[1])}; /***** Customer Information Object *****/ CustomerInfo custData = new CustomerInfo (billingAddress, shippingAddress, email, instructions, lineItems); purchase.setCustInfo (custData); //Convenience Fee ConvFeeInfo convFeeInfo = new ConvFeeInfo(); convFeeInfo.setConvenienceFee ("5.00"); purchase.setConvFeeInfo (convFeeInfo); HttpPostRequest mpgReq = new HttpPostRequest(); mpgReq.setProcCountryCode (processing_country_code); mpgReq.setTestMode (true); //false or comment out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); </pre>

Sample Convenience Fee Purchase with Customer Information - CA	Sample Convenience Fee Purchase with Customer Information - US
<pre> ConvFeeInfo convFeeInfo = new ConvFeeInfo(); convFeeInfo.setConvenienceFee("1.00"); /***** Transactional Request Object *****/ Purchase purchase = new Purchase(); purchase.setOrderId(order_id); purchase.setAmount(amount); purchase.setPan(pan); purchase.setExpdate(expdate); purchase.setCryptType(crypt); purchase.setCustInfo(customer); purchase.setConvFeeInfo(convFeeInfo); HttpPostRequest mpgReq = new HttpPostRequest(); mpgReq.setProcCountryCode(processing_country_code); mpgReq.setTestMode(true); //false or comment out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(purchase); mpgReq.setStatusCheck(status_check); mpgReq.send(); try { Receipt receipt = mpgReq.getReceipt(); System.out.println("CardType = " + receipt.getCardType()); System.out.println("TransAmount = " + receipt.getTransAmount ()); System.out.println("TxnNumber = " + receipt.getTxnNumber()); System.out.println("ReceiptId = " + receipt.getReceiptId()); System.out.println("TransType = " + receipt.getTransType()); System.out.println("ReferenceNum = " + receipt.getReferenceNum ()); System.out.println("ResponseCode = " + receipt.getResponseCode ()); System.out.println("ISO = " + receipt.getISO()); System.out.println("BankTotals = " + receipt.getBankTotals()); System.out.println("Message = " + receipt.getMessage()); System.out.println("AuthCode = " + receipt.getAuthCode()); System.out.println("Complete = " + receipt.getComplete()); System.out.println("TransDate = " + receipt.getTransDate()); System.out.println("TransTime = " + receipt.getTransTime()); System.out.println("Ticket = " + receipt.getTicket()); System.out.println("TimedOut = " + receipt.getTimedOut()); System.out.println("IsVisaDebit = " + receipt.getIsVisaDebit ());  System.out.println("CfSuccess = " + receipt.getCfSuccess()); System.out.println("CfStatus = " + receipt.getCfStatus()); System.out.println("FeeAmount = " + receipt.getFeeAmount()); System.out.println("FeeRate = " + receipt.getFeeRate()); System.out.println("FeeType = " + receipt.getFeeType()); } catch (Exception e) { e.printStackTrace(); } } </pre>	<pre> mpgReq.setTransaction (purchase); mpgReq.send(); try { Receipt receipt = mpgReq.getReceipt(); System.out.println("CardType = " + receipt.getCardType ()); System.out.println ("TransAmount = " + receipt.getTransAmount()); System.out.println("TxnNumber = " + receipt.getTxnNumber ()); System.out.println("ReceiptId = " + receipt.getReceiptId ()); System.out.println("TransType = " + receipt.getTransType ()); System.out.println ("ReferenceNum = " + receipt.getReferenceNum ()); System.out.println ("ResponseCode = " + receipt.getResponseCode ()); System.out.println("ISO = " + receipt.getISO()); System.out.println("BankTotals = " + receipt.getBankTotals()); System.out.println("Message = " + receipt.getMessage()); System.out.println("AuthCode = " + receipt.getAuthCode ()); System.out.println("Complete = " + receipt.getComplete ()); System.out.println("TransDate = " + receipt.getTransDate ()); System.out.println("TransTime = " + receipt.getTransTime ()); System.out.println("Ticket = " + receipt.getTicket()); System.out.println("TimedOut = " + receipt.getTimedOut ()); System.out.println("CfSuccess </pre>

Sample Convenience Fee Purchase with Customer Information - CA	Sample Convenience Fee Purchase with Customer Information - US
<pre> }</pre>	<pre> = " + receipt.getCfSuccess ()); System.out.println("CfStatus = " + receipt.getCfStatus ()); System.out.println("FeeAmount = " + receipt.getFeeAmount ()); System.out.println("FeeRate = " + receipt.getFeeRate()); System.out.println("FeeType = " + receipt.getFeeType()); } catch (Exception e) { e.printStackTrace(); } } }</pre>

## 9.4 ACH Debit - Convenience Fee

**NOTE:** Convenience Fee ACH Debit with Customer Information is also supported.

### Convenience Fee ACH Debit transaction object definition

```
ACHDebit ach_debit = new ACHDebit (order_id, cust_id, amount, achinfo);
```

### HttpPostRequest object for Convenience Fee ACH Debit transaction

```
HttpPostRequest mpgReq = new HttpPostRequest();
```

```
mpgReq.setTransaction(ach_debit);
```

### Convenience Fee ACH Debit transaction object values

**Table 1: ACH Debit with Convenience Fee transaction object mandatory values**

Value	Type	Limits	Set Method
Order ID	String	50-character alpha-numeric	<code>achdebit.setOrderId(order_id);</code>
Amount	String	9-character decimal	<code>achdebit.setAmount(amount);</code>
ACH Info	Object		<code>achdebit.setAchInfo(achinfo);</code>

**Table 107: ACH Debit with Convenience Fee transaction optional values**

Value	Type	Limits	Set method
Customer ID	String	50-character alpha-numeric	<code>achdebit.setCustId(custid);</code>
Status Check	Boolean	true/false	<code>mpgReq.setStatusCheck(status_check);</code>
Customer information	Object	Not applicable. See Section Appendix D (page 330).	<code>achdebit.setCustInfo(customer);</code>
Convenience fee	Object	Not applicable. See Appendix H (page 352).	<code>achdebit.setConvFeeInfo(convFeeInfo);</code>
Recurring billing	Object	Not applicable. See Section Appendix G (page 345).	<code>achdebit.setRecurInfo(recurInfo);</code>

**Sample Convenience Fee ACH Debit - US**

```

package USA;
import JavaAPI.*;
public class TestUSAConvFeeACHDebit
{
public static void main(String args[])
{
String store_id = "monusqa002";
String api_token = "qatoken";
String processing_country_code = "US";
java.util.Date createDate = new java.util.Date();
String order_id = "Test"+createDate.getTime();
String cust_id = "moneristest";
String amount = "10.00";
String sec = "web";
String cust_first_name = "Moneris";
String cust_last_name = "Solutions";
String cust_address1 = "3300 Bloor St W";
String cust_address2 = "4th floor west tower";
String cust_city = "Toronto";
String cust_state = "ON";
String cust_zip = "M1M1M1";
String routing_num = "071000013";
String account_num = "742941347";
String check_num = "9995";
String account_type = "checking";
String micr = "";
ACHInfo achinfo = new ACHInfo (sec,cust_first_name,cust_last_name,cust_address1,cust_

```

**Sample Convenience Fee ACH Debit - US**

```

        address2,cust_city,cust_state,
        cust_zip, routing_num, account_num, check_num, account_type, micr);
ACHDebit ach_debit = new ACHDebit (order_id, cust_id, amount, achinfo);
ConvFeeInfo convFeeInfo = new ConvFeeInfo();
convFeeInfo.setConvenienceFee("5.00");
ach_debit.setConvFeeInfo(convFeeInfo);
HttpPostRequest mpgReq = new HttpPostRequest();
mpgReq.setProcCountryCode (processing_country_code);
mpgReq.setTestMode(true); //false or comment out this line for production transactions
mpgReq.setStoreId(store_id);
mpgReq.setApiToken (api_token);
mpgReq.setTransaction(ach_debit);
mpgReq.send();
try
{
    Receipt receipt = mpgReq.getReceipt();
    System.out.println("CardType = " + receipt.getCardType());
    System.out.println("TransAmount = " + receipt.getTransAmount());
    System.out.println("TxnNumber = " + receipt.getTxnNumber());
    System.out.println("ReceiptId = " + receipt.getReceiptId());
    System.out.println("TransType = " + receipt.getTransType());
    System.out.println("ReferenceNum = " + receipt.getReferenceNum());
    System.out.println("ResponseCode = " + receipt.getResponseCode());
    System.out.println("BankTotals = " + receipt.getBankTotals());
    System.out.println("Message = " + receipt.getMessage());
    System.out.println("AuthCode = " + receipt.getAuthCode());
    System.out.println("Complete = " + receipt.getComplete());
    System.out.println("TransDate = " + receipt.getTransDate());
    System.out.println("TransTime = " + receipt.getTransTime());
    System.out.println("Ticket = " + receipt.getTicket());
    System.out.println("TimedOut = " + receipt.getTimedOut());
    System.out.println("CfSuccess = " + receipt.getCfSuccess());
    System.out.println("CfStatus = " + receipt.getCfStatus());
    System.out.println("FeeAmount = " + receipt.getFeeAmount());
    System.out.println("FeeRate = " + receipt.getFeeRate());
    System.out.println("FeeType = " + receipt.getFeeType());
}
catch (Exception e)
{
    e.printStackTrace();
}
}

```

## 9.5 ACH Debit with Customer Information

### Convenience Fee ACH Debit with Customer Information transaction object definition

```
ACHDebit achdebit = new ACHDebit();
```

### HttpPostRequest object for Convenience Fee ACH Debit with Customer Info transaction

```
HttpPostRequest mpgReq = new HttpPostRequest();
```

```
mpgReq.setTransaction(achdebit);
```

**Convenience Fee ACH Debit with Customer Information transaction object values****Table 1: ACH Debit with Customer Information transaction object mandatory values**

Value	Type	Limits	Set Method
Order ID	String	50-character alpha-numeric	<code>achdebit.setOrderId(order_id);</code>
Amount	String	9-character decimal	<code>achdebit.setAmount(amount);</code>
ACH Info	Object		<code>achdebit.setAchInfo(achinfo);</code>

**Table 108: ACH Debit with Customer Information transaction optional values**

Value	Type	Limits	Set method
Customer ID	String	50-character alpha-numeric	<code>achdebit.setCustId(custid);</code>
Status Check	Boolean	true/false	<code>mpgReq.setStatusCheck(status_check);</code>
Customer information	Object	Not applicable. See Section Appendix D (page 330).	<code>achdebit.setCustInfo(customer);</code>
Convenience fee	Object	Not applicable. See Appendix H (page 352).	<code>achdebit.setConvFeeInfo(convFeeInfo);</code>
Recurring billing	Object	Not applicable. See Section Appendix G (page 345).	<code>achdebit.setRecurInfo(recurInfo);</code>

**Sample ACH Debit with Customer Information - US**

```

package USA;
import JavaAPI.*;
public class TestUSAConvFeeACHDebitCustInfo
{
    public static void main(String args[])
    {
        String store_id = "monusqa138";
        String api_token = "qatoken";
        String processing_country_code = "US";
        java.util.Date createDate = new java.util.Date();

```



## Sample ACH Debit with Customer Information - US

```

String order_id = "Test"+createDate.getTime();
String cust_id = "customer1";
String amount = "1.00";
String sec = "web";
String cust_first_name = "Bob";
String cust_last_name = "Smith";
String cust_address1 = "3300 Bloor St W";
String cust_address2 = "4th floor west tower";
String cust_city = "Toronto";
String cust_state = "ON";
String cust_zip = "M1M1M1";
String routing_num = "490000018";
String account_num = "222222";
String check_num = "11";
String account_type = "checking";
String micr = "t071000013t742941347o113";
ACHInfo achinfo = new ACHInfo (sec,cust_first_name,cust_last_name,cust_address1,cust_
    address2,cust_city,cust_state,
    cust_zip,routing_num,account_num,check_num,account_type,micr);
/***** Billing/Shipping Variables *****/
String last_name = "Harris";
String first_name = "Tommie";
String company_name = "Da Bears";
String address = "454 Michigan Ave";
String city = "Chicago";
String province = "Illinois";
String zip_code = "99879";
String country = "USA";
String phone_number = "764-908-9989";
String fax = "764-908-9990";
String tax1 = "1.00";
String tax2 = "1.00";
String tax3 = "1.00";
String shipping_cost = "2.00";
/***** Line Item Variables *****/
String[] name = new String[]{"Mini Bears Helmet", "Mini Bills Helmet"};
String[] quantity = new String[]{"1", "2"};
String[] product_code = new String[] {"BEOOOWS9", "BUFD099D"};
String[] extended_amount = new String[] {"4.00", "6.00"};
/***** Miscellaneous Variables *****/
String email = "T.Harris@ChicagoBears.com";
String instructions = "Must arrive before opening day at Lambeau";
/***** Transaction Object *****/
ACHDebit ach_debit = new ACHDebit (order_id, cust_id, amount, achinfo);
/***** Billing/Shipping Object *****/
BillingLocation billingAddress =
    new BillingLocation (last_name, first_name, company_name, address,
        city, province, zip_code, country, phone_number,
        fax, tax1, tax2, tax3, shipping_cost);
ShippingLocation shippingAddress =
    new ShippingLocation (last_name, first_name, company_name, address,
        city, province, zip_code, country, phone_number,
        fax, tax1, tax2, tax3, shipping_cost);
/***** Line Item Object *****/
Item[] lineItems = new Item[]{new Item(name[0], quantity[0], product_code[0], extended_amount[0]),
    new Item(name[1], quantity[1], product_code[1], extended_amount[1])};
/***** Customer Information Object *****/
CustomerInfo custData =
    new CustomerInfo (billingAddress, shippingAddress, email, instructions, lineItems);
ach_debit.setCustInfo (custData);

```

**Sample ACH Debit with Customer Information - US**

```
//Convenience Fee
ConvFeeInfo convFeeInfo = new ConvFeeInfo();
convFeeInfo.setConvenienceFee("1.00");
ach_debit.setConvFeeInfo(convFeeInfo);
HttpsPostRequest mpgReq = new HttpsPostRequest();
mpgReq.setProcCountryCode(processing_country_code);
mpgReq.setTestMode(true); //false or comment out this line for production transactions
mpgReq.setStoreId(store_id);
mpgReq.setApiToken(api_token);
mpgReq.setTransaction(ach_debit);
mpgReq.send();
try
{
    Receipt receipt = mpgReq.getReceipt();
    System.out.println("CardType = " + receipt.getCardType());
    System.out.println("TransAmount = " + receipt.getTransAmount());
    System.out.println("TxnNumber = " + receipt.getTxnNumber());
    System.out.println("ReceiptId = " + receipt.getReceiptId());
    System.out.println("TransType = " + receipt.getTransType());
    System.out.println("ReferenceNum = " + receipt.getReferenceNum());
    System.out.println("ResponseCode = " + receipt.getResponseCode());
    System.out.println("BankTotals = " + receipt.getBankTotals());
    System.out.println("Message = " + receipt.getMessage());
    System.out.println("AuthCode = " + receipt.getAuthCode());
    System.out.println("Complete = " + receipt.getComplete());
    System.out.println("TransDate = " + receipt.getTransDate());
    System.out.println("TransTime = " + receipt.getTransTime());
    System.out.println("Ticket = " + receipt.getTicket());
    System.out.println("TimedOut = " + receipt.getTimedOut());
    System.out.println("CfSuccess = " + receipt.getCfStatus());
    System.out.println("CfStatus = " + receipt.getCfStatus());
    System.out.println("FeeAmount = " + receipt.getFeeAmount());
    System.out.println("FeeRate = " + receipt.getFeeRate());
    System.out.println("FeeType = " + receipt.getFeeType());
}
catch (Exception e)
{
    e.printStackTrace();
}
}
```

## 9.6 Purchase with VbV, MCSC and Amex SafeKey

### Convenience Fee Purchase with VbV/MCSC/SafeKey transaction object definition

```
CavvPurchase cavvPurchase = new CavvPurchase();
```

### HttpsPostRequest object for Convenience Fee Purchase w/ VbV/MCSC/SafeKey transaction

```
HttpsPostRequest mpgReq = new HttpsPostRequest();
```

### Convenience Fee Purchase with VbV/MCSC/SafeKey transaction object values

For a full description of mandatory and optional values, see "Definition of Request Fields" on page 306

**Table 1: Convenience Fee Purchase with VbV, MCSC, SafeKey - Mandatory Values**

Value	Type	Limits	Set Method
Order ID	String	50-character alpha-numeric	<code>cavvPurchase.setOrderId (order_id);</code>
Amount	String	9-character decimal	<code>cavvPurchase.setAmount (amount);</code>
Credit card number	String	20-character numeric	<code>cavvPurchase.setPan (pan);</code>
Expiry date	String	4-character numeric YYMM format	<code>cavvPurchase.setExpDate (exp-date);</code>
E-Commerce indicator	String	1-character alpha-numeric	<code>cavvPurchase.setCryptType (crypt_type);</code>
Cardholder Authentication Verification Value (CAVV)	String	50-character alpha-numeric	<code>cavvPurchase.setCavv (cavv);</code>
Convenience fee amount	String	9-character decimal	<code>cavvPurchase.setConvFeeInfo (convFeeInfo);</code>

**Table 2: Convenience Fee Purchase with VbV, MCSC, SafeKey - Optional Values**

Value	Type	Limits	Set Method
Status Check	Boolean	true/false	<code>mpgReq.setStatusCheck (status_check);</code>
Customer ID	String	50-character alpha-numeric	<code>cavvPurchase.setCustId (custid);</code>
Dynamic descriptor	String	20-character alpha-numeric	<code>cavvPurchase.setDynamicDescriptor (dynamic_descriptor);</code>
Commercial card invoice	String	17-character alpha-numeric	<code>cavvPurchase.setCommcardInvoice (commcard_invoice);</code>
Commercial card tax amount	String	9-character decimal	<code>cavvPurchase.setCommcardTaxAmount (commcard_tax_amount);</code>
E-Commerce Indicator	String	1-character numeric	<code>cavvPurchase.setCryptType (crypt_type);</code>

Value	Type	Limits	Set Method
Wallet indicator	String	3-character alphanumeric	<code>cavvPurchase.setWalletIndicator(wallet_indicator);</code>
Customer Information	Object	Not applicable. See Section Appendix D (page 330).	<code>cavvPurchase.setCustInfo(customer);</code>
AVS Information	Object	Not applicable. See Appendix E (page 336).	<code>cavvPurchase.setAvsInfo(avsCheck);</code>
CVD Information	Object	Not applicable. See Appendix F (page 342).	<code>cavvPurchase.setCvdInfo(cvdCheck);</code>
Convenience Fee	Object	Not applicable. See Appendix H (page 352).	<code>cavvPurchase.setConvFeeInfo(convFeeInfo);</code>

Sample Purchase with VbV and MC Secure Code - CA	Sample Purchase with VbV and MC Secure Code - US
<pre> package Canada; import JavaAPI.*; public class TestCanadaConvFeeCavvPurchase {     public static void main(String[] args)     {         String store_id = "monca00392";         String api_token = "qYdISUhHiOdfTr1CLNpN";         java.util.Date createDate = new java.util.Date             ();         String order_id = "Test"+createDate.getTime();         String cust_id = "CUS887H67";         String amount = "10.42";         String pan = "4242424242424242";         String expdate = "1901"; //YYMM         String cavv = "AAABBJg0VhI0VniQEjRWAAAAA=";         String dynamic_descriptor = "123456";         String processing_country_code = "CA";         String crypt_type = "5";         boolean status_check = false;         /***** Convenience Fee *****/         ConvFeeInfo convFeeInfo = new ConvFeeInfo();         convFeeInfo.setConvenienceFee("1.00");          CavvPurchase cavvPurchase = new CavvPurchase             ();         cavvPurchase.setOrderId(order_id); </pre>	<pre> package USA; import JavaAPI.*; public class TestUSAConvFeeCavvPurchase {     public static void main(String args[])     {         String store_id = "monusgal38";         String api_token = "qatoken";         String processing_country_code = "US";         java.util.Date createDate = new java.util.Date             ();         String order_id = "Test"+createDate.getTime();         String cust_id = "B_Griese_06";         String amount = "10.00";         String pan = "4005554444400555";         String expiry_date = "1912";         String cavv = "AAABBJg0VhI0VniQEjRWAAAAA=";         String commcard_invoice = "INV009";         String commcard_tax_amount = "1.00";         String street_number = "212";         String street_name = "Michigan Avenue";         String zip_code = "87882";         String cvd_indicator = "1";         String cvd_code = "890";         CavvPurchase cavvPurchase = new CavvPurchase             ();         cavvPurchase.setOrderId(order_id);         cavvPurchase.setCustId(cust_id); </pre>

Sample Purchase with VbV and MC Secure Code - CA	Sample Purchase with VbV and MC Secure Code - US
<pre> cavvPurchase.setCustId(cust_id); cavvPurchase.setAmount(amount); cavvPurchase.setPan(pan); cavvPurchase.setExpdate(expdate); cavvPurchase.setCavv(cavv); cavvPurchase.setCryptType(crypt_type);     //Mandatory for AMEX only cavvPurchase.setDynamicDescriptor(dynamic_     descriptor); cavvPurchase.setConvFeeInfo(convFeeInfo); HttpsPostRequest mpgReq = new HttpsPostRequest (); mpgReq.setProcCountryCode(processing_country_ code); mpgReq.setTestMode(true); //false or comment     out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(cavvPurchase); mpgReq.setStatusCheck(status_check); mpgReq.send(); try { Receipt receipt = mpgReq.getReceipt(); System.out.println("CardType = " +     receipt.getCardType()); System.out.println("TransAmount = " +     receipt.getTransAmount()); System.out.println("TxnNumber = " +     receipt.getTxnNumber()); System.out.println("ReceiptId = " +     receipt.getReceiptId()); System.out.println("TransType = " +     receipt.getTransType()); System.out.println("ReferenceNum = " +     receipt.getReferenceNum()); System.out.println("ResponseCode = " +     receipt.getResponseCode()); System.out.println("ISO = " + receipt.getISO ()); System.out.println("BankTotals = " +     receipt.getBankTotals()); System.out.println("Message = " +     receipt.getMessage()); System.out.println("AuthCode = " +     receipt.getAuthCode()); System.out.println("Complete = " +     receipt.getComplete()); System.out.println("TransDate = " +     receipt.getTransDate()); System.out.println("TransTime = " +     receipt.getTransTime()); System.out.println("Ticket = " +     receipt.getTicket()); System.out.println("TimedOut = " +     receipt.getTimedOut()); </pre>	<pre> cavvPurchase.setAmount(amount); cavvPurchase.setPan(pan); cavvPurchase.setExpdate(expiry_date); cavvPurchase.setCavv(cavv); cavvPurchase.setCommcardInvoice(commcard_     invoice); cavvPurchase.setCommcardTaxAmount(commcard_     tax_amount);  AvsInfo avsCheck = new AvsInfo(street_number,     street_name, zip_code); cavvPurchase.setAvsInfo(avsCheck); CvdInfo cvdCheck = new CvdInfo(cvd_indicator,     cvd_code); cavvPurchase.setCvdInfo(cvdCheck); ConvFeeInfo convFeeInfo = new ConvFeeInfo(); convFeeInfo.setConvenienceFee("5.00"); cavvPurchase.setConvFeeInfo(convFeeInfo); HttpsPostRequest mpgReq = new HttpsPostRequest (); mpgReq.setProcCountryCode(processing_country_ code); mpgReq.setTestMode(true); //false or comment     out this line for production transactions mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(cavvPurchase); mpgReq.send(); try { Receipt receipt = mpgReq.getReceipt(); System.out.println("CardType = " +     receipt.getCardType()); System.out.println("TransAmount = " +     receipt.getTransAmount()); System.out.println("TxnNumber = " +     receipt.getTxnNumber()); System.out.println("ReceiptId = " +     receipt.getReceiptId()); System.out.println("TransType = " +     receipt.getTransType()); System.out.println("ReferenceNum = " +     receipt.getReferenceNum()); System.out.println("ResponseCode = " +     receipt.getResponseCode()); System.out.println("BankTotals = " +     receipt.getBankTotals()); System.out.println("Message = " +     receipt.getMessage()); System.out.println("AuthCode = " +     receipt.getAuthCode()); System.out.println("Complete = " +     receipt.getComplete()); System.out.println("TransDate = " +     receipt.getTransDate()); System.out.println("TransTime = " + </pre>

Sample Purchase with VbV and MC Secure Code - CA	Sample Purchase with VbV and MC Secure Code - US
<pre> System.out.println("CavvResultCode = " +     receipt.getCavvResultCode());  System.out.println("CfSuccess = " +     receipt.getCfSuccess()); System.out.println("CfStatus = " +     receipt.getCfStatus()); System.out.println("FeeAmount = " +     receipt.getFeeAmount()); System.out.println("FeeRate = " +     receipt.getFeeRate()); System.out.println("FeeType = " +     receipt.getFeeType()); } catch (Exception e) { e.printStackTrace(); } } </pre>	<pre>         receipt.getTransTime()); System.out.println("Ticket = " +     receipt.getTicket()); System.out.println("TimedOut = " +     receipt.getTimedOut()); System.out.println("AVS Response = " +     receipt.getAvsResultCode()); System.out.println("CVD Response = " +     receipt.getCvdResultCode()); System.out.println("CfSuccess = " +     receipt.getCfSuccess()); System.out.println("CfStatus = " +     receipt.getCfStatus()); System.out.println("FeeAmount = " +     receipt.getFeeAmount()); System.out.println("FeeRate = " +     receipt.getFeeRate()); System.out.println("FeeType = " +     receipt.getFeeType()); } catch (Exception e) { e.printStackTrace(); } } </pre>



## 10 Visa Checkout

- 10.1 About Visa Checkout
- 10.2 Transaction Types - Visa Checkout
- 10.3 Integrating Visa Checkout Lightbox
- 10.4 Transaction Flow for Visa Checkout
- 10.5 Visa Checkout Purchase
- 10.6 Visa Checkout PreAuth
- 10.7 Visa Checkout Completion
- 10.8 Visa Checkout Purchase Correction
- 10.9 Visa Checkout Refund
- 10.10 Visa Checkout Information

### 10.1 About Visa Checkout

Visa Checkout is a digital wallet service offered to customers using credit cards. Visa Checkout functionality can be integrated into the Moneris Gateway via the API.

### 10.2 Transaction Types - Visa Checkout

Below is a list of transactions supported by the Visa Checkout API, other terms used for the transaction type are indicated in brackets.

#### **VdotMePurchase (sale)**

Call to Moneris to obtain funds on the Visa Checkout `callId` and ready them for deposit into the merchant's account. It also updates the customer's Visa Checkout transaction history.

#### **VdotMePreAuth (authorisation / pre-authorization)**

Call to Moneris to verify funds on the Visa Checkout `callId` and reserve those funds for your merchant account. The funds are locked for a specified amount of time, based on the card issuer. To retrieve the funds from this call so that they may be settled in the merchant's account, a `VdotMeCompletion` must be performed. It also updates the customer's Visa Checkout transaction history.

#### **VdotMeCompletion (Completion / Capture)**

Call to Moneris to obtain funds reserved by `VdotMePreAuth` call. This transaction call retrieves the locked funds and readies them for settlement into the merchant's account. This call must be made typically within 72 hours of performing `VdotMePreAuth`. It also updates the customer's Visa Checkout transaction history.

#### **VdotMePurchaseCorrection (Void / Purchase Correction)**

Call to Moneris to void the `VdotMePurchases` and `VdotMeCompletions` the same day\* that they occurred on. It also updates the customer's Visa Checkout transaction history.

#### **VdotMeRefund (Credit)**

Call to Moneris to refund against a `VdotMePurchase` or `VdotMeCompletion` to refund any part, or all of the transaction. It also updates the customer's Visa Checkout transaction history.

#### **VdotMeInfo (Credit)**

Call to Moneris to obtain cardholder details such as, name on card, partial card number, expiry date, shipping and billing information.



## 10.3 Integrating Visa Checkout Lightbox

1. Using the API Key you obtained when you configured your Visa Checkout store, create Visa Checkout Lightbox integration with JavaScript by following the Visa documentation, which is available on Visa Developer portal:

**Visa Checkout General Information (JavaScript SDK download)**

[https://developer.visa.com/products/visa\\_checkout](https://developer.visa.com/products/visa_checkout)

**Getting Started With Visa checkout**

[https://developer.visa.com/products/visa\\_checkout/guides#getting\\_started](https://developer.visa.com/products/visa_checkout/guides#getting_started)

**Adding Visa Checkout to Your Web Page**

[https://developer.visa.com/products/visa\\_checkout/guides#adding\\_to\\_page](https://developer.visa.com/products/visa_checkout/guides#adding_to_page)

**Submitting the Consumer Payment Request**

[https://developer.visa.com/products/visa\\_checkout/guides#submitting\\_csr](https://developer.visa.com/products/visa_checkout/guides#submitting_csr)

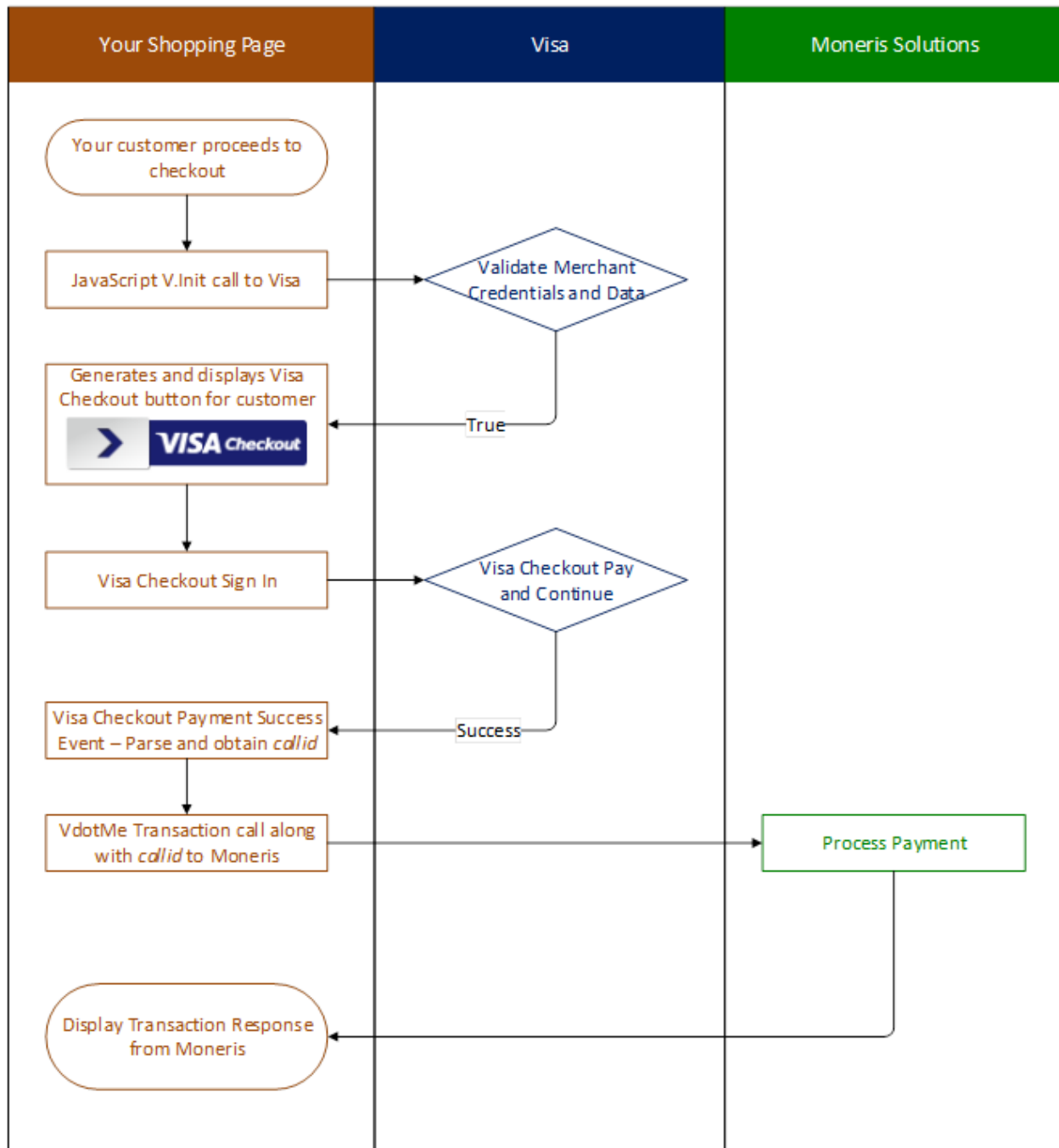
2. If you get a payment success event from the resulting Visa Lightbox JavaScript, you will have to parse and obtain the `callid` from their JSON response. The additional information is obtained using `VdotMeInfo`.

Once you have obtained the `callid` from Visa Lightbox, you can make appropriate Visa Checkout `VdotMe` transaction call to Moneris to process your transaction and obtain your funds.

**NOTE:** During Visa Checkout testing in our QA test environment, please use the API key that you generated in the Visa Checkout configuration for the `V.Init` call in your JavaScript.

## 10.4 Transaction Flow for Visa Checkout

### VISA Checkout Process – Successful Process



## 10.5 Visa Checkout Purchase

### VdotMePurchase transaction object definition

```
VdotMePurchase vmepurchase = new VdotMePurchase();
```

### HttpPostRequest for VdotMePurchase transaction

```
HttpPostRequest mpgReq = new HttpPostRequest();
```

### VdotMePurchase transaction object values

**Table 1: VdotMePurchase transaction object mandatory values**

Value	Type	Limits	Set Method
Order ID	String	50-character alpha-numeric	<code>vmepurchase.setOrderId(order_id);</code>
Call ID	String	20-character numeric	<code>vmepurchase.setCallId(call_id);</code>
Amount	String	9-character decimal	<code>vmepurchase.setAmount(amount);</code>
E-commerce indicator	String	1-character alpha-numeric	<code>vmepurchase.setCryptType(crypt_type);</code>

**Table 2: VdotMePurchase transaction object optional values**

Value	Type	Limits	Set Method
Dynamic descriptor	String	20-character alphanumeric	<code>vDotMePurchaseCorrection.setDynamicDescriptor(dynamic_descriptor);</code>
Status check	Boolean	true/false	<code>mpgReq.setStatusCheck(status_check);</code>

#### Sample VdotMePurchase - CA

```
package Canada;
import JavaAPI.*;
public class TestCanadaVdotMePurchase
{
    public static void main(String[] args)
    {
        String store_id = "store2";
        String api_token = "yesguy";
        String cust_id = "Joe Doe";
        java.util.Date createDate = new java.util.Date();
        String order_id = "Test"+createDate.getTime();
        String amount = "8.00";
```

### Sample VdotMePurchase - CA

```
String crypt_type = "7";
String call_id = "9104624497663077101";
String dynamic_descriptor = "inv123";
String processing_country_code = "CA";
boolean status_check = false;
VdotMePurchase vmepurchase = new VdotMePurchase();
vmepurchase.setOrderId(order_id);
vmepurchase.setCustId(cust_id);
vmepurchase.setAmount(amount);
vmepurchase.setCallId(call_id);
vmepurchase.setCryptType(crypt_type);
vmepurchase.setDynamicDescriptor(dynamic_descriptor);
HttpPostRequest mpgReq = new HttpPostRequest();
mpgReq.setProcCountryCode(processing_country_code);
mpgReq.setTestMode(true); //false or comment out this line for production transactions
mpgReq.setStoreId(store_id);
mpgReq.setApiToken(api_token);
mpgReq.setTransaction(vmepurchase);
mpgReq.setStatusCheck(status_check);
mpgReq.send();
try
{
    Receipt receipt = mpgReq.getReceipt();
    System.out.println("CardType = " + receipt.getCardType());
    System.out.println("TransAmount = " + receipt.getTransAmount());
    System.out.println("TxnNumber = " + receipt.getTxnNumber());
    System.out.println("ReceiptId = " + receipt.getReceiptId());
    System.out.println("TransType = " + receipt.getTransType());
    System.out.println("ReferenceNum = " + receipt.getReferenceNum());
    System.out.println("ResponseCode = " + receipt.getResponseCode());
    System.out.println("ISO = " + receipt.getISO());
    System.out.println("BankTotals = " + receipt.getBankTotals());
    System.out.println("Message = " + receipt.getMessage());
    System.out.println("AuthCode = " + receipt.getAuthCode());
    System.out.println("Complete = " + receipt.getComplete());
    System.out.println("TransDate = " + receipt.getTransDate());
    System.out.println("TransTime = " + receipt.getTransTime());
    System.out.println("Ticket = " + receipt.getTicket());
    System.out.println("TimedOut = " + receipt.getTimedOut());
    System.out.println("StatusCode = " + receipt.getStatusCode());
    System.out.println("StatusMessage = " + receipt.getStatusMessage());
}
catch (Exception e)
{
    e.printStackTrace();
}
}
```

## 10.6 Visa Checkout PreAuth

`VdotMePreAuth` is virtually identical to the `VdotMePurchase` with the exception of the transaction type name.

If the order could not be completed for some reason, such as an order is cancelled, made in error or not fulfillable, the `VdotMePreAuth` transaction must be reversed within 72 hours.

To reverse an authorization, perform a `VdotMeCompletion` transaction for \$0.00 (zero dollars).

**VdotMePreAuth transaction object definition**

```
VdotMePreauth vMePreauthRequest = new VdotMePreauth();
```

**HttpPostRequest object for VdotMePreAuth transaction**

```
HttpPostRequest mpgReq = new HttpPostRequest();
```

**VdotMePreAuth transaction object values****Table 1: VdotMePreAuth transaction object mandatory values**

Value	Type	Limits	Set Method
Amount	String	9-character decimal	<code>vDotMeReauthRequest.setAmount(amount);</code>
Call ID	String	20-character numeric	<code>vDotMeReauthRequest.setCallId(call_id);</code>
Order ID	String	50-character alpha-numeric	<code>vDotMeReauthRequest.setOrderId(order_id);</code>
E-commerce indicator	String	1-character alpha-numeric	<code>vDotMeReauthRequest.setCryptType(crypt_type);</code>

**Table 2: VdotMePreAuth transaction object optional values**

Value	Type	Limits	Set Method
Customer ID	String	50-character alpha-numeric	<code>vMePreauthRequest.setCustId(custid);</code>
Dynamic descriptor	String	20-character alpha-numeric	<code>vDotMeReauthRequest.setDynamicDescriptor(dynamic_descriptor);</code>

**Sample VdotMePreAuth - CA**

```
package Canada;
import JavaAPI.*;
public class TestCanadaVdotMePreauth
{
    public static void main(String[] args)
    {
        String store_id = "store2";
        String api_token = "yesguy";
        String amount = "5.00";
        String crypt_type = "7";
        java.util.Date createDate = new java.util.Date();
        String order_id = "Test"+createDate.getTime();
        String call_id = "9104624497663077101";
```

### Sample VdotMePreAuth - CA

```
String cust_id = "my customer id";
String processing_country_code = "CA";
boolean status_check = false;
VdotMePreauth vMePreauthRequest = new VdotMePreauth();
vMePreauthRequest.setOrderId(order_id);
vMePreauthRequest.setAmount(amount);
vMePreauthRequest.setCallId(call_id);
vMePreauthRequest.setCustId(cust_id);
vMePreauthRequest.setCryptType(crypt_type);
HttpPostRequest mpgReq = new HttpPostRequest();
mpgReq.setProcCountryCode(processing_country_code);
mpgReq.setTestMode(true); //false or comment out this line for production transactions
mpgReq.setStoreId(store_id);
mpgReq.setApiToken(api_token);
mpgReq.setTransaction(vMePreauthRequest);
mpgReq.setStatusCheck(status_check);
mpgReq.send();
try
{
    Receipt receipt = mpgReq.getReceipt();
    System.out.println("CardType = " + receipt.getCardType());
    System.out.println("TransAmount = " + receipt.getTransAmount());
    System.out.println("TxnNumber = " + receipt.getTxnNumber());
    System.out.println("ReceiptId = " + receipt.getReceiptId());
    System.out.println("TransType = " + receipt.getTransType());
    System.out.println("ReferenceNum = " + receipt.getReferenceNum());
    System.out.println("ResponseCode = " + receipt.getResponseCode());
    System.out.println("ISO = " + receipt.getISO());
    System.out.println("BankTotals = " + receipt.getBankTotals());
    System.out.println("Message = " + receipt.getMessage());
    System.out.println("AuthCode = " + receipt.getAuthCode());
    System.out.println("Complete = " + receipt.getComplete());
    System.out.println("TransDate = " + receipt.getTransDate());
    System.out.println("TransTime = " + receipt.getTransTime());
    System.out.println("Ticket = " + receipt.getTicket());
    System.out.println("TimedOut = " + receipt.getTimedOut());
    System.out.println("StatusCode = " + receipt.getStatusCode());
    System.out.println("StatusMessage = " + receipt.getStatusMessage());
}
catch (Exception e)
{
    e.printStackTrace();
}
}
```

## 10.7 Visa Checkout Completion

The `VdotMeCompletion` transaction is used to secure the funds locked by a `VdotMePreAuth` transaction.

You may also perform this transaction at \$0.00 (zero dollars) to reverse a `VdotMePreauth` transaction that you are unable to fulfill.

### VdotMeCompletion transaction object definition

```
VdotMeCompletion vmecompletion = new VdotMeCompletion();
```

**HttpPostRequest object for VdotMeCompletion transaction**

```
HttpPostRequest mpgReq = new HttpPostRequest();
```

**VdotMeCompletion transaction object values****Table 1: VdotMeCompletion transaction object mandatory values**

Value	Type	Limits	Set Method
Order ID	String	50-character alpha-numeric	<code>vmecompletion.setOrderId(order_id);</code>
Transaction number	String	255-character alpha-numeric	<code>vmecompletion.setTxnNumber(txn_number);</code>
Completion amount	String	9-character decimal	<code>vmecompletion.setAmount(comp_amount);</code>
E-commerce indicator	String	1-character alpha-numeric	<code>vmecompletion.setCryptType(crypt_type);</code>

**Table 2: VdotMeCompletion transaction object optional values**

Value	Type	Limits	Set Method
Customer ID	String	50-character alpha-numeric	<code>vmecompletion.setCustId(custid);</code>
Dynamic descriptor	String	20-character alpha-numeric	<code>vmecompletion.setDynamicDescriptor(dynamic_descriptor);</code>

**Sample VdotMeCompletion - CA**

```
package Canada;
import JavaAPI.*;
public class TestCanadaVdotMeCompletion
{
    public static void main(String[] args)
    {
        String store_id = "store2";
        String api_token = "yesguy";
        String order_id = "Test1432134710264";
        String txn_number = "724379-0_10";
        String comp_amount = "1.00";
        String ship_indicator = "P";
        String crypt_type = "7";
        String cust_id = "mycustomerid";
        String dynamic_descriptor = "inv 123";
        String processing_country_code = "CA";
        boolean status_check = false;
        VdotMeCompletion vmecompletion = new VdotMeCompletion();
```

### Sample VdotMeCompletion - CA

```

vmecompletion.setOrderId(order_id);
vmecompletion.setTxnNumber(txn_number);
vmecompletion.setAmount(comp_amount);
vmecompletion.setCryptType(crypt_type);
vmecompletion.setDynamicDescriptor(dynamic_descriptor);
vmecompletion.setCustId(cust_id);
vmecompletion.setShipIndicator(ship_indicator);
HttpPostRequest mpgReq = new HttpsPostRequest();
mpgReq.setProcCountryCode(processing_country_code);
mpgReq.setTestMode(true); //false or comment out this line for production transactions
mpgReq.setStoreId(store_id);
mpgReq.setApiToken(api_token);
mpgReq.setTransaction(vmecompletion);
mpgReq.setStatusCheck(status_check);
mpgReq.send();
try
{
    Receipt receipt = mpgReq.getReceipt();
    System.out.println("CardType = " + receipt.getCardType());
    System.out.println("TransAmount = " + receipt.getTransAmount());
    System.out.println("TxnNumber = " + receipt.getTxnNumber());
    System.out.println("ReceiptId = " + receipt.getReceiptId());
    System.out.println("TransType = " + receipt.getTransType());
    System.out.println("ReferenceNum = " + receipt.getReferenceNum());
    System.out.println("ResponseCode = " + receipt.getResponseCode());
    System.out.println("ISO = " + receipt.getISO());
    System.out.println("BankTotals = " + receipt.getBankTotals());
    System.out.println("Message = " + receipt.getMessage());
    System.out.println("AuthCode = " + receipt.getAuthCode());
    System.out.println("Complete = " + receipt.getComplete());
    System.out.println("TransDate = " + receipt.getTransDate());
    System.out.println("TransTime = " + receipt.getTransTime());
    System.out.println("Ticket = " + receipt.getTicket());
    System.out.println("TimedOut = " + receipt.getTimedOut());
    System.out.println("StatusCode = " + receipt.getStatusCode());
    System.out.println("StatusMessage = " + receipt.getStatusMessage());
}
catch (Exception e)
{
    e.printStackTrace();
}
}

```

## 10.8 Visa Checkout Purchase Correction

`VdotMePurchaseCorrection` is used to cancel a `VdotMeCompletion` or `VdotMePurchase` transaction that was performed in the current batch. No other transaction types can be corrected using this method.

No amount is required because it is always for 100% of the original transaction.

### `VdotMePurchaseCorrection` transaction object definition

```

VdotMePurchaseCorrection vDotMePurchaseCorrection = new VdotMePurchaseCor-
rection();

```



**HttpPostRequest object for VdotMePurchaseCorrection transaction**

```
HttpPostRequest mpgReq = new HttpPostRequest();
```

**VdotMePurchaseCorrection transaction object values****Table 1: VdotMePurchaseCorrection transaction object mandatory values**

Value	Type	Limits	Set Method
Order ID	String	50-character alpha-numeric	<code>vDotMePurchaseCorrection.setOrderId(order_id);</code>
Transaction number	String	255-character alpha-numeric	<code>vDotMePurchaseCorrection.setTxnNumber(txn_number);</code>

**Table 2: VdotMePurchaseCorrection transaction object optional values**

Value	Type	Limits	Set Method
Customer ID	String	50-character alpha-numeric	<code>vDotMePurchaseCorrection.setCustId(custid);</code>
Status check	Boolean	true/false	<code>mpgReq.setStatusCheck(status_check);</code>

**Sample VdotMePurchaseCorrection - CA**

```
package Canada;
import JavaAPI.*;
public class TestCanadaVdotMePurchaseCorrection
{
    public static void main(String[] args)
    {
        String store_id = "store2";
        String api_token = "yesguy";
        String order_id = "Test1432134533159";
        String txn_number = "724377-0_10";
        String crypt_type = "7";
        String cust_id = "my customer id";
        String processing_country_code = "CA";
        boolean status_check = false;
        VdotMePurchaseCorrection vDotMePurchaseCorrection = new VdotMePurchaseCorrection();
        vDotMePurchaseCorrection.setOrderId(order_id);
        vDotMePurchaseCorrection.setCustId(cust_id);
        vDotMePurchaseCorrection.setTxnNumber(txn_number);
        vDotMePurchaseCorrection.setCryptType(crypt_type);
        HttpPostRequest mpgReq = new HttpPostRequest();
        mpgReq.setProcCountryCode(processing_country_code);
        mpgReq.setTestMode(true); //false or comment out this line for production transactions
        mpgReq.setStoreId(store_id);
        mpgReq.setApiToken(api_token);
        mpgReq.setTransaction(vDotMePurchaseCorrection);
        mpgReq.setStatusCheck(status_check);
        mpgReq.send();
    }
}
```

**Sample VdotMePurchaseCorrection - CA**

```

try
{
    Receipt receipt = mpgReq.getReceipt();
    System.out.println("CardType = " + receipt.getCardType());
    System.out.println("TransAmount = " + receipt.getTransAmount());
    System.out.println("TxnNumber = " + receipt.getTxnNumber());
    System.out.println("ReceiptId = " + receipt.getReceiptId());
    System.out.println("TransType = " + receipt.getTransType());
    System.out.println("ReferenceNum = " + receipt.getReferenceNum());
    System.out.println("ResponseCode = " + receipt.getResponseCode());
    System.out.println("ISO = " + receipt.getISO());
    System.out.println("BankTotals = " + receipt.getBankTotals());
    System.out.println("Message = " + receipt.getMessage());
    System.out.println("AuthCode = " + receipt.getAuthCode());
    System.out.println("Complete = " + receipt.getComplete());
    System.out.println("TransDate = " + receipt.getTransDate());
    System.out.println("TransTime = " + receipt.getTransTime());
    System.out.println("Ticket = " + receipt.getTicket());
    System.out.println("TimedOut = " + receipt.getTimedOut());
    System.out.println("StatusCode = " + receipt.getStatusCode());
    System.out.println("StatusMessage = " + receipt.getStatusMessage());
}
catch (Exception e)
{
    e.printStackTrace();
}
}

```

## 10.9 Visa Checkout Refund

VdotMeRefund will credit a specified amount to the cardholder's credit card and update their Visa Checkout transaction history. A refund can be sent up to the full value of the original VdotMeCompletion or VdotMePurchase.

### VdotMeRefund transaction object definition

```
VdotMeRefund vDotMeRefundRequest = new VdotMeRefund();
```

### HttpPostRequest object for VdotMeRefund transaction

```
HttpPostRequest mpgReq = new HttpPostRequest();
```

**VdotMeRefund transaction object values****Table 1: VdotMeRefund transaction object mandatory values**

Value	Type	Limits	Set Method
Order ID	String	50-character alpha-numeric	<code>vDotMeRefundRequest.setOrderId(order_id);</code>
Amount	String	9-character decimal	<code>vDotMeRefundRequest.setAmount(amount);</code>
Transaction number	String	255-character alpha-numeric	<code>vDotMeRefundRequest.setTxnNumber(txn_number);</code>
E-commerce indicator	String	1-character alpha-numeric	<code>vDotMeRefundRequest.setCryptType(crypt_type);</code>

**Table 2: VdotMeRefund transaction object optional values**

Value	Type	Limits	Set Method
Customer ID	String	50-character alpha-numeric	<code>vDotMeRefundRequest.setCustId(custid);</code>
Dynamic descriptor	String	20-character alpha-numeric	<code>vDotMeRefundRequest.setDynamicDescriptor(dynamic_descriptor);</code>
Status check	Boolean	true/false	<code>mpgReq.setStatusCheck(status_check);</code>

**Sample VdotMeRefund - CA**

```

package Canada;
import JavaAPI.*;
public class TestCanadaVdotMeRefund
{
    public static void main(String[] args)
    {
        String store_id = "store2";
        String api_token = "yesguy";
        String order_id = "Test1432134710264";
        String txn_number = "724380-1_10";
        String amount = "1.00";
        String crypt_type = "7";
        String dynamic_descriptor = "inv 123";
        String cust_id = "my customer id";
        String processing_country_code = "CA";
        boolean status_check = false;
        VdotMeRefund vDotMeRefundRequest = new VdotMeRefund();
        vDotMeRefundRequest.setOrderId(order_id);
    }
}

```

### Sample VdotMeRefund - CA

```

vDotMeRefundRequest.setAmount(amount);
vDotMeRefundRequest.setCustId(cust_id);
vDotMeRefundRequest.setTxnNumber(txn_number);
vDotMeRefundRequest.setCryptType(crypt_type);
vDotMeRefundRequest.setDynamicDescriptor(dynamic_descriptor);
HttpPostRequest mpgReq = new HttpPostRequest();
mpgReq.setProcCountryCode(processing_country_code);
mpgReq.setTestMode(true); //false or comment out this line for production transactions
mpgReq.setStoreId(store_id);
mpgReq.setApiToken(api_token);
mpgReq.setTransaction(vDotMeRefundRequest);
mpgReq.setStatusCheck(status_check);
mpgReq.send();
try
{
    Receipt receipt = mpgReq.getReceipt();
    System.out.println("CardType = " + receipt.getCardType());
    System.out.println("TransAmount = " + receipt.getTransAmount());
    System.out.println("TxnNumber = " + receipt.getTxnNumber());
    System.out.println("ReceiptId = " + receipt.getReceiptId());
    System.out.println("TransType = " + receipt.getTransType());
    System.out.println("ReferenceNum = " + receipt.getReferenceNum());
    System.out.println("ResponseCode = " + receipt.getResponseCode());
    System.out.println("ISO = " + receipt.getISO());
    System.out.println("BankTotals = " + receipt.getBankTotals());
    System.out.println("Message = " + receipt.getMessage());
    System.out.println("AuthCode = " + receipt.getAuthCode());
    System.out.println("Complete = " + receipt.getComplete());
    System.out.println("TransDate = " + receipt.getTransDate());
    System.out.println("TransTime = " + receipt.getTransTime());
    System.out.println("Ticket = " + receipt.getTicket());
    System.out.println("TimedOut = " + receipt.getTimedOut());
    System.out.println("StatusCode = " + receipt.getStatusCode());
    System.out.println("StatusMessage = " + receipt.getStatusMessage());
}
catch (Exception e)
{
    e.printStackTrace();
}
}

```

## 10.10 Visa Checkout Information

VdotMeInfo will get customer information from their Visa Checkout wallet. The details returned are dependent on what the customer has stored in Visa Checkout.

### VdotMeInfo transaction object definition

```
VdotMeInfo vmeinfo = new VdotMeInfo();
```

### HttpPostRequest object for VdotMeInfo transaction

```
HttpPostRequest mpgReq = new HttpPostRequest();
```

## VdotMeInfo transaction object values

Table 1: VdotMeInfo transaction object mandatory values

Value	Type	Limits	Set Method
Call ID	String	20-character numeric	<code>vmeinfo.setCallId(call_id);</code>

## Sample VdotMeInfo - CA

```

package Canada;
import java.util.Hashtable;
import java.util.Set;
import JavaAPI.*;
public class TestCanadaVdotMeInfo
{
    public static void main(String[] args)
    {
        String store_id = "store2";
        String api_token = "yesguy";
        String call_id = "8620484083629792701";
        String processing_country_code = "CA";
        boolean status_check = false;
        VdotMeInfo vmeinfo = new VdotMeInfo();
        vmeinfo.setCallId(call_id);
        HttpsPostRequest mpgReq = new HttpsPostRequest();
        mpgReq.setProcCountryCode(processing_country_code);
        mpgReq.setTestMode(true); //false or comment out this line for production transactions
        mpgReq.setStoreId(store_id);
        mpgReq.setApiToken(api_token);
        mpgReq.setTransaction(vmeinfo);
        mpgReq.setStatusCheck(status_check);
        mpgReq.send();

        try
        {
            Receipt receipt = mpgReq.getReceipt();

            System.out.println("dump of vmeDataHash variables:");
            Hashtable<String, String>vmeDataHash = new Hashtable<String, String>();
            vmeDataHash = receipt.getVmeDataHash();

            Set<String> keys = vmeDataHash.keySet();
            for(String key: keys){
                System.out.println("Value of "+key+" is: "+vmeDataHash.get(key));
            }
            System.out.println("Response Code: " + receipt.getResponseCode());
            System.out.println("Response Message: " + receipt.getMessage());
            System.out.println("Currency Code: " + receipt.getCurrencyCode());
            System.out.println("Payment Totals: " + receipt.getPaymentTotal());
            System.out.println("User First Name: " + receipt.getUserFirstName());
            System.out.println("User Last Name: " + receipt.getUserLastName());
            System.out.println("Username: " + receipt.getUserName());
            System.out.println("User Email: " + receipt.getUserEmail());
            System.out.println("Encrypted User ID: " + receipt.getEncUserId());
            System.out.println("Creation Time Stamp: " + receipt.getCreationTimeStamp());
            System.out.println("Name on Card: " + receipt.getNameOnCard());
            System.out.println("Expiration Month: " + receipt.getExpirationDateMonth());
            System.out.println("Expiration Year: " + receipt.getExpirationDateYear());
        }
    }
}

```

### Sample VdotMeInfo - CA

```

System.out.println("Last 4 Digits: " + receipt.getLastFourDigits());
System.out.println("Bin Number (6 Digits): " + receipt.getBinSixDigits());
System.out.println("Card Brand: " + receipt.getCardBrand());
System.out.println("Card Type: " + receipt.getVdotMeCardType());
System.out.println("Billing Person Name: " + receipt.getPersonName());
System.out.println("Billing Address Line 1: " + receipt.getBillingAddressLine1());
System.out.println("Billing City: " + receipt.getBillingCity());
System.out.println("Billing State/Province Code: " + receipt.getBillingStateProvinceCode());
System.out.println("Billing Postal Code: " + receipt.getBillingPostalCode());
System.out.println("Billing Country Code: " + receipt.getBillingCountryCode());
System.out.println("Billing Phone: " + receipt.getBillingPhone());
System.out.println("Billing ID: " + receipt.getBillingId());
System.out.println("Billing Verification Status: " + receipt.getBillingVerificationStatus());
System.out.println("Partial Shipping Country Code: " + receipt.getPartialShippingCountryCode());
System.out.println("Partial Shipping Postal Code: " + receipt.getPartialShippingPostalCode());
System.out.println("Shipping Person Name: " + receipt.getShippingPersonName());
System.out.println("Shipping Address Line 1: " + receipt.getShipAddressLine1());
System.out.println("Shipping City: " + receipt.getShippingCity());
System.out.println("Shipping State/Province Code: " + receipt.getShippingStateProvinceCode());
System.out.println("Shipping Postal Code: " + receipt.getShippingPostalCode());
System.out.println("Shipping Country Code: " + receipt.getShippingCountryCode());
System.out.println("Shipping Phone: " + receipt.getShippingPhone());
System.out.println("Shipping Default: " + receipt.getShippingDefault());
System.out.println("Shipping ID: " + receipt.getShippingId());
System.out.println("Shipping Verification Status: " + receipt.getShippingVerificationStatus());
System.out.println("isExpired: " + receipt.getIsExpired());
System.out.println("Base Image File Name: " + receipt.getBaseImageFileName());
System.out.println("Height: " + receipt.getHeight());
System.out.println("Width: " + receipt.getWidth());
System.out.println("Issuer Bid: " + receipt.getIssuerBid());
System.out.println("Risk Advice: " + receipt.getRiskAdvice());
System.out.println("Risk Score: " + receipt.getRiskScore());
System.out.println("AVS Response Code: " + receipt.getAvsResponseCode());
System.out.println("CVV Response Code: " + receipt.getCvvResponseCode());
System.out.println("\r\nPress the enter key to exit");
}
catch (Exception e)
{
e.printStackTrace();
}
}
}

```



## 11 Level 2/3 Transactions

- 11.1 About Level 2/3 Transactions
- 11.2 Level 2/3 Visa Transactions
- 11.3 Level 2/3 MasterCard Transactions
- 11.4 Level 2/3 American Express Transactions

### 11.1 About Level 2/3 Transactions

The Moneris Gateway API supports passing Level 2/3 transaction data for Visa, MasterCard and American Express.

All Level 2/3 transactions use the same Preauth transaction as described in Pre-Authorization (page 15).

### 11.2 Level 2/3 Visa Transactions

- 11.2.1 Level 2/3 Transaction Types for Visa
- 11.2.2 Level 2/3 Transaction Flow for Visa
- 11.2.3 VSCompletion
- 11.2.4 VSPurchal
- 11.2.5 VSForcepost
- 11.2.6 VSPurchaseCorrection
- 11.2.7 VSRefund
- 11.2.8 VSIndependentRefund

#### 11.2.1 Level 2/3 Transaction Types for Visa

This transaction set includes a suite of corporate card financial transactions as well as a transaction that allows for the passing of Level 2/3 data. Please ensure that Visa Level 2/3 support is enabled on your merchant account. Batch Close, Open Totals and Preauth are identical to the transactions outlined in the section Basic Transaction Set (page 10).

- When the Preauth response contains CorporateCard equal to true then you can submit the MC transactions.
- If CorporateCard is false then the card does not support Level 2/3 data and non Level 2/3 transaction are to be used. If the card is not a corporate card, please refer to section 4 for the appropriate non-corporate card transactions.
- Ensure to collect the MessageId response field from the Preauth response – this field must be sent in the Level 2/3 data transaction.



**NOTE:** This transaction set is intended for transactions where Corporate Card is true and Level 2/3 data will be submitted. If the credit card is found to be a corporate card but you do not wish to send any Level 2/3 data then you may submit VS transactions using the basic transaction set outlined in Basic Transaction Set (page 10).

**Preauth – (authorisation / preauthorisation)**

Preauth verifies and locks funds on the customer's credit card. The funds are locked for a specified amount of time, based on the card issuer. To retrieve the funds from a preauth so that they may be settled in the merchant account a capture must be performed. CorporateCard will return as true if the card supports Level 2/3.

**VSCompletion – (Capture/Preauth Completion)**

Once a Preauth is obtained the funds that are locked need to be retrieved from the customer's credit card. The capture retrieves the locked funds and readies them for settlement in to the merchant account. Prior to performing a VSCompletion, a Preauth must be performed.

**VSForcePost – (Force Capture/Preauth Completion)**

This transaction is an alternative to VSCompletion to obtain the funds locked on Preauth obtained from IVR or equivalent terminal. The force post retrieves the locked funds and readies them for settlement in to the merchant account.

**VSPurchaseCorrection (Void, Correction)**

VSPurchases can be voided the same day\* that they occur. A void must be for the full amount of the transaction and will remove any record of it from the cardholder statement.

**VSRefund – (Credit)**

A refund can be performed against a VSCompletion to refund any part or all of the transaction.

**VSIndependentRefund – (Credit)**

A refund can be performed against a purchase or a capture to refund any part, or all of the transaction. Independent refund is used when the originating transaction was not performed through Moneris Gateway. Independent refund is used when the originating transaction was not performed through Moneris Gateway. Please note, the Independent Refund transaction may or may not be supported on your account. If you receive a transaction not allowed error when attempting an independent refund, it may mean the transaction is not supported on your account. If you wish to have the Independent Refund transaction type temporarily enabled (or re-enabled), please contact the Service Centre at 1-866-319-7450.

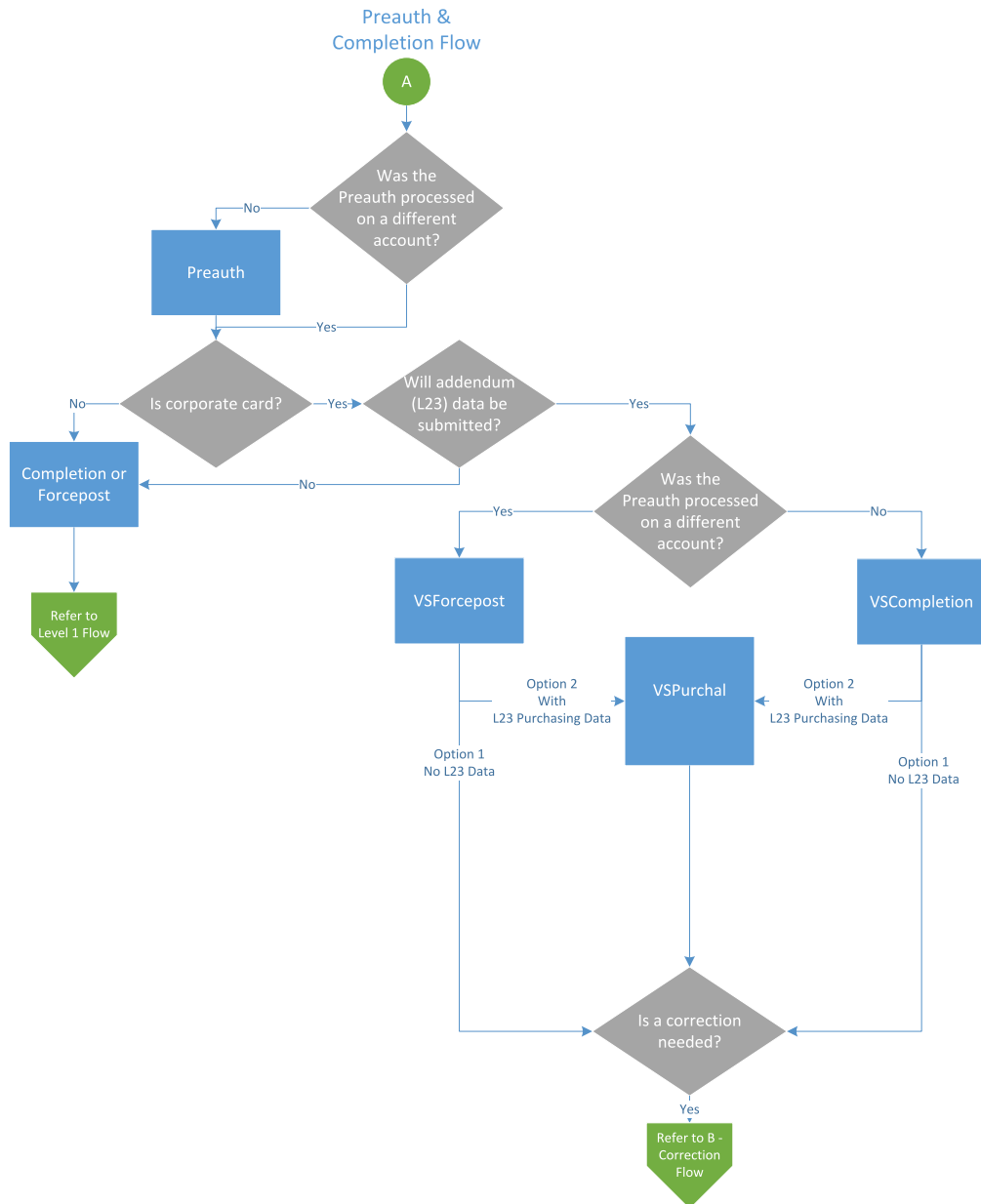
**VSPurchal – (Level 2/3 Data)**

VSPurchal will contain all the required and optional data fields for Level 2/3 Business to Business data. VSPurchal data can be sent when the card has been identified in the Preauth transaction request as being a corporate card.

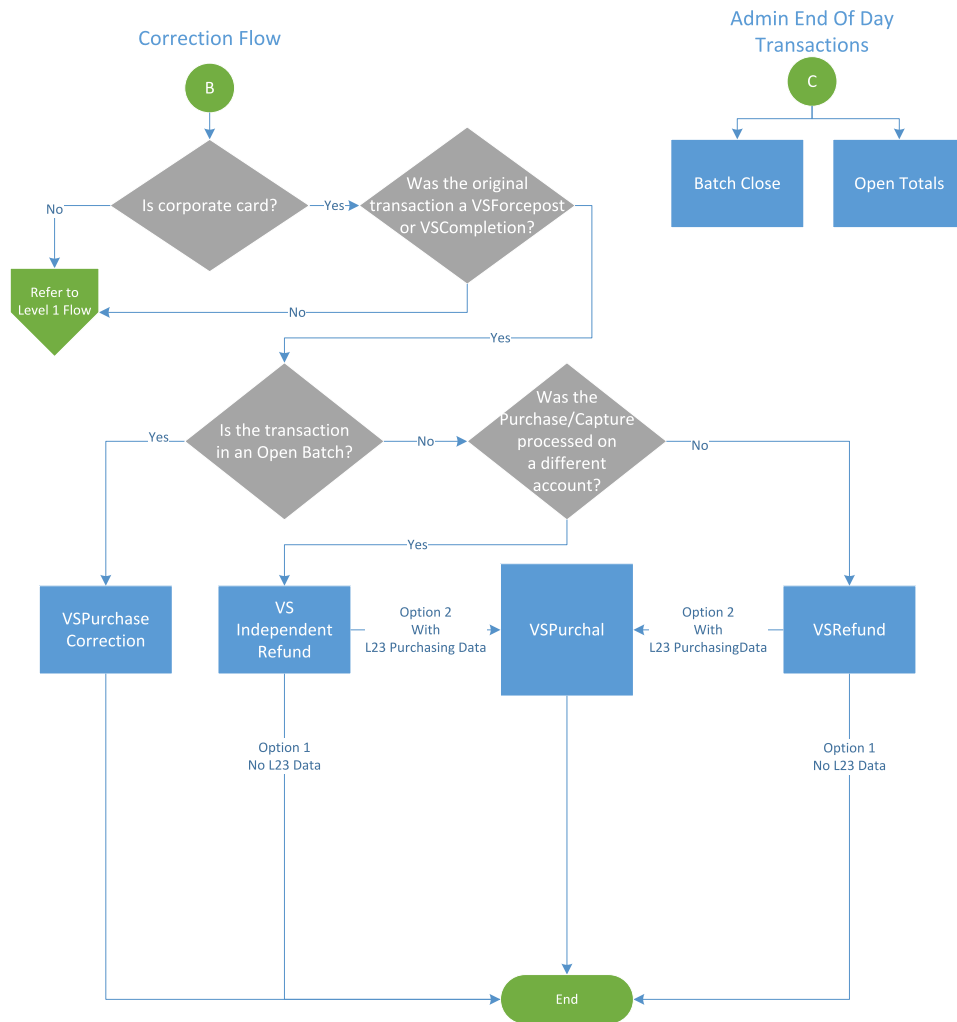
\* A VSPurchaseCorrection can be performed against a transaction as long as the batch that contains the original transaction remains open. When using the automated closing feature, the batch close occurs daily between 10 – 11 pm EST.

## 11.2.2 Level 2/3 Transaction Flow for Visa

### Pre-authorization/Completion Transaction Flow



## Purchase Correction Transaction Flow



### 11.2.3 VSCompletion

The Visa Completion transaction is used to secure the funds locked by a preauth transaction. When sending a capture request you will need two pieces of information from the original preauth – the order\_id and the txn\_number from the returned response.

```
import JavaAPI.*;
public class TestVSCompletion {
    public static void main(String args[])
    {
        String host = args[0];
        String store_id = args[1];
        String api_token = args[2];
        String order_id = args[3];
        String comp_amount = args[4];
        String txn_number = args[5];
        String crypt = args[6];
        String national_tax = args[7];
        String merchant_vat_no = args[8];
        String local_tax = args[9];
        String customer_vat_no = args[8];
        String local_tax_no = args[9];
        String cri = args[8];
        String customer_code = args[8];
        String invoice_number = args[9];
        VSCompletion completion = new VSCompletion (order_id, comp_amount, txn_number, crypt,national_tax,
            merchant_vat_no,local_tax, customer_vat_no,local_tax_no, cri,customer_code,invoice_number);
        HttpsPostRequest mpgReq = new HttpsPostRequest(host, store_id, api_token, completion);
        try
        {
            Receipt receipt = mpgReq.getReceipt();
            System.out.println("CardType = " + receipt.getCardType());
            System.out.println("TransAmount = " + receipt.getTransAmount());
            System.out.println("TxnNumber = " + receipt.getTxnNumber());
            System.out.println("ReceiptId = " + receipt.getReceiptId());
            System.out.println("TransType = " + receipt.getTransType());
            System.out.println("ReferenceNum = " + receipt.getReferenceNum());
            System.out.println("ResponseCode = " + receipt.getResponseCode());
            System.out.println("ISO = " + receipt.getISO());
            System.out.println("BankTotals = " + receipt.getBankTotals());
            System.out.println("Message = " + receipt.getMessage());
            System.out.println("AuthCode = " + receipt.getAuthCode());
            System.out.println("Complete = " + receipt.getComplete());
            System.out.println("TransDate = " + receipt.getTransDate());
            System.out.println("TransTime = " + receipt.getTransTime());
            System.out.println("Ticket = " + receipt.getTicket());
            System.out.println("TimedOut = " + receipt.getTimedOut());
            System.out.println("ITD Response = " + receipt.getITDResponse());
            System.out.println("IsVisaDebit = " + receipt.getIsVisaDebit());
        }
        catch (Exception e)
        {
            e.printStackTrace();
        }
    }
}
```

### 11.2.4 VSPurchal

Upon sending a VSCompletion, VSRefund, VSPurchaseCorrection and succesfully receiving a message\_id in the response the Level 2/3 data can be submitted. Below is a sample of setting the fields. For a full

description of all fields (required and optional) please see Definition of Request Fields for Level 2/3 - Visa (VSPurchal) (page 363).

```
import JavaAPI.*;
public class TestVSPurchal {
    public static void main(String args[]) throws Exception
    {
        String host = args[0];
        String store_id = args[1];
        String api_token = args[2];
        String order_id = args[3];
        String txn number = args[4];
        /***** Level 2 Addendum *****/

        String buyerName = "Buyer Manager";
        String localTaxRate = "13.00";
        String dutyAmount = "0.00";
        String discountTreatment = "0";
        String discountAmt = "0.00";
        String freightAmount = "0.20";
        String shipToPosCode = "M8X 2W8";
        String shipFromPosCode = "M1K 2Y7";
        String desCouCode = "CA";
        String vatRefNum = "VAT12345";
        String taxTreatment = "3";//3 = Gross prices given with tax information provided at invoice level
        String gstHstFreightAmount = "0.00";
        String gstHstFreightRate = "13.00";

        VSPurcha data2 =
        new VSPurcha(buyerName, localTaxRate, dutyAmount, discountTreatment, discountAmt, freightAmount,
            shipToPosCode, shipFromPosCode, desCouCode,
            vatRefNum, taxTreatment, gstHstFreightAmount, gstHstFreightRate);
        /***** Level 3 Addendum *****/
        String[] itemComCode = new String[]{"", ""};
        String[] productCode = new String[]{"CHR123", "DDSK200"};
        String[] itemDescription = new String[]{"Office Chair", "Disk Drive"};
        String[] itemQuantity = new String[]{"3", "1"};
        String[] itemUom = new String[]{"EA", "EA"};
        String[] unitCost = new String[]{"0.20", "0.40"};
        String[] vatTaxAmt = new String[]{"0.00", "0.00"};
        String[] vatTaxRate = new String[]{"13.00", "13.00"};
        String[] discountTreatmentL = new String[]{"0", "0"};
        String[] discountAmtL = new String[]{"0.00", "0.00"};

        // Every order has one or more VSPurchl, which can be also called Line Item

        VSPurchl[] data3 = new VSPurchl[2];
        data3[0] = new VSPurchl(itemComCode[0], productCode[0], itemDescription[0], itemQuantity[0],
            itemUom[0], unitCost[0], vatTaxAmt[0], vatTaxRate[0], discountTreatmentL[0], discountAmtL[0]);
        data3[1] = new VSPurchl(itemComCode[1], productCode[1], itemDescription[1], itemQuantity[1],
            itemUom[1], unitCost[1], vatTaxAmt[1], vatTaxRate[1], discountTreatmentL[1], discountAmtL[1]);

        /***** Request *****/

        VSPurchal data = new VSPurchal(order_id,txn number,data2,data3);
        HttpsPostRequest mpgReq = new HttpsPostRequest(host, store_id, api_token, data);
        try
        {
            Receipt receipt = mpgReq.getReceipt();
            System.out.println("CardType = " + receipt.getCardType());
            System.out.println("TransAmount = " + receipt.getTransAmount());
            System.out.println("TxnNumber = " + receipt.getTxnNumber());
            System.out.println("ReceiptId = " + receipt.getReceiptId());
            System.out.println("TransType = " + receipt.getTransType());
            System.out.println("ReferenceNum = " + receipt.getReferenceNum());
        }
    }
}
```

```

System.out.println("ResponseCode = " + receipt.getResponseCode());
System.out.println("ISO = " + receipt.getISO());
System.out.println("BankTotals = " + receipt.getBankTotals());
System.out.println("Message = " + receipt.getMessage());
System.out.println("AuthCode = " + receipt.getAuthCode());
System.out.println("Complete = " + receipt.getComplete());
System.out.println("TransDate = " + receipt.getTransDate());
System.out.println("TransTime = " + receipt.getTransTime());
System.out.println("Ticket = " + receipt.getTicket());
System.out.println("TimedOut = " + receipt.getTimedOut());
System.out.println("ITD Response = " + receipt.getITDResponse());
System.out.println("IsVisaDebit = " + receipt.getIsVisaDebit());
}
catch (Exception e)
{
e.printStackTrace();
}
}
}

```

### 11.2.5 VSForcepost

Visa Forcepost transaction is used to secure the funds locked by a preauth transaction performed over IVR or equivalent terminal. When sending a forcepost request, you will need order\_id, amount, pan (card number), expiry date, crypt type and the auth code received in the preauth response.

```

import JavaAPI.*;
public class TestVSForcePost {
public static void main(String args[])
{
String host = args[0];
String store_id = args[1];
String api_token = args[2];
String order_id = args[3];
String cust_id = args[4];
String amount = args[5];
String pan = args[6];
String expdate = args[7];
String auth_code = args[8];
String crypt = args[9];
String national_tax = args[10];
String merchant_vat_no = args[11];
String local_tax = args[12];
String customer_vat_no = args[13];
String local_tax_no = args[14];
String cri = args[15];
String customer_code = args[16];
String invoice_number = args[17];
VSForcePost forcepost = new VSForcePost (order_id, cust_id, amount, pan, expdate, auth_
code, crypt, national_tax, merchant_vat_no, local_tax, customer_vat_no, local_tax_no, cri, customer_
code, invoice_number);
HttpPostRequest mpgReq = new HttpPostRequest(host, store_id, api_token, forcepost);
try
{
Receipt receipt = mpgReq.getReceipt();
System.out.println("CardType = " + receipt.getCardType());
System.out.println("TransAmount = " + receipt.getTransAmount());
System.out.println("TxnNumber = " + receipt.getTxnNumber());
System.out.println("ReceiptId = " + receipt.getReceiptId());
System.out.println("TransType = " + receipt.getTransType());
System.out.println("ReferenceNum = " + receipt.getReferenceNum());
System.out.println("ResponseCode = " + receipt.getResponseCode());
System.out.println("ISO = " + receipt.getISO());
}
}
}

```

```
System.out.println("BankTotals = " + receipt.getBankTotals());
System.out.println("Message = " + receipt.getMessage());
System.out.println("AuthCode = " + receipt.getAuthCode());
System.out.println("Complete = " + receipt.getComplete());
System.out.println("TransDate = " + receipt.getTransDate());
System.out.println("TransTime = " + receipt.getTransTime());
System.out.println("Ticket = " + receipt.getTicket());
System.out.println("TimedOut = " + receipt.getTimedOut());
System.out.println("ITD Response = " + receipt.getITDResponse());
System.out.println("IsVisaDebit = " + receipt.getIsVisaDebit());
}
catch (Exception e)
{
    e.printStackTrace();
}
}
```

### 11.2.6 VSPurchaseCorrection

The Visa Purchase Correction (void) transaction is used to cancel a transaction that was performed in the current batch. No amount is required because a void is always for 100% of the original transaction. The only transaction that can be voided using VSPurchaseCorrection is a VSCompletion or VSForcepost. To send a void the order\_id and txn\_number from the VSCompletion/VSForcepost are required.

```
import JavaAPI.*;
public class TestVSPurchaseCorrection {
    public static void main(String args[])
    {
        String host = args[0];
        String store_id = args[1];
        String api_token = args[2];
        String order_id = args[3];
        String txn_number = args[4];
        String crypt = args[5];
        VSPurchaseCorrection pc = new VSPurchaseCorrection(order_id, txn_number, crypt);
        HttpsPostRequest mpgReq = new HttpsPostRequest(host, store_id, api_token, pc);
        try
        {
            Receipt receipt = mpgReq.getReceipt();
            System.out.println("CardType = " + receipt.getCardType());
            System.out.println("TransAmount = " + receipt.getTransAmount());
            System.out.println("TxnNumber = " + receipt.getTxnNumber());
            System.out.println("ReceiptId = " + receipt.getReceiptId());
            System.out.println("TransType = " + receipt.getTransType());
            System.out.println("ReferenceNum = " + receipt.getReferenceNum());
            System.out.println("ResponseCode = " + receipt.getResponseCode());
            System.out.println("ISO = " + receipt.getISO());
            System.out.println("BankTotals = " + receipt.getBankTotals());
            System.out.println("Message = " + receipt.getMessage());
            System.out.println("AuthCode = " + receipt.getAuthCode());
            System.out.println("Complete = " + receipt.getComplete());
            System.out.println("TransDate = " + receipt.getTransDate());
            System.out.println("TransTime = " + receipt.getTransTime());
            System.out.println("Ticket = " + receipt.getTicket());
            System.out.println("TimedOut = " + receipt.getTimedOut());
            System.out.println("IsVisaDebit = " + receipt.getIsVisaDebit());
        }
        catch (Exception e)
        {
            e.printStackTrace();
        }
    }
}
```

```
}
```

### 11.2.7 VSRefund

Visa Refund will credit a specified amount to the cardholder's credit card. A refund can be sent up to the full value of the original VSCompletion or VSForcepost. To send a refund you will require the order\_id and txn\_number from the original VSCompletion or VSForcepost.

```
import JavaAPI.*;
public class TestVSRefund {
    public static void main(String args[])
    {
        String host = args[0];
        String store_id = args[1];
        String api_token = args[2];
        String order_id = args[3];
        String amount = args[4];
        String txn_number = args[5];
        String crypt = args[6];
        String national_tax = args[7];
        String merchant_vat_no = args[8];
        String local_tax = args[9];
        String customer_vat_no = args[8];
        String local_tax_no = args[9];
        String cri = args[8];
        String customer_code = args[8];
        String invoice_number = args[9];
        VSRefund refund = new VSRefund (order_id, amount, txn_number, crypt,national_tax, merchant_vat_
            no,local_tax, customer_vat_no,local_tax_no, cri,customer_code,invoice_number);
        HttpsPostRequest mpgReq = new HttpsPostRequest(host, store_id, api_token, refund);
        try
        {
            Receipt receipt = mpgReq.getReceipt();
            System.out.println("CardType = " + receipt.getCardType());
            System.out.println("TransAmount = " + receipt.getTransAmount());
            System.out.println("TxnNumber = " + receipt.getTxnNumber());
            System.out.println("ReceiptId = " + receipt.getReceiptId());
            System.out.println("TransType = " + receipt.getTransType());
            System.out.println("ReferenceNum = " + receipt.getReferenceNum());
            System.out.println("ResponseCode = " + receipt.getResponseCode());
            System.out.println("ISO = " + receipt.getISO());
            System.out.println("BankTotals = " + receipt.getBankTotals());
            System.out.println("Message = " + receipt.getMessage());
            System.out.println("AuthCode = " + receipt.getAuthCode());
            System.out.println("Complete = " + receipt.getComplete());
            System.out.println("TransDate = " + receipt.getTransDate());
            System.out.println("TransTime = " + receipt.getTransTime());
            System.out.println("Ticket = " + receipt.getTicket());
            System.out.println("TimedOut = " + receipt.getTimedOut());
            System.out.println("ITD Response = " + receipt.getITDResponse());
            System.out.println("IsVisaDebit = " + receipt.getIsVisaDebit());
        }
        catch (Exception e)
        {
            e.printStackTrace();
        }
    }
}
```



### 11.2.8 VSIndependentRefund

Visa Independent Refund will credit a specified amount to the cardholder's credit card. The independent refund does not require an existing order to be logged in the Moneris Gateway; however, the credit card number and expiry date will need to be passed. The transaction format is almost identical to a preauth.

```
import JavaAPI.*;
public class TestVSIndependentRefund {
    public static void main(String args[])
    {
        String host = args[0];
        String store_id = args[1];
        String api_token = args[2];
        String order_id = args[3];
        String cust_id = args[4];
        String amount = args[5];
        String pan = args[6];
        String expdate = args[7];
        String crypt = args[8];
        String national_tax = args[9];
        String merchant_vat_no = args[10];
        String local_tax = args[11];
        String customer_vat_no = args[12];
        String local_tax_no = args[13];
        String cri = args[14];
        String customer_code = args[15];
        String invoice_number = args[16];
        VSIndependentRefund indrefund = new VSIndependentRefund (order_id, cust_id,amount, pan,
            expdate,crypt,national_tax, merchant_vat_no,local_tax, customer_vat_no,local_tax_no,
            cri,customer_code,invoice_number);
        HttpsPostRequest mpgReq = new HttpsPostRequest(host, store_id, api_token, indrefund);
        try
        {
            Receipt receipt = mpgReq.getReceipt();
            System.out.println("CardType = " + receipt.getCardType());
            System.out.println("TransAmount = " + receipt.getTransAmount());
            System.out.println("TxnNumber = " + receipt.getTxnNumber());
            System.out.println("ReceiptId = " + receipt.getReceiptId());
            System.out.println("TransType = " + receipt.getTransType());
            System.out.println("ReferenceNum = " + receipt.getReferenceNum());
            System.out.println("ResponseCode = " + receipt.getResponseCode());
            System.out.println("ISO = " + receipt.getISO());
            System.out.println("BankTotals = " + receipt.getBankTotals());
            System.out.println("Message = " + receipt.getMessage());
            System.out.println("AuthCode = " + receipt.getAuthCode());
            System.out.println("Complete = " + receipt.getComplete());
            System.out.println("TransDate = " + receipt.getTransDate());
            System.out.println("TransTime = " + receipt.getTransTime());
            System.out.println("Ticket = " + receipt.getTicket());
            System.out.println("TimedOut = " + receipt.getTimedOut());
            System.out.println("ITD Response = " + receipt.getITDResponse());
            System.out.println("IsVisaDebit = " + receipt.getIsVisaDebit());
        }
        catch (Exception e)
        {
            e.printStackTrace();
        }
    }
}
```

## 11.3 Level 2/3 MasterCard Transactions

- 11.3.1 Level 2/3 Transaction Types for MasterCard
- 11.3.2 Level 2/3 Transaction Flow for MasterCard
- 11.3.3 MCCompletion
- 11.3.4 MCForcepost
- 11.3.5 MCPurchaseCorrection
- 11.3.6 MCRefund
- 11.3.7 MCIndependentRefund
- 11.3.8 MCCorpais - Corporate Card Common Data with Line Item Details

### 11.3.1 Level 2/3 Transaction Types for MasterCard

This transaction set includes a suite of corporate card financial transactions as well as a transaction that allows for the passing of Level 2/3 data. Please ensure MC Level 2/3 processing support is enabled on your merchant account. Batch Close, Open Totals and Preauth are identical to the transactions outlined in the section Basic Transaction Set (page 10).

When the Preauth response contains CorporateCard equal to true then you can submit the MC transactions.

If CorporateCard is false then the card does not support Level 2/3 data and non Level 2/3 transaction are to be used. If the card is not a corporate card, please refer to section 4 for the appropriate non-corporate card transactions.

**NOTE:** This transaction set is intended for transactions where Corporate Card is true and Level 2/3 data will be submitted. If the credit card is found to be a corporate card but you do not wish to send any Level 2/3 data then you may submit MC transactions using the transaction set outlined in Basic Transaction Set (page 10).

#### **Preauth – (authorisation / preauthorisation)**

The preauth verifies and locks funds on the customer's credit card. The funds are locked for a specified amount of time, based on the card issuer. To retrieve the funds from a preauth so that they may be settled in the merchant account a capture must be performed. Level 2/3 data submission is not supported as part of a preauth as a preauth is not settled. When CorporateCard is returned true then Level 2/3 data may be submitted.

#### **MCCompletion – (Capture/Preauth Completion)**

Once a Preauth is obtained the funds that are locked need to be retrieved from the customer's credit card. The capture retrieves the locked funds and readies them for settlement in to the merchant account. Prior to performing an MCCompletion a Preauth must be performed.

#### **MCForcePost – (Force Capture/Preauth Completion)**

This transaction is an alternative to MCCompletion to obtain the funds locked on Preauth obtained from IVR or equivalent terminal. The force post requires that the original Preauth's auth code is provided and it retrieves the locked funds and readies them for settlement in to the merchant account.

**MCPurchaseCorrection – (Void, Correction)**

MCCompletions can be voided the same day\* that they occur. A void must be for the full amount of the transaction and will remove any record of it from the cardholder statement. \* An MCPurchaseCorrection can be performed against a transaction as long as the batch that contains the original transaction remains open. When using the automated closing feature batch close occurs daily between 10 – 11 pm EST.

**MCTRefund – (Credit)**

A refund can be performed against an MCCompletion or MCForcepost to refund an amount less than or equal to the amount of the original transaction.

**MCTIndependentRefund – (Credit)**

A refund can be performed against an completion to refund any part, or all of the transaction. Independent refund is used when the originating transaction was not performed through Moneris Gateway. Please note, the Independent Refund transaction may or may not be supported on your account. If you receive a transaction not allowed error when attempting an independent refund, it may mean the transaction is not supported on your account. If you wish to have the Independent Refund transaction type temporarily enabled (or re-enabled), please contact the Service Centre at 1-866-319-7450.

**MCCorpais – (Level 2/3 Data)**

MCCorpais will contain the entire required and optional data field for Level 2/3 data.

MCCorpais data can be sent when the card has been identified in the transaction request as being a corporate card. This transaction supports multiple data types and combinations:

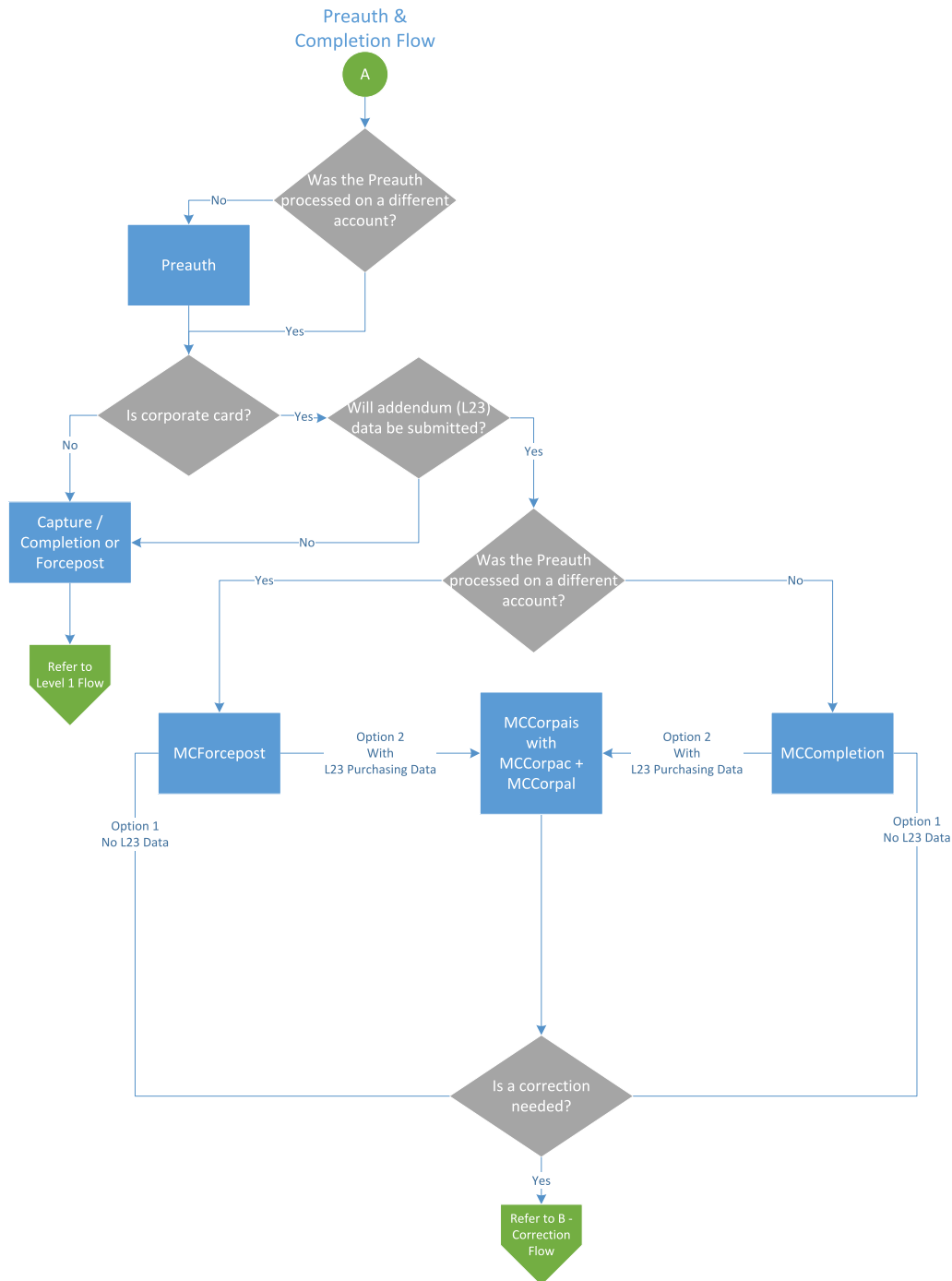
- Purchasing Card Data:
  - Corporate card common data with Line Item Details

**MCTLevel23 [DEPRECATED] – (Level 2/3 Data)**

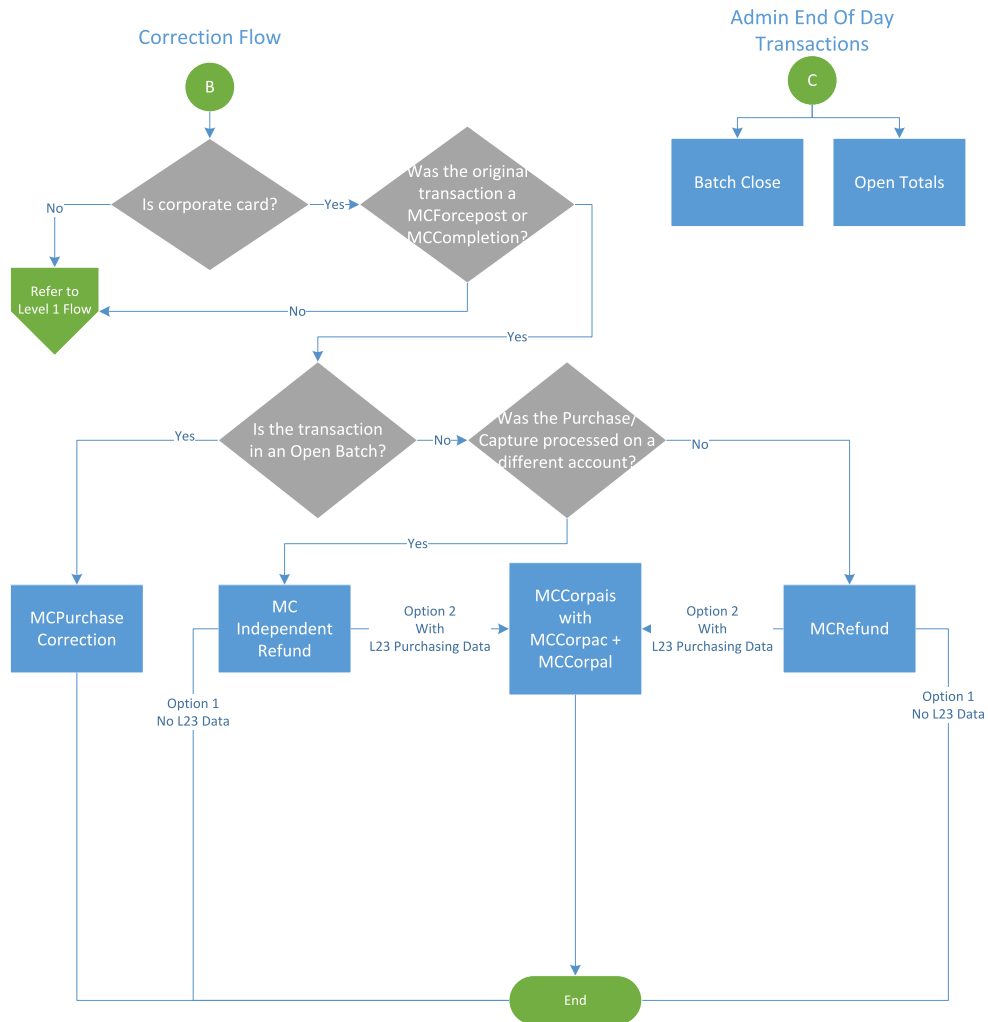
MCTLevel23 will contain all the required and optional data fields for Level 2/3 data. MCTLevel23 data can be sent when the card has been identified in the transaction request as being a corporate card. Please use MCCorpais instead of MCTLevel23 to submit any Level 2/3 Addendum data.

### 11.3.2 Level 2/3 Transaction Flow for MasterCard

#### Pre-authorization/Completion Transaction Flow



## Purchase Correction Transaction Flow



### 11.3.3 MCCompletion

The MasterCard Completion transaction is used to secure the funds locked by a preauth transaction. When sending a capture request you will need two pieces of information from the original preauth – the `order_id` and the `txn_number` from the returned response.

```
import JavaAPI.*;
import JavaAPI.XMLable.*;
public class TestMCCompletion {
    public static void main(String args[])
    {
        String host = args[0];
        String store_id = args[1];
        String api_token = args[2];
        String order_id = args[3];
        String amount = args[4];
        String txn_number = args[5];
        String crypt = args[6];
        String merchant_ref_no = args[7];
        String customer_code = args[8];
        String invoice_number = args[9];
        MCCompletion completion = new MCCompletion (order_id, amount, txn_number, crypt,merchant_ref_no,
            customer_code,invoice_number);
        HttpsPostRequest mpgReq = new HttpsPostRequest(host, store_id, api_token, completion);
        try
        {
            Receipt receipt = mpgReq.getReceipt();
            System.out.println("CardType = " + receipt.getCardType());
            System.out.println("TransAmount = " + receipt.getTransAmount());
            System.out.println("TxnNumber = " + receipt.getTxnNumber());
            System.out.println("ReceiptId = " + receipt.getReceiptId());
            System.out.println("TransType = " + receipt.getTransType());
            System.out.println("ReferenceNum = " + receipt.getReferenceNum());
            System.out.println("ResponseCode = " + receipt.getResponseCode());
            System.out.println("ISO = " + receipt.getISO());
            System.out.println("BankTotals = " + receipt.getBankTotals());
            System.out.println("Message = " + receipt.getMessage());
            System.out.println("AuthCode = " + receipt.getAuthCode());
            System.out.println("Complete = " + receipt.getComplete());
            System.out.println("TransDate = " + receipt.getTransDate());
            System.out.println("TransTime = " + receipt.getTransTime());
            System.out.println("Ticket = " + receipt.getTicket());
            System.out.println("TimedOut = " + receipt.getTimedOut());
            System.out.println("ITD Response = " + receipt.getITDResponse());
            System.out.println("IsVisaDebit = " + receipt.getIsVisaDebit());
        }
        catch (Exception e)
        {
            e.printStackTrace();
        }
    }
}
```

### 11.3.4 MCForcepost

MasterCard Forcepost transaction is used to secure the funds locked by a preauth transaction performed over IVR or equivalent terminal. When sending a force post request, you will need `order_id`, `amount`, `pan` (card number), `expiry date`, `crypt type` and the `auth code` received in the preauth response.

```
import JavaAPI.*;
```

```
public class TestMCForcePost {
    public static void main(String args[])
    {
        String host = args[0];
        String store_id = args[1];
        String api_token = args[2];
        String order_id = args[3];
        String amount = args[4];
        String pan = args[5];
        String expdate = args[6];
        String authCode = args[7];
        String merchant_ref_no = args[8];
        String customer_code = args[9];
        String invoice_number = args[10];
        String crypt_type = args[11];
        MCForcePost mcforcrcpost = new MCForcePost (order_id, "Cust_id",amount, pan, expdate,authCode,
            merchant_ref_no,customer_code,invoice_number,crypt_type);
        HttpsPostRequest mpgReq = new HttpsPostRequest(host, store_id, api_token, mcforcrcpost);
        try
        {
            Receipt receipt = mpgReq.getReceipt();
            System.out.println("CardType = " + receipt.getCardType());
            System.out.println("TransAmount = " + receipt.getTransAmount());
            System.out.println("TxnNumber = " + receipt.getTxnNumber());
            System.out.println("ReceiptId = " + receipt.getReceiptId());
            System.out.println("TransType = " + receipt.getTransType());
            System.out.println("ReferenceNum = " + receipt.getReferenceNum());
            System.out.println("ResponseCode = " + receipt.getResponseCode());
            System.out.println("ISO = " + receipt.getISO());
            System.out.println("BankTotals = " + receipt.getBankTotals());
            System.out.println("Message = " + receipt.getMessage());
            System.out.println("AuthCode = " + receipt.getAuthCode());
            System.out.println("Complete = " + receipt.getComplete());
            System.out.println("TransDate = " + receipt.getTransDate());
            System.out.println("TransTime = " + receipt.getTransTime());
            System.out.println("Ticket = " + receipt.getTicket());
            System.out.println("TimedOut = " + receipt.getTimedOut());
            System.out.println("ITD Response = " + receipt.getITDResponse());
            System.out.println("IsVisaDebit = " + receipt.getIsVisaDebit());
        }
        catch (Exception e)
        {
            e.printStackTrace();
        }
    }
}
```

### 11.3.5 MCPurchaseCorrection

The MasterCard Purchase Correction (void) transaction is used to cancel a transaction that was performed in the current batch. No amount is required because a void is always for 100% of the original transaction. The only transaction that can be voided is completion. To send a void the order\_id and txn\_number from the MCCompletion or MCForcepost are required.

```
import JavaAPI.*;
public class TestMCPurchaseCorrection {
    public static void main(String args[])
    {
        String host = args[0];
        String store_id = args[1];
        String api_token = args[2];
        String order_id = args[3];
```

```

String txn_number = args[4];
String crypt = args[5];
MCPurchaseCorrection pc = new MCPurchaseCorrection(order_id, txn_number, crypt);
HttpsPostRequest mpgReq = new HttpsPostRequest(host, store_id, api_token, pc);
try
{
    Receipt receipt = mpgReq.getReceipt();
    System.out.println("CardType = " + receipt.getCardType());
    System.out.println("TransAmount = " + receipt.getTransAmount());
    System.out.println("TxnNumber = " + receipt.getTxnNumber());
    System.out.println("ReceiptId = " + receipt.getReceiptId());
    System.out.println("TransType = " + receipt.getTransType());
    System.out.println("ReferenceNum = " + receipt.getReferenceNum());
    System.out.println("ResponseCode = " + receipt.getResponseCode());
    System.out.println("ISO = " + receipt.getISO());
    System.out.println("BankTotals = " + receipt.getBankTotals());
    System.out.println("Message = " + receipt.getMessage());
    System.out.println("AuthCode = " + receipt.getAuthCode());
    System.out.println("Complete = " + receipt.getComplete());
    System.out.println("TransDate = " + receipt.getTransDate());
    System.out.println("TransTime = " + receipt.getTransTime());
    System.out.println("Ticket = " + receipt.getTicket());
    System.out.println("TimedOut = " + receipt.getTimedOut());
    System.out.println("IsVisaDebit = " + receipt.getIsVisaDebit());
}
catch (Exception e)
{
    e.printStackTrace();
}
}
}

```

### 11.3.6 MCRefund

The MasterCard Refund will credit a specified amount to the cardholder's credit card. A refund can be sent up to the full value of the original capture. To send a refund you will require the order\_id and txn\_number from the original MCCompletion or MCForcepost.

```

import JavaAPI.*;
public class TestMCRefund {
    public static void main(String args[])
    {
        String host = args[0];
        String store_id = args[1];
        String api_token = args[2];
        String order_id = args[3];
        String amount = args[4];
        String txn_number = args[5];
        String crypt = args[6];
        String merchant_ref_no = args[7];
        String customer_code = args[8];
        String invoice_number = args[9];
        MCRefund refund = new MCRefund (order_id, amount, txn_number, crypt, merchant_ref_no, customer_code, invoice_number);
        HttpsPostRequest mpgReq = new HttpsPostRequest(host, store_id, api_token, refund);
        try
        {
            Receipt receipt = mpgReq.getReceipt();
            System.out.println("CardType = " + receipt.getCardType());
            System.out.println("TransAmount = " + receipt.getTransAmount());
            System.out.println("TxnNumber = " + receipt.getTxnNumber());
            System.out.println("ReceiptId = " + receipt.getReceiptId());
            System.out.println("TransType = " + receipt.getTransType());
        }
    }
}

```



```
System.out.println("ReferenceNum = " + receipt.getReferenceNum());
System.out.println("ResponseCode = " + receipt.getResponseCode());
System.out.println("ISO = " + receipt.getISO());
System.out.println("BankTotals = " + receipt.getBankTotals());
System.out.println("Message = " + receipt.getMessage());
System.out.println("AuthCode = " + receipt.getAuthCode());
System.out.println("Complete = " + receipt.getComplete());
System.out.println("TransDate = " + receipt.getTransDate());
System.out.println("TransTime = " + receipt.getTransTime());
System.out.println("Ticket = " + receipt.getTicket());
System.out.println("TimedOut = " + receipt.getTimedOut());
System.out.println("ITD Response = " + receipt.getITDResponse());
System.out.println("IsVisaDebit = " + receipt.getIsVisaDebit());
}
catch (Exception e)
{
    e.printStackTrace();
}
}
```

### 11.3.7 MCIndependentRefund

The MasterCard Refund will credit a specified amount to the cardholder's credit card. A refund can be sent up to the full value of the original capture. To send a refund you will require the order\_id and txn\_number from the original MCCompletion or MCForcepost.

```
import JavaAPI.*;
public class TestMCIndependentRefund {
    public static void main(String args[])
    {
        String host = args[0];
        String store_id = args[1];
        String api_token = args[2];
        String order_id = args[3];
        String amount = args[4];
        String pan = args[5];
        String expdate = args[6];
        String cust_id = args[7];
        String merchant_ref_no = args[8];
        String customer_code = args[9];
        String invoice_number = args[10];
        String crypt_type = args[11];
        MCIndependentRefund indrefund = new MCIndependentRefund (order_id, cust_id, amount, pan, expdate,
            merchant_ref_no, customer_code, invoice_number, crypt_type);
        HttpsPostRequest mpgReq = new HttpsPostRequest(host, store_id, api_token, indrefund);
        try
        {
            Receipt receipt = mpgReq.getReceipt();
            System.out.println("CardType = " + receipt.getCardType());
            System.out.println("TransAmount = " + receipt.getTransAmount());
            System.out.println("TxnNumber = " + receipt.getTxnNumber());
            System.out.println("ReceiptId = " + receipt.getReceiptId());
            System.out.println("TransType = " + receipt.getTransType());
            System.out.println("ReferenceNum = " + receipt.getReferenceNum());
            System.out.println("ResponseCode = " + receipt.getResponseCode());
            System.out.println("ISO = " + receipt.getISO());
            System.out.println("BankTotals = " + receipt.getBankTotals());
            System.out.println("Message = " + receipt.getMessage());
            System.out.println("AuthCode = " + receipt.getAuthCode());
            System.out.println("Complete = " + receipt.getComplete());
            System.out.println("TransDate = " + receipt.getTransDate());
            System.out.println("TransTime = " + receipt.getTransTime());
```

```

System.out.println("Ticket = " + receipt.getTicket());
System.out.println("TimedOut = " + receipt.getTimedOut());
System.out.println("ITD Response = " + receipt.getITDResponse());
System.out.println("IsVisaDebit = " + receipt.getIsVisaDebit());
}
catch (Exception e)
{
e.printStackTrace();
}
}
}

```

### 11.3.8 MCCorpais - Corporate Card Common Data with Line Item Details

This transaction example includes the following elements for Level 2 and 3 purchasing card corporate card data processing:

- Corporate Card Common Data (MCCorpac)
  - only 1 set of MCCorpac fields can be submitted
  - this data set includes data elements that apply to the overall order, e.g., the total overall taxes
- Line Item Details (MCCorpall)
  - 1-998 counts of MCCorpall line items can be submitted
  - This data set includes the details about each individual item or service purchased

MCCorpais request must be preceded by a financial transaction (MCCompletion, MCForcepost, MCRrefund, MCIndependentRefund) and the Corporate Card flag must be set to “true” in the Preauth response. MCCorpais request will need to contain the order\_id of the financial transaction as well the txn\_number. For description of the Level 2/3 fields, please see Definition of Request Fields for Level 2/3 - MasterCard (page 354).

```

using System;
namespace Moneris
{
public class TestMCCorpaisCommonLineItem
{
public static void Main(string[] args)
{
string host = "esqa.moneris.com";
string store_id = "moneris";
string api_token = "hurgle";
string order_id;
string txn_number;
Console.Write ("Please enter an order ID: ");
order_id = Console.ReadLine();
Console.Write ("Please enter a txn number: ");
txn_number = Console.ReadLine();

try
{
/*****Passenger Transport Detail - General Ticket Information *****/

//you can only set values to fields which you have valid value
//common data first
MCCorpac corpac=new MCCorpac();
corpac.CustomerCode="CustomerCode123";
corpac.CardAcceptorTaxId="UrTaxId";//Merchant tax id which is mandatory

```

```

corpac.CorporationVatNumber="cvn123";
corpac.FreightAmount="1.23";
corpac.DutyAmount="2.34";
corpac.ShipToPosCode="M1R 1W5";
corpac.OrderDate="141211";
corpac.CustomerVatNumber="customervn231";
corpac.UniqueInvoiceNumber="uin567";
corpac.AuthorizedContactName="John Walker";
Tax[] taxc = new Tax[2];
taxc[0] = new Tax("1.19", "6.0", "GST", "gst1298", "Y");
taxc[1] = new Tax("1.29", "7.0", "PST", "pst1298", "N");
corpac.Tax=taxc;
//line item detail
MCCorpal[] corpal = new MCCorpal[2];
corpal[0] = new MCCorpal();
corpal[0].CustomerCode="customer code";
corpal[0].LineItemDate="150114";
corpal[0].ShipDate="150120";
corpal[0].OrderDate="150114";
corpal[0].ProductCode="pc11";
corpal[0].ItemDescription="Good item";
corpal[0].ItemQuantity="4";
corpal[0].UnitCost="1.25";
corpal[0].ItemUnitMeasure="EA";
corpal[0].ExtItemAmount="5.00";
corpal[0].DiscountAmount="1.00";
corpal[0].CommodityCode="cCode11";
Tax[] taxl = new Tax[1];
taxl[0] = new Tax("0.52", "13.0", "HST", "hst1298", "Y");
corpal[0].Tax=taxl;
corpal[1] = new MCCorpal();
corpal[1].CustomerCode="customer code2";
corpal[1].LineItemDate="150114";
corpal[1].ShipDate="150122";
corpal[1].OrderDate="150114";
corpal[1].ProductCode="pc12";
corpal[1].ItemDescription="Better item";
corpal[1].ItemQuantity="5";
corpal[1].UnitCost="10.00";
corpal[1].ItemUnitMeasure="EA";
corpal[1].ExtItemAmount="50.00";
corpal[1].CommodityCode="cCode12";

/***** Request *****/

MCCorpais data = new MCCorpais();
data.OrderId=order_id;
data.TxnNumber=txn_number;
data.Corpac=corpac;
data.Corpal=corpal;

L23HttpPostRequest request=new L23HttpPostRequest(host, store_id, api_token, data);

/***** Response *****/

Receipt myReceipt=request.GetReceipt();

Console.WriteLine("CardType = " + myReceipt.GetCardType());
Console.WriteLine("TransAmount = " + myReceipt.GetTransAmount());
Console.WriteLine("TxnNumber = " + myReceipt.GetTxnNumber());
Console.WriteLine("ReceiptId = " + myReceipt.GetReceiptId());
Console.WriteLine("TransType = " + myReceipt.GetTransType());
Console.WriteLine("ReferenceNum = " + myReceipt.GetReferenceNum());
Console.WriteLine("ResponseCode = " + myReceipt.GetResponseCode());
Console.WriteLine("ISO = " + myReceipt.GetISO());
Console.WriteLine("BankTotals = " + myReceipt.GetBankTotals());

```

```

Console.WriteLine("Message = " + myReceipt.GetMessage());
Console.WriteLine("AuthCode = " + myReceipt.GetAuthCode());
Console.WriteLine("Complete = " + myReceipt.GetComplete());
Console.WriteLine("TransDate = " + myReceipt.GetTransDate());
Console.WriteLine("TransTime = " + myReceipt.GetTransTime());
Console.WriteLine("Ticket = " + myReceipt.GetTicket());
Console.WriteLine("TimedOut = " + myReceipt.GetTimedOut());
Console.WriteLine("CorporateCard = " + myReceipt.GetCorporateCard());
Console.WriteLine("MessageId = " + myReceipt.GetMessageId());
}
catch (Exception e)
{
    Console.WriteLine("e.StackTrace:"+e.StackTrace+",e.Message:"+e.Message);
}
}
}
}
}

```

## 11.4 Level 2/3 American Express Transactions

- 11.4.1 Level 2/3 Transaction Types for Amex
- 11.4.2 Level 2/3 Transaction Flow for Amex
- 11.4.3 AXCompletion
- 11.4.4 AXForcePost
- 11.4.5 AXPurchaseCorrection
- 11.4.6 AXRefund
- 11.4.7 AXIndependentRefund

### 11.4.1 Level 2/3 Transaction Types for Amex

This transaction set includes a suite of corporate card financial transactions as well as a transaction that allows for the passing of Level 2/3 data. Please ensure American Express Level 2/3 processing support is enabled on your merchant account. Batch Close, Open Totals and Preauth are identical to the transactions outlined in the section Basic Transaction Set (page 10).

- When the Preauth response contains CorporateCard equal to true then you can submit the AX transactions.
- If CorporateCard is false then the card does not support Level 2/3 data and non Level 2/3 transaction are to be used. If the card is not a corporate card, please refer to section 4 for the appropriate non-corporate card transactions.

**NOTE:** This transaction set is intended for transactions where Corporate Card is true and Level 2/3 data will be submitted. If the credit card is found to be a corporate card but you do not wish to send any Level 2/3 data then you may submit AX transactions using the transaction set outlined in the section Basic Transaction Set (page 10).

**Preauth – (authorisation / preauthorisation)**

The preauth verifies and locks funds on the customer's credit card. The funds are locked for a specified amount of time, based on the card issuer. To retrieve the funds from a preauth so that they may be settled in the merchant account a capture must be performed. CorporateCard will return as true if the card supports Level 2/3.

**AXCompletion – (Capture/Preauth Completion)**

Once a Preauth is obtained the funds that are locked need to be retrieved from the customer's credit card. The capture retrieves the locked funds and readies them for settlement in to the merchant account. Prior to performing an AXCompletion a Preauth must be performed.

**AXForcePost – (Force Capture/Preauth Completion)**

This transaction is an alternative to AXCompletion to obtain the funds locked on Preauth obtained from IVR or equivalent terminal. The capture retrieves the locked funds and readies them for settlement in to the merchant account.

**AXPurchaseCorrection – (Void, Correction)**

AXCompletion and AXForcepost can be voided the same day\* that they occur. A void must be for the full amount of the transaction and will remove any record of it from the cardholder statement. \* An AXPurchaseCorrection can be performed against a transaction as long as the batch that contains the original transaction remains open. When using the automated closing feature, the batch close occurs daily between 10 – 11 pm EST.

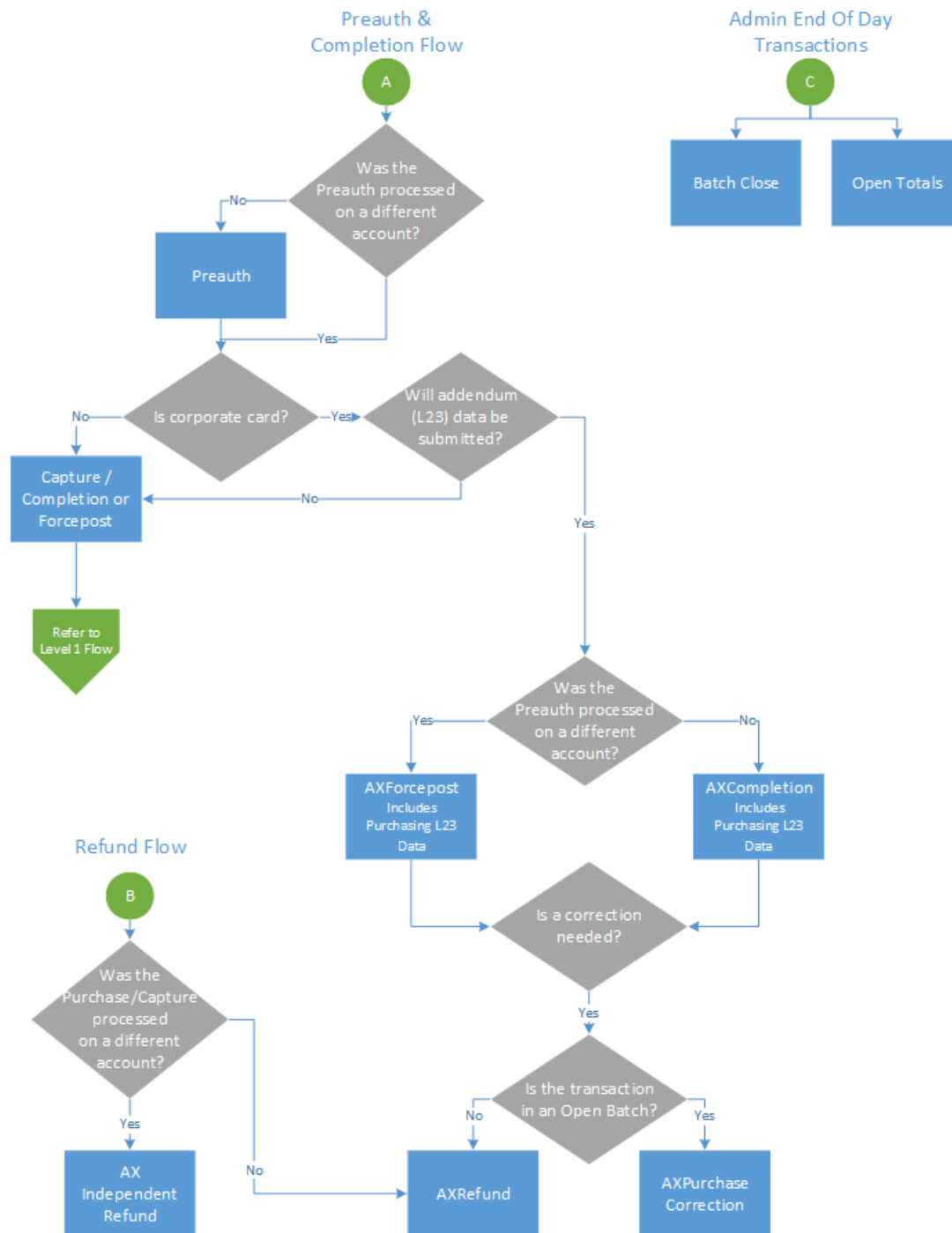
**AXRefund – (Credit)**

A refund can be performed against an AXCompletion and AXForcepost to refund any part, or all of the transaction.

**AXIndependentRefund – (Credit)**

A refund can be performed against a purchase or a capture to refund any part, or all of the transaction. Independent refund is used when the originating transaction was not performed through Moneris Gateway. Please note, the Independent Refund transaction may or may not be supported on your account. If you receive a transaction not allowed error when attempting an independent refund, it may mean the transaction is not supported on your account. If you wish to have the Independent Refund transaction type temporarily enabled (or re-enabled), please contact the Service Centre at 1-866-319-7450.

### 11.4.2 Level 2/3 Transaction Flow for Amex



### 11.4.3 AXCompletion

The American Express Completion transaction is used to secure the funds locked by a preauth transaction. When sending a capture request you will need two pieces of information from the original

preauth – the order\_id and the txn\_number from the returned response.

```
import JavaAPI.*;
import java.util.*;
public class TestAXCompletion {
public static void main(String args[])
{
String host = args[0];
String store_id = args[1];
String api_token = args[2];
String order_id = args[3];
String amount = args[4];
String txn_number = args[5];
String crypt = args[6];
String customer_code = args[7];
String invoice_number = args[8];
/***** Table 1 - HEADING *****/

String n101 = "R6"; //Entity ID Code
String n102 = "Retailing Inc. International"; //Name
String n301 = "919 Oriole Rd."; //Address Line 1
String n401 = "Toronto"; //City
String n402 = "On"; //State or Province
String n403 = "H1T6W3"; //Postal Code

String big04 = ""; //Purchase Order Number
String big05 = ""; //Release Number
String big10 = ""; //Invoice Number

String[] ref01 = new String[]{"4C", "CR"}; //Reference ID Qualifier
String[] ref02 = new String[]{"M5T3A5", "16802309004"}; //Reference ID
RefAx[] refID = new RefAx[2];
refID[0] = new RefAx (ref01[0], ref02[0]);
refID[1] = new RefAx (ref01[1], ref02[1]);

NlLoop[] nl = new NlLoop[1];
nl[0] = new NlLoop (n101, n102, n301, "",
n401, n402, n403, refID);

Table1 tbl1 = new Table1 (big04, big05, big10, nl);

/***** Table 2 - DETAIL *****/

//the sum of the extended amount field (i.e. paramater #7 of It1_Loop
//must equal the level 1 amount field)

String[] it102 = new String[]{"1", "1", "1", "1", "1"}; //Line item quantity invoiced
String[] it103 = new String[]{"EA", "EA", "EA", "EA", "EA"}; //Line item unit or basis of
measurement code
String[] it104 = new String[]{"10.00", "25.00", "8.62", "10.00", "-10.00"}; //Line item unit price
String[] it105 = new String[]{"", "", "", "", ""}; //Line item basis of unit price code

String[] it10618 = new String[]{"MG", "MG", "MG", "MG", "MG"}; //Product/Service ID qualifier
String[] it10719 = new String[]{"DJFR4", "JFJ49", "FEF33", "FEE43", "DISCOUNT"}; //Product/Service
ID (corresponds to it10618)

String[] txi01_GST = new String[]{"GS", "GS", "GS", "GS", "GS"}; //Tax type code
String[] txi02_GST = new String[]{"0.70", "1.75", "1.00", "0.80", "0.00"}; //Monetary amount
String[] txi03_GST = new String[]{"", "", "", "", ""}; //Percent
String[] txi06_GST = new String[]{"", "", "", "", ""}; //Tax exempt code

String[] txi01_PST = new String[]{"PG", "PG", "PG", "PG", "PG"}; //Tax type code
String[] txi02_PST = new String[]{"0.80", "2.00", "1.00", "0.80", "0.00"}; //Monetary amount
String[] txi03_PST = new String[]{"", "", "", "", ""}; //Percent
String[] txi06_PST = new String[]{"", "", "", "", ""}; //Tax exempt code
```

```

Txi[] taxGST = {new Txi(txi01_GST[0], txi02_GST[0], txi03_GST[0], txi06_GST[0]),
new Txi(txi01_GST[1], txi02_GST[1], txi03_GST[1], txi06_GST[1]),
new Txi(txi01_GST[2], txi02_GST[2], txi03_GST[2], txi06_GST[2]),
new Txi(txi01_GST[3], txi02_GST[3], txi03_GST[3], txi06_GST[3]),
new Txi(txi01_GST[4], txi02_GST[4], txi03_GST[4], txi06_GST[4])};

Txi[] taxPST = {new Txi(txi01_PST[0], txi02_PST[0], txi03_PST[0], txi06_PST[0]),
new Txi(txi01_PST[1], txi02_PST[1], txi03_PST[1], txi06_PST[1]),
new Txi(txi01_PST[2], txi02_PST[2], txi03_PST[2], txi06_PST[2]),
new Txi(txi01_PST[3], txi02_PST[3], txi03_PST[3], txi06_PST[3]),
new Txi(txi01_PST[4], txi02_PST[4], txi03_PST[4], txi06_PST[4])};

String[] pam05 = {"11.50", "28.75", "10.62", "11.50", "-10.00"}; //Extended line-item amount
String[] pid05 = {"Stapler", "Lamp", "Bottled Water", "Fountain Pen", "DISCOUNT"}; //Line item
description
ArrayList<Itl06s[]> itQual = new ArrayList<Itl06s[]>(); //array list to hold product IDs and
Descriptions
ArrayList<Txi[]> level3Taxes = new ArrayList<Txi[]>(); //list to hold GST and PST objects for each
item

int numOfItems = pid05.length;

ItlLoop[] itemLoop = new ItlLoop[numOfItems]; //instantiate array of items object

//for (int item = 0; item < pid05.Length; item++)
for (int item = 0; item < numOfItems; item++)
{
itQual.add(new Itl06s[]{new Itl06s(itl0618[item], itl0719[item])});
level3Taxes.add(new Txi[]{taxGST[item], taxPST[item]}); //create tax object for item 1

itemLoop[item] = new ItlLoop(itl02[item], itl03[item], itl04[item],
itl05[item], itQual.get(item),
level3Taxes.get(item), pam05[item], pid05[item]);
}
Table2 tbl2 = new Table2 (itemLoop); //element of AXLevel23

/***** Table 3 - SUMMARY *****/

Txi[] taxTbl3 = new Txi[3];
taxTbl3[0] = new Txi("GS", "4.25","", ""); //sum of GST taxes
taxTbl3[1] = new Txi("PG", "4.60","", ""); //sum of PST taxes
taxTbl3[2] = new Txi("TX", "8.85","", "");

Table3 tbl3 = new Table3(taxTbl3);

/***** REQUEST *****/

AXLevel23 level23 = new AXLevel23(tbl1, tbl2, tbl3);

AXCompletion completion = new AXCompletion (order_id, amount, txn_number, crypt, customer_
code, invoice_number, level23);
HttpsPostRequest mpgReq = new HttpsPostRequest(host, store_id, api_token, completion);
try
{
Receipt receipt = mpgReq.getReceipt();
System.out.println("CardType = " + receipt.getCardType());
System.out.println("TransAmount = " + receipt.getTransAmount());
System.out.println("TxnNumber = " + receipt.getTxnNumber());
System.out.println("ReceiptId = " + receipt.getReceiptId());
System.out.println("TransType = " + receipt.getTransType());
System.out.println("ReferenceNum = " + receipt.getReferenceNum());
System.out.println("ResponseCode = " + receipt.getResponseCode());
System.out.println("ISO = " + receipt.getISO());
System.out.println("BankTotals = " + receipt.getBankTotals());
}

```



```
System.out.println("Message = " + receipt.getMessage());
System.out.println("AuthCode = " + receipt.getAuthCode());
System.out.println("Complete = " + receipt.getComplete());
System.out.println("TransDate = " + receipt.getTransDate());
System.out.println("TransTime = " + receipt.getTransTime());
System.out.println("Ticket = " + receipt.getTicket());
System.out.println("TimedOut = " + receipt.getTimedOut());
System.out.println("ITD Response = " + receipt.getITDResponse());
System.out.println("IsVisaDebit = " + receipt.getIsVisaDebit());
}
catch (Exception e)
{
    e.printStackTrace();
}
}
```

### 11.4.4 AXForcePost

The Amex Forcepost transaction is used to secure the funds locked by a preauth transaction performed over IVR or equivalent terminal. When sending an AXForcepost request, you will need order\_id, amount, pan (card number), expdate, auth\_code and crypt.

```
import JavaAPI.*;
import java.util.*;
public class TestAXForcePost {
    public static void main(String args[])
    {
        String host = args[0];
        String store_id = args[1];
        String api_token = args[2];
        String order_id = args[3];
        String cust_id = args[4];
        String amount = args[5];
        String pan = args[6];
        String expdate = args[7];
        String auth_code = args[8];
        String customer_code = args[9];
        String invoice_number = args[10];
        /***** Table 1 - HEADING *****/

        String n101 = "R6"; //Entity ID Code
        String n102 = "Retailing Inc. International"; //Name
        String n301 = "919 Oriole Rd."; //Address Line 1
        String n401 = "Toronto"; //City
        String n402 = "On"; //State or Province
        String n403 = "H1T6W3"; //Postal Code

        String big04 = ""; //Purchase Order Number
        String big05 = ""; //Release Number
        String big10 = ""; //Invoice Number

        String[] ref01 = new String[]{"4C", "CR"}; //Reference ID Qualifier
        String[] ref02 = new String[]{"M5T3A5", "16802309004"}; //Reference ID
        RefAx[] refID = new RefAx[2];
        refID[0] = new RefAx (ref01[0], ref02[0]);
        refID[1] = new RefAx (ref01[1], ref02[1]);

        N1Loop[] n1 = new N1Loop[1];
        n1[0] = new N1Loop (n101, n102, n301, "",
            n401, n402, n403, refID);

        Table1 tbl1 = new Table1 (big04, big05, big10, n1);
```

```

/***** Table 2 - DETAIL *****/

//the sum of the extended amount field (i.e. parameter #7 of Itl_Loop
//must equal the level 1 amount field)

String[] itl02 = new String[]{"1", "1", "1", "1", "1"}; //Line item quantity invoiced
String[] itl03 = new String[]{"EA", "EA", "EA", "EA", "EA"}; //Line item unit or basis of
    measurement code
String[] itl04 = new String[]{"10.00", "25.00", "8.62", "10.00", "-10.00"}; //Line item unit price
String[] itl05 = new String[]{"", "", "", "", ""}; //Line item basis of unit price code

String[] itl0618 = new String[]{"MG", "MG", "MG", "MG", "MG"}; //Product/Service ID qualifier
String[] itl0719 = new String[]{"DJFR4", "JFJ49", "FEF33", "FEE43", "DISCOUNT"}; //Product/Service
    ID (corresponds to itl0618)

String[] txi01_GST = new String[]{"GS", "GS", "GS", "GS", "GS"}; //Tax type code
String[] txi02_GST = new String[]{"0.70", "1.75", "1.00", "0.80", "0.00"}; //Monetary amount
String[] txi03_GST = new String[]{"", "", "", "", ""}; //Percent
String[] txi06_GST = new String[]{"", "", "", "", ""}; //Tax exempt code

String[] txi01_PST = new String[]{"PG", "PG", "PG", "PG", "PG"}; //Tax type code
String[] txi02_PST = new String[]{"0.80", "2.00", "1.00", "0.80", "0.00"}; //Monetary amount
String[] txi03_PST = new String[]{"", "", "", "", ""}; //Percent
String[] txi06_PST = new String[]{"", "", "", "", ""}; //Tax exempt code

Txi[] taxGST = {new Txi(txi01_GST[0], txi02_GST[0], txi03_GST[0], txi06_GST[0]),
    new Txi(txi01_GST[1], txi02_GST[1], txi03_GST[1], txi06_GST[1]),
    new Txi(txi01_GST[2], txi02_GST[2], txi03_GST[2], txi06_GST[2]),
    new Txi(txi01_GST[3], txi02_GST[3], txi03_GST[3], txi06_GST[3]),
    new Txi(txi01_GST[4], txi02_GST[4], txi03_GST[4], txi06_GST[4])};

Txi[] taxPST = {new Txi(txi01_PST[0], txi02_PST[0], txi03_PST[0], txi06_PST[0]),
    new Txi(txi01_PST[1], txi02_PST[1], txi03_PST[1], txi06_PST[1]),
    new Txi(txi01_PST[2], txi02_PST[2], txi03_PST[2], txi06_PST[2]),
    new Txi(txi01_PST[3], txi02_PST[3], txi03_PST[3], txi06_PST[3]),
    new Txi(txi01_PST[4], txi02_PST[4], txi03_PST[4], txi06_PST[4])};

String[] pam05 = {"11.50", "28.75", "10.62", "11.50", "-10.00"}; //Extended line-item amount
String[] pid05 = {"Stapler", "Lamp", "Bottled Water", "Fountain Pen", "DISCOUNT"}; //Line item
    description
ArrayList<Itl06s[]> itQual = new ArrayList<Itl06s[]>(); //array list to hold product IDs and
    Descriptions
ArrayList<Txi[]> level3Taxes = new ArrayList<Txi[]>(); //list to hold GST and PST objects for each
    item

int numOfItems = pid05.length;

ItlLoop[] itemLoop = new ItlLoop[numOfItems]; //instantiate array of items object

//for (int item = 0; item < pid05.Length; item++)
for (int item = 0; item < numOfItems; item++)
{
    itQual.add(new Itl06s[]{new Itl06s(itl0618[item], itl0719[item])});
    level3Taxes.add(new Txi[]{taxGST[item], taxPST[item]}); //create tax object for item 1

    itemLoop[item] = new ItlLoop(itl02[item], itl03[item], itl04[item],
        itl05[item], itQual.get(item),
        level3Taxes.get(item), pam05[item], pid05[item]);
}
Table2 tbl2 = new Table2 (itemLoop); //element of AXLevel23

/***** Table 3 - SUMMARY *****/

```

```
Txi[] taxTbl3 = new Txi[3];
taxTbl3[0] = new Txi("GS", "4.25","", ""); //sum of GST taxes
taxTbl3[1] = new Txi("PG", "4.60","", ""); //sum of PST taxes
taxTbl3[2] = new Txi("TX", "8.85","", "");

Table3 tbl3 = new Table3(taxTbl3);

/***** REQUEST *****/

AXLevel23 level23 = new AXLevel23(tbl1, tbl2, tbl3);

AXForcePost forcepost = new AXForcePost (order_id, cust_id, amount, pan, expdate, auth_code, customer_
    code, invoice_number, level23);
HttpsPostRequest mpgReq = new HttpsPostRequest(host, store_id, api_token, forcepost);
try
{
    Receipt receipt = mpgReq.getReceipt();
    System.out.println("CardType = " + receipt.getCardType());
    System.out.println("TransAmount = " + receipt.getTransAmount());
    System.out.println("TxnNumber = " + receipt.getTxnNumber());
    System.out.println("ReceiptId = " + receipt.getReceiptId());
    System.out.println("TransType = " + receipt.getTransType());
    System.out.println("ReferenceNum = " + receipt.getReferenceNum());
    System.out.println("ResponseCode = " + receipt.getResponseCode());
    System.out.println("ISO = " + receipt.getISO());
    System.out.println("BankTotals = " + receipt.getBankTotals());
    System.out.println("Message = " + receipt.getMessage());
    System.out.println("AuthCode = " + receipt.getAuthCode());
    System.out.println("Complete = " + receipt.getComplete());
    System.out.println("TransDate = " + receipt.getTransDate());
    System.out.println("TransTime = " + receipt.getTransTime());
    System.out.println("Ticket = " + receipt.getTicket());
    System.out.println("TimedOut = " + receipt.getTimedOut());
    System.out.println("ITD Response = " + receipt.getITDResponse());
    System.out.println("IsVisaDebit = " + receipt.getIsVisaDebit());
}
catch (Exception e)
{
    e.printStackTrace();
}
}
```

### 11.4.5 AXPurchaseCorrection

The American Express Purchase Correction (Void) transaction is used to cancel a transaction that was performed in the current batch. No amount is required because a void is always for 100% of the original transaction. The only transaction that can be voided using AXPurchaseCorrection is AXCompletion and AXForcepost. To send an AXPurchaseCorrection the order\_id and TxnNumber from the AXCompletion or AXForcepost are required.

```
import JavaAPI.*;
public class TestAXPurchaseCorrection {
    public static void main(String args[])
    {
        String host = args[0];
        String store_id = args[1];
        String api_token = args[2];
        String order_id = args[3];
        String txn_number = args[4];
        String crypt = args[5];
```

```

AXPurchaseCorrection pc = new AXPurchaseCorrection(order_id, txn_number, crypt);
HttpsPostRequest mpgReq = new HttpsPostRequest(host, store_id, api_token, pc);
try
{
    Receipt receipt = mpgReq.getReceipt();
    System.out.println("CardType = " + receipt.getCardType());
    System.out.println("TransAmount = " + receipt.getTransAmount());
    System.out.println("TxnNumber = " + receipt.getTxnNumber());
    System.out.println("ReceiptId = " + receipt.getReceiptId());
    System.out.println("TransType = " + receipt.getTransType());
    System.out.println("ReferenceNum = " + receipt.getReferenceNum());
    System.out.println("ResponseCode = " + receipt.getResponseCode());
    System.out.println("ISO = " + receipt.getISO());
    System.out.println("BankTotals = " + receipt.getBankTotals());
    System.out.println("Message = " + receipt.getMessage());
    System.out.println("AuthCode = " + receipt.getAuthCode());
    System.out.println("Complete = " + receipt.getComplete());
    System.out.println("TransDate = " + receipt.getTransDate());
    System.out.println("TransTime = " + receipt.getTransTime());
    System.out.println("Ticket = " + receipt.getTicket());
    System.out.println("TimedOut = " + receipt.getTimedOut());
    System.out.println("IsVisaDebit = " + receipt.getIsVisaDebit());
}
catch (Exception e)
{
    e.printStackTrace();
}
}
}

```

### 11.4.6 AXRefund

The American Express Refund will credit a specified amount to the cardholder's credit card. A refund can be sent up to the full value of the original AXCompletion or AXForcepost. To send an AXRefund you will require the order\_id and txn\_number from the original AXCompletion or AXForcepost.

```

import java.util.ArrayList;
import JavaAPI.*;
public class TestAXRefund {
    public static void main(String args[])
    {
        String host = args[0];
        String store_id = args[1];
        String api_token = args[2];
        String order_id = args[3];
        String amount = args[4];
        String txn_number = args[5];
        String crypt = args[6];
        String customer_code = args[7];
        String invoice_number = args[8];
        /***** Table 1 - HEADING *****/

        String n101 = "R6"; //Entity ID Code
        String n102 = "Retailing Inc. International"; //Name
        String n301 = "919 Oriole Rd."; //Address Line 1
        String n401 = "Toronto"; //City
        String n402 = "On"; //State or Province
        String n403 = "H1T6W3"; //Postal Code

        String big04 = ""; //Purchase Order Number
        String big05 = ""; //Release Number
        String big10 = ""; //Invoice Number
    }
}

```

```

String[] ref01 = new String[]{"4C", "CR"}; //Reference ID Qualifier
String[] ref02 = new String[]{"M5T3A5", "16802309004"}; //Reference ID
RefAx[] refID = new RefAx[2];
refID[0] = new RefAx (ref01[0], ref02[0]);
refID[1] = new RefAx (ref01[1], ref02[1]);

NlLoop[] nl = new NlLoop[1];
nl[0] = new NlLoop (n101, n102, n301, "",
n401, n402, n403, refID);

Table1 tbl1 = new Table1 (big04, big05, big10, nl);

/***** Table 2 - DETAIL *****/

//the sum of the extended amount field (i.e. paramater #7 of It1_Loop
//must equal the level 1 amount field)

String[] it102 = new String[]{"1", "1", "1", "1", "1"}; //Line item quantity invoiced
String[] it103 = new String[]{"EA", "EA", "EA", "EA", "EA"}; //Line item unit or basis of
    measurement code
String[] it104 = new String[]{"10.00", "25.00", "8.62", "10.00", "-10.00"}; //Line item unit price
String[] it105 = new String[]{"", "", "", "", ""}; //Line item basis of unit price code

String[] it10618 = new String[]{"MG", "MG", "MG", "MG", "MG"}; //Product/Service ID qualifier
String[] it10719 = new String[]{"DJFR4", "JFJ49", "FEF33", "FEE43", "DISCOUNT"}; //Product/Service
    ID (corresponds to it10618)

String[] txi01_GST = new String[]{"GS", "GS", "GS", "GS", "GS"}; //Tax type code
String[] txi02_GST = new String[]{"0.70", "1.75", "1.00", "0.80", "0.00"}; //Monetary amount
String[] txi03_GST = new String[]{"", "", "", "", ""}; //Percent
String[] txi06_GST = new String[]{"", "", "", "", ""}; //Tax exempt code

String[] txi01_PST = new String[]{"PG", "PG", "PG", "PG", "PG"}; //Tax type code
String[] txi02_PST = new String[]{"0.80", "2.00", "1.00", "0.80", "0.00"}; //Monetary amount
String[] txi03_PST = new String[]{"", "", "", "", ""}; //Percent
String[] txi06_PST = new String[]{"", "", "", "", ""}; //Tax exempt code

Txi[] taxGST = {new Txi(txi01_GST[0], txi02_GST[0], txi03_GST[0], txi06_GST[0]),
    new Txi(txi01_GST[1], txi02_GST[1], txi03_GST[1], txi06_GST[1]),
    new Txi(txi01_GST[2], txi02_GST[2], txi03_GST[2], txi06_GST[2]),
    new Txi(txi01_GST[3], txi02_GST[3], txi03_GST[3], txi06_GST[3]),
    new Txi(txi01_GST[4], txi02_GST[4], txi03_GST[4], txi06_GST[4])};

Txi[] taxPST = {new Txi(txi01_PST[0], txi02_PST[0], txi03_PST[0], txi06_PST[0]),
    new Txi(txi01_PST[1], txi02_PST[1], txi03_PST[1], txi06_PST[1]),
    new Txi(txi01_PST[2], txi02_PST[2], txi03_PST[2], txi06_PST[2]),
    new Txi(txi01_PST[3], txi02_PST[3], txi03_PST[3], txi06_PST[3]),
    new Txi(txi01_PST[4], txi02_PST[4], txi03_PST[4], txi06_PST[4])};

String[] pam05 = {"11.50", "28.75", "10.62", "11.50", "-10.00"}; //Extended line-item amount
String[] pid05 = {"Stapler", "Lamp", "Bottled Water", "Fountain Pen", "DISCOUNT"}; //Line item
    description
ArrayList<It106s[]> itQual = new ArrayList<It106s[]>(); //array list to hold product IDs and
    Descriptions
ArrayList<Txi[]> level3Taxes = new ArrayList<Txi[]>(); //list to hold GST and PST objects for each
    item

int numOfItems = pid05.length;

It1Loop[] itemLoop = new It1Loop[numOfItems]; //instantiate array of items object

//for (int item = 0; item < pid05.Length; item++)
for (int item = 0; item < numOfItems; item++)
{

```

```

itQual.add(new Itl06s[]{new Itl06s(itl0618[item], itl0719[item])});
level3Taxes.add(new Txi[]{taxGST[item], taxPST[item]}); //create tax object for item 1

itemLoop[item] = new ItlLoop(itl02[item], itl03[item], itl04[item],
itl05[item], itQual.get(item),
level3Taxes.get(item), pam05[item], pid05[item]);
}
Table2 tbl2 = new Table2 (itemLoop); //element of AXLevel23

/***** Table 3 - SUMMARY *****/

Txi[] taxTbl3 = new Txi[3];
taxTbl3[0] = new Txi("GS", "4.25","", ""); //sum of GST taxes
taxTbl3[1] = new Txi("PG", "4.60","", ""); //sum of PST taxes
taxTbl3[2] = new Txi("TX", "8.85","", "");

Table3 tbl3 = new Table3(taxTbl3);

/***** REQUEST *****/

AXLevel23 level23 = new AXLevel23(tbl1, tbl2, tbl3);

AXRefund refund = new AXRefund (order_id, amount, txn_number, crypt, customer_code, invoice_
number, level23);
HttpsPostRequest mpgReq = new HttpsPostRequest(host, store_id, api_token, refund);
try
{
Receipt receipt = mpgReq.getReceipt();
System.out.println("CardType = " + receipt.getCardType());
System.out.println("TransAmount = " + receipt.getTransAmount());
System.out.println("TxnNumber = " + receipt.getTxnNumber());
System.out.println("ReceiptId = " + receipt.getReceiptId());
System.out.println("TransType = " + receipt.getTransType());
System.out.println("ReferenceNum = " + receipt.getReferenceNum());
System.out.println("ResponseCode = " + receipt.getResponseCode());
System.out.println("ISO = " + receipt.getISO());
System.out.println("BankTotals = " + receipt.getBankTotals());
System.out.println("Message = " + receipt.getMessage());
System.out.println("AuthCode = " + receipt.getAuthCode());
System.out.println("Complete = " + receipt.getComplete());
System.out.println("TransDate = " + receipt.getTransDate());
System.out.println("TransTime = " + receipt.getTransTime());
System.out.println("Ticket = " + receipt.getTicket());
System.out.println("TimedOut = " + receipt.getTimedOut());
System.out.println("ITD Response = " + receipt.getITDResponse());
System.out.println("IsVisaDebit = " + receipt.getIsVisaDebit());
}
catch (Exception e)
{
e.printStackTrace();
}
}
}

```

### 11.4.7 AXIndependentRefund

The American Express Independent Refund will credit a specified amount to the cardholder's credit card. The independent refund does not require an existing order to be logged in the Moneris Gateway; however, the credit card number and expiry date will need to be passed.

```

import JavaAPI.*;
import java.util.*;

```

```

public class TestAXIndependentRefund {
public static void main(String args[])
{
String host = args[0];
String store_id = args[1];
String api_token = args[2];
String order_id = args[3];
String cust_id = args[4];
String amount = args[5];
String pan = args[6];
String expdate = args[7];
String customer_code = args[8];
String invoice_number = args[9];
/***** Table 1 - HEADING *****/

String n101 = "R6"; //Entity ID Code
String n102 = "Retailing Inc. International"; //Name
String n301 = "919 Oriole Rd."; //Address Line 1
String n401 = "Toronto"; //City
String n402 = "On"; //State or Province
String n403 = "H1T6W3"; //Postal Code

String big04 = ""; //Purchase Order Number
String big05 = ""; //Release Number
String big10 = ""; //Invoice Number

String[] ref01 = new String[]{"4C", "CR"}; //Reference ID Qualifier
String[] ref02 = new String[]{"M5T3A5", "16802309004"}; //Reference ID
RefAx[] refID = new RefAx[2];
refID[0] = new RefAx (ref01[0], ref02[0]);
refID[1] = new RefAx (ref01[1], ref02[1]);

N1Loop[] n1 = new N1Loop[1];
n1[0] = new N1Loop (n101, n102, n301, "",
n401, n402, n403, refID);

Table1 tbl1 = new Table1 (big04, big05, big10, n1);

/***** Table 2 - DETAIL *****/

//the sum of the extended amount field (i.e. paramater #7 of It1_Loop
//must equal the level 1 amount field)

String[] it102 = new String[]{"1", "1", "1", "1", "1"}; //Line item quantity invoiced
String[] it103 = new String[]{"EA", "EA", "EA", "EA", "EA"}; //Line item unit or basis
of measurement code
String[] it104 = new String[]{"10.00", "25.00", "8.62", "10.00", "-10.00"}; //Line
item unit price
String[] it105 = new String[]{"", "", "", "", ""}; //Line item basis of unit price
code

String[] it10618 = new String[]{"MG", "MG", "MG", "MG", "MG"}; //Product/Service ID
qualifier
String[] it10719 = new String[]{"DJFR4", "JFJ49", "FEF33", "FEE43", "DISCOUNT"};
//Product/Service ID (corresponds to it10618)

String[] txi01_GST = new String[]{"GS", "GS", "GS", "GS", "GS"}; //Tax type code
String[] txi02_GST = new String[]{"0.70", "1.75", "1.00", "0.80", "0.00"};
//Monetary amount
String[] txi03_GST = new String[]{"", "", "", "", ""}; //Percent
String[] txi06_GST = new String[]{"", "", "", "", ""}; //Tax exempt code

String[] txi01_PST = new String[]{"PG", "PG", "PG", "PG", "PG"}; //Tax type code
String[] txi02_PST = new String[]{"0.80", "2.00", "1.00", "0.80", "0.00"};
//Monetary amount

```

```

String[] txi03_PST = new String[]{"", "", "", "", ""}; //Percent
String[] txi06_PST = new String[]{"", "", "", "", ""}; //Tax exempt code

Txi[] taxGST = {new Txi(txi01_GST[0], txi02_GST[0], txi03_GST[0], txi06_GST[0]),
new Txi(txi01_GST[1], txi02_GST[1], txi03_GST[1], txi06_GST
[1]),
new Txi(txi01_GST[2], txi02_GST[2], txi03_GST[2], txi06_GST
[2]),
new Txi(txi01_GST[3], txi02_GST[3], txi03_GST[3],
txi06_GST[3]),
new Txi(txi01_GST[4], txi02_GST[4], txi03_GST[4], txi06_GST
[4])};

Txi[] taxPST = {new Txi(txi01_PST[0], txi02_PST[0], txi03_PST[0], txi06_PST[0]),
new Txi(txi01_PST[1], txi02_PST[1], txi03_PST[1], txi06_PST
[1]),
new Txi(txi01_PST[2], txi02_PST[2], txi03_PST[2], txi06_PST
[2]),
new Txi(txi01_PST[3], txi02_PST[3], txi03_PST[3],
txi06_PST[3]),
new Txi(txi01_PST[4], txi02_PST[4], txi03_PST[4], txi06_PST
[4])};

String[] pam05 = {"11.50", "28.75", "10.62", "11.50", "-10.00"}; //Extended
line-item amount
String[] pid05 = {"Stapler", "Lamp", "Bottled Water", "Fountain Pen", "DISCOUNT"};
//Line item description
ArrayList<Itl06s[]> itQual = new ArrayList<Itl06s[]>(); //array list to hold product
IDs and Descriptions
ArrayList<Txi[]> level3Taxes = new ArrayList<Txi[]>(); //list to hold GST and PST
objects for each item

int numofItems = pid05.length;

ItlLoop[] itemLoop = new ItlLoop[numofItems]; //instantiate array of items object

//for (int item = 0; item < pid05.Length; item++)
for (int item = 0; item < numofItems; item++)
{
itQual.add(new Itl06s[]{new Itl06s(itl0618[item], itl0719[item])});
level3Taxes.add(new Txi[]{taxGST[item], taxPST[item]}); //create tax object for
item 1

itemLoop[item] = new ItlLoop(itl02[item], itl03[item], itl04[item],
itl05[item], itQual.get(item),
level3Taxes.get(item), pam05[item], pid05[item]);
}
Table2 tbl2 = new Table2 (itemLoop); //element of AXLevel23

/***** Table 3 - SUMMARY *****/

Txi[] taxTbl3 = new Txi[3];
taxTbl3[0] = new Txi("GS", "4.25","", ""); //sum of GST taxes
taxTbl3[1] = new Txi("PG", "4.60","", ""); //sum of PST taxes
taxTbl3[2] = new Txi("TX", "8.85","", "");

Table3 tbl3 = new Table3(taxTbl3);

/***** REQUEST *****/

AXLevel23 level23 = new AXLevel23(tbl1, tbl2, tbl3);

AXIndependentRefund indrefund = new AXIndependentRefund (order_id, cust_id, amount, pan,
expdate, customer_code, invoice_number, level23);
HttpsPostRequest mpgReq = new HttpsPostRequest(host, store_id, api_token, indrefund);

```



```
try
{
    Receipt receipt = mpgReq.getReceipt();
    System.out.println("CardType = " + receipt.getCardType());
    System.out.println("TransAmount = " + receipt.getTransAmount());
    System.out.println("TxnNumber = " + receipt.getTxnNumber());
    System.out.println("ReceiptId = " + receipt.getReceiptId());
    System.out.println("TransType = " + receipt.getTransType());
    System.out.println("ReferenceNum = " + receipt.getReferenceNum());
    System.out.println("ResponseCode = " + receipt.getResponseCode());
    System.out.println("ISO = " + receipt.getISO());
    System.out.println("BankTotals = " + receipt.getBankTotals());
    System.out.println("Message = " + receipt.getMessage());
    System.out.println("AuthCode = " + receipt.getAuthCode());
    System.out.println("Complete = " + receipt.getComplete());
    System.out.println("TransDate = " + receipt.getTransDate());
    System.out.println("TransTime = " + receipt.getTransTime());
    System.out.println("Ticket = " + receipt.getTicket());
    System.out.println("TimedOut = " + receipt.getTimedOut());
    System.out.println("ITD Response = " + receipt.getITDResponse());
    System.out.println("IsVisaDebit = " + receipt.getIsVisaDebit());
}
catch (Exception e)
{
    e.printStackTrace();
}
}
```

## 12 Testing a Solution

- 12.1 About the Merchant Resource Centre
- 12.2 Logging In to the QA Merchant Resource Center
- 12.3 Test Credentials for Merchant Resource Center
- 12.4 Getting a Unique Test Store ID and API Token
- 12.5 Processing a Transaction
- 12.6 Testing INTERAC® Online Payment Solutions
- 12.7 Testing MPI Solutions
- 12.8 Testing Visa Checkout
- 1 ThreatMetrix Query Data
- 12.9 Test Cards
- 12.10 Simulator Host

### 12.1 About the Merchant Resource Centre

The Merchant Resource Center is the user interface for Moneris Gateway services. There is also a QA version of the Merchant Resource Centre site specifically allocated for you and other developers to use to test your API integrations with the gateway.

You can access the Merchant Resource Center in the test environment at:

<https://esqa.moneris.com/mpg> (Canada)

<https://esplusqa.moneris.com/usmpg> (United States)

The test environment is generally available 24/7, but 100% availability is not guaranteed. Also, please be aware that other merchants are using the test environment in the Merchant Resource Center. Therefore, you may see transactions and user IDs that you did not create. As a courtesy to others who are testing, we ask that you use only the transactions/users that you created. This applies to processing Refund transactions, changing passwords or trying other functions.

### 12.2 Logging In to the QA Merchant Resource Center

To log in to the QA Merchant Resource Center for testing purposes:

1. Go to the Merchant Resource Center QA website at <https://esqa.moneris.com/mpg>
2. Enter your username and password, which are the same email address and password you use to log in to the Developer Portal
3. Enter your Store ID, which you obtained from the Developer Portal's My Testing Credentials as described in Test Credentials for Merchant Resource Center (page 282)

### 12.3 Test Credentials for Merchant Resource Center

For testing purposes, you can either use the pre-existing test stores in the Merchant Resource Center, or you can create your own unique test store where you will only see your own transactions. If you want to use the pre-existing stores, use the test credentials provided in the following tables with the corresponding lines of code, as in the examples below.

**Example of Corresponding Code For Canada:**

```
string processing_country_code = "CA";  
mpgReq.setTestMode(true);  
String store_id = "store5";  
String api_token = "yesguy";
```

**Table 109: Test Server Credentials - Canada**

store_id	api_token	Username	Password	Other Information
store1	yesguy	demouser	password	
store2	yesguy	demouser	password	
store3	yesguy	demouser	password	
store4	yesguy	demouser	password	
store5	yesguy	demouser	password	
monca00392	yesguy	demouser	password	Use this store to test Convenience Fee transactions
moncaqagt1	mgtokenguy1	demouser	password	Use this store to test Token Sharing
moncaqagt2	mgtokenguy2	demouser	password	Use this store to test Token Sharing
moncaqagt3	mgtokenguy3	demouser	password	Use this store to test Token Sharing

**Example of Corresponding Code for US:**

```
string processing_country_code = "US";  
mpgReq.setTestMode(true);  
String store_id = "monusqa005";  
String api_token = "qatoken";
```

**Table 110: Test Server Credentials - USA**


store_id	api_token	Username	Password	Other Information
monusqa002	qatoken	demouser	abc1234	
monusqa003	qatoken	demouser	abc1234	
monusqa004	qatoken	demouser	abc1234	
monusqa005	qatoken	demouser	abc1234	
monusqa006	qatoken	demouser	abc1234	
monusqa024	qatoken	demouser	abc1234	For testing ACH transactions only
monusqa025	qatoken	demouser	abc1234	For testing both ACH and Credit Card transactions
monusqa138	qatoken	demouser	abc1234	For testing Convenience Fee transactions

Alternatively, you can create and use a unique test store where you will only see your own transactions. For more on this, see [Getting a Unique Test Store ID and API Token](#) (page 284)

## 12.4 Getting a Unique Test Store ID and API Token

Transactions requests via the API will require you to have a Store ID and a corresponding API token. For testing purposes, you can either use the pre-existing test stores in the Merchant Resource Center, or you can create your own unique test store where you will only see your own transactions.

To get your unique Store ID and API token:

1. Log in to the Developer Portal at <https://developer.moneris.com>
2. In the My Profile dialog, click the Full Profile  button
3. Under My Testing Credentials, select Request Testing Credentials
4. Enter your Developer Portal password and select your country
5. Record the Store ID and API token that are given, as you will need them for logging in to the Merchant Resource Center (Store ID) and for API requests (API token).

Alternatively, you can use the pre-existing test stores already set up in the Merchant Resource Center as described in [Test Credentials for Merchant Resource Center](#) (page 282).



## 12.5 Processing a Transaction

- 12.5.1 Overview
- 12.5.2 HttpsPostRequest Object
- 12.5.3 Receipt Object

### 12.5.1 Overview

There are some common steps for every transaction that is processed.

1. Instantiate the transaction object (such as Purchase), and update it with object definitions that refer to the individual transaction.
2. Instantiate the HttpsPostRequest connection object and update it with connection information, host information and the transaction object that you created in step 1.  
Section 12.5.2 (page 287) provides the HttpsPostRequest connection object definition. This object and its variables apply to **every** transaction request.
3. Invoke the HttpsPostRequest object's `send()` method.
4. Instantiate the Receipt object, by invoking the HttpsPostRequest object's get Receipt method. Use this object to retrieve the applicable response details.

Some transactions may require steps in addition to the ones listed here. For example, ACH transactions require the use of an ACHinfo object. Below is a sample Purchase transaction with each major step outlined. For extensive code samples of other transaction types, refer to the Java API ZIP file.

**NOTE:** For illustrative purposes, the order in which lines of code appear below may differ slightly from the same sample code presented elsewhere in this document.

<pre>import java.io.*; import java.util.*; import java.net.*; import JavaAPI.*;  String order_id = "Test"+createDate.getTime(); String amount = "5.00"; String pan = "4242424242424242"; String expdate = "1901"; //YYMM format String crypt = "7"; String processing_country_code = "CA";</pre>	Include all necessary classes.
<pre>String store_id = "store5"; String api_token = "yesguy";</pre>	Define all mandatory values for the transaction object properties.
<pre>Purchase purchase = new Purchase();  purchase.setOrderId(order_id); purchase.setAmount(amount); purchase.setPan(pan); purchase.setExpdate(expdate); purchase.setCryptType(crypt); purchase.setDynamicDescriptor("2134565");</pre>	Define all mandatory values for the connection object properties.
	Instantiate the transaction object and assign values to properties.

<pre> HttpsPostRequest mpgReq = new HttpsPostRequest();  mpgReq.setProcCountryCode(processing_country_code); mpgReq.setTestMode(true); mpgReq.setStoreId(store_id); mpgReq.setApiToken(api_token); mpgReq.setTransaction(purchase); mpgReq.setStatusCheck(status_check);  try {     Receipt receipt = mpgReq.getReceipt();      System.out.println("CardType = " + receipt.getCardType());     System.out.println("TransAmount = " + receipt.getTransAmount());     System.out.println("TxnNumber = " + receipt.getTxnNumber());     System.out.println("ReceiptId = " + receipt.getReceiptId());     System.out.println("TransType = " + receipt.getTransType());     System.out.println("ReferenceNum = " + receipt.getReferenceNum());     System.out.println("ResponseCode = " + receipt.getResponseCode());     System.out.println("ISO = " + receipt.getISO());     System.out.println("BankTotals = " + receipt.getBankTotals());     System.out.println("Message = " + receipt.getMessage());     System.out.println("AuthCode = " + receipt.getAuthCode());     System.out.println("Complete = " + receipt.getComplete());     System.out.println("TransDate = " + receipt.getTransDate());     System.out.println("TransTime = " + receipt.getTransTime());     System.out.println("Ticket = " + receipt.getTicket());     System.out.println("TimedOut = " + receipt.getTimedOut());     System.out.println("IsVisaDebit = " + receipt.getIsVisaDebit()); } catch (Exception e) {     e.printStackTrace(); } } </pre>	<p>Instantiate connection object and assign values to properties, including the transaction object you just created.</p> <p>Instantiate the Receipt object and use its get methods to retrieve the desired response data.</p>
--	---

## 12.5.2 HttpsPostRequest Object

The transaction object that you instantiate becomes a property of this object when you call its set Transaction method.

### HttpsPostRequest Object Definition

```
HttpsPostRequest mpgReq = new HttpsPostRequest();
```

After instantiating the HttpsPostRequest object, update its mandatory values as outlined in Table 111

**Table 111: HttpsPostRequest object mandatory values**

Value	Type	Limits	Set method
	Description		
Processing country code	String	2-character alphabetic	<code>mpgReq.setProcCountryCode (processing_country_code) ;</code>
	CA for Canada, US for USA.		
Test mode	Boolean	true/false	<code>mpgReq.setTestMode (true) ;</code>
	Set to <code>true</code> when in test mode. Set to <code>false</code> (or comment out entire line) when in production mode.		
Store ID	String	10-character alphanumeric	<code>mpgReq.setStoreId (store_id) ;</code>
	Unique identifier provided by Moneris upon merchant account set up. See Testing Credentials (12.1, page 282) for test environment details.		
API Token	String	20-character alphanumeric	<code>mpgReq.setApiToken (api_token) ;</code>
	Unique alphanumeric string assigned upon merchant account activation. To locate your production API token, refer to the Merchant Resource Centre Admin Store Settings. See Testing Credentials (12.1, page 282) for test environment details.		
Transaction	Object	Not applicable	<code>mpgReq.setTransaction (transaction) ;</code>
	This argument is one of the numerous transaction types discussed in the rest of this manual. (Such as Purchase, Refund and so on.) This object is instantiated in step 1 on page 1.		

**Table 1: HttpsPostRequest object optional values**

Value	Type	Limits	Set method
	Description		
Status Check	Boolean	true/false	<code>mpgReq.setStatusCheck (status_check) ;</code>
	See "Definition of Request Fields" on page 306.  Note that while this value belongs to the HttpsPostRequest object, it is only supported by some transactions. Check the individual transaction definition to find out whether Status Check can be used.		

### 12.5.3 Receipt Object

After you send a transaction using the HttpsPostRequest object's send method, you can instantiate a receipt object.



## Receipt Object Definition

```
Receipt receipt = mpgReq.getReceipt();
```

For an in-depth explanation of Receipt object methods and properties, See "Definition of Response Fields" on page 314.

## 12.6 Testing INTERAC® Online Payment Solutions

Acxsys has two websites where merchants can post transactions for testing the fund guarantee porting of INTERAC® Online Payment transactions. The test `IDEBIT_MERCHNUM` value is provided by Moneris after registering in the test environment.

After registering, the following two links become accessible:

- Merchant Test Tool
- Certification Test Tool

### Merchant Test Tool

[https://merchant-test.interacdebit.ca/gateway/merchant\\_test\\_processor.do](https://merchant-test.interacdebit.ca/gateway/merchant_test_processor.do)

This URL is used to simulate the transaction response process, to validate response variables, and to properly integrate your checkout process.

When testing INTERAC® Online Payment transactions, you are forwarded to the INTERAC® Online Payment Merchant Testing Tool. A screen appears where certain fields need to be completed.

For an approved response, do not alter any of the fields except for the ones listed here.

#### **IDEBIT\_TRACK2**

To form a track2 when testing with the Moneris Gateway, use one of these three numbers:

3728024906540591206=01121122334455000

5268051119993326=01121122334455000000

453781122255=011211223344550000000000

#### **IDEBIT\_ISSNAME**

RBC

#### **IDEBIT\_ISSCONF**

123456

For a declined response, provide any other value as the `IDEBIT_TRACK2`. Click **Post to Merchant**.

Whether the transaction is approved or declined, do **not** click **Validate Data**. This will return validation errors.

### Certification Test Tool

[https://merchant-test.interacdebit.ca/gateway/merchant\\_certification\\_processor.do](https://merchant-test.interacdebit.ca/gateway/merchant_certification_processor.do)

This URL is used to complete the required INTERAC® Online Payment Merchant Front-End Certification test cases, which are outlined in Appendix N (page 377) and Appendix O (page 381).

---

To confirm the fund that was guaranteed above, an INTERAC® Online Payment Purchase (see page 75) must be sent to the Moneris Gateway QA using the following test store information:

**Host:** esqa.moneris.com

**Store ID:** store3

**API Token:** yesguy

You can always log into the Merchant Resource Center to check the results using the following information:

**URL:** <https://esqa.moneris.com/mpg>

**Store ID:** store3

Note that all response variables that are posted back from the IOP gateway in step 4.4 of 4.4 must be validated for length of field, permitted characters and invalid characters.

## 12.7 Testing MPI Solutions

When testing your implementation of the Moneris MPI, you can use the Visa/MasterCard/Amex PIT (production integration testing) environment. The testing process is slightly different than a production environment in that when the inline window is generated, it does not contain any input boxes. Instead, it contains a window of data and a **Submit** button. Clicking **Submit** loads the response in the testing window. The response will not be displayed in production.

**NOTE:** MasterCard SecureCode and Amex SafeKey may not be directly tested within our current test environment. However, the process and behavior tested with the Visa test cards will be the same for MCSC and SafeKey.

When testing you may use the following test card numbers with any future expiry date. Use the appropriate test card information from the tables below: Visa and MasterCard use the same test card information, while Amex uses unique information.

**Table 112: MPI test card numbers (Visa and MasterCard only)**

Card Number	VERes	PARes	Action
4012001037141112 4242424242424242	Y	true	TXN – Call function to create inline window. ACS – Send CAVV to Moneris Gateway using either the Cavv Purchase or the Cavv Pre-Authorization transaction.
4012001038488884	U	NA	Send transaction to Moneris Gateway using either the basic Purchase or the basic Pre-Authorization transaction. Set crypt_type = 7.

**Table 112: MPI test card numbers (Visa and MasterCard only) (continued)**

Card Number	VERes	PAREs	Action
4012001038443335	N	NA	Send transaction to Moneris Gateway using either the basic Purchase or the basic Pre-Authorization transaction. Set crypt_type = 6.
4012001037461114	Y	false	Card failed to authenticate. Merchant may chose to send transaction or decline transaction. If transaction is sent, use crypt type = 7.

**Table 113: MPI test card numbers (Amex only)**

Card Number	Password			Action
	VERes	Required?	PAREs	
375987000000062	U	Not required	N/A	TXN – Call function to create inLine window. ACS – Send CAVV to Moneris Gateway using either the Cavv Purchase or the Cavv Pre-Authorization transaction. Set crypt_type = 7.
375987000000021	Y	Yes: test13fail	false	Card failed to authenticate. Merchant may chose to send transaction or decline transaction. If transaction is sent, use crypt type = 7.
375987000000013	N	Not required	N/A	Send transaction to Moneris Gateway using either the basic Purchase or the basic Pre-Authorization transaction. Set crypt_type = 6.
374500261001009	Y	Yes: test09	true	Card failed to authenticate. Merchant may choose to send transaction or decline transaction. Set crypt_type = 5.

**VERes**

The result U, Y or N is obtained by using getMessage().

**PAREs**

The result “true” or “false” is obtained by using getSuccess().

To access the Merchant Resource Center in the test environment go to <https://esqa.moneris.com/mpg> (Canada) or <https://esplusqa.moneris.com/usmpg> (USA).

Transactions in the test environment should not exceed \$11.00.

## 12.8 Testing Visa Checkout

In order to test Visa Checkout you need to:

1. Create a Visa Checkout configuration profile in the Merchant Resource Center QA environment at <https://esqa.moneris.com/mpg>. To learn more about this, see "Creating a Visa Checkout Configuration for Testing" below.
2. Obtain a Lightbox API key to be used for Lightbox integration. To learn more about this, see "Integrating Visa Checkout Lightbox" on page 233.
3. For test card numbers specifically for use when testing Visa Checkout, see "Test Cards for Visa Checkout" on the next page

### 12.8.1 Creating a Visa Checkout Configuration for Testing

Once you have a test store created, you need to activate Visa Checkout in the QA environment.

To activate Visa Checkout in QA:

1. Log in to the the QA environment at <https://esqa.moneris.com/mpg>
2. In the Admin menu, select Visa Checkout
3. Complete the applicable fields
4. Click Save.

## 12.9 Test Cards

Because of security and compliance reasons, the use of live credit and debit card numbers for testing is strictly prohibited. Only test credit and debit card numbers are to be used.

To test general transactions, use the following test card numbers:

**Table 114: General test card numbers**

Card Plan	Card Number
MasterCard	5454545454545454
Visa	4242424242424242
Amex	373599005095005
JCB	3566007770015365
Diners	36462462742008
Track2	5258968987035454=06061015454001060101?

To test Level 2/3 transactions, use the following test card numbers:

**Table 115: Level 2/3 test card numbers**

Card Plan	Card Number
MasterCard	5454545442424242
Visa	4242424254545454
Amex	373269005095005
Diners	36462462742008

To test ACH transactions (US only), use the following account details:

**Financial institution:** FEDERAL RESERVE BANK

**Routing Number:** 011000015

**Account number:** Any number between 5 and 22 digits

**Check number:** Any number

### 12.9.1 Test Cards for Visa Checkout

**Table 1: Test Cards Numbers - Visa Checkout**

Card Plan	Card Number
Visa	4005520201264821 (without card art)
Visa	4242424242424242 (with card art)
MasterCard	5500005555555559
American Express	340353278080900
Discover	6011003179988686

## 12.10 Simulator Host

The test environment has been designed to replicate the production environment as closely as possible. One major difference is that Moneris is unable to send test transactions onto the production authorization network. Therefore, issuer responses are simulated. Additionally, the requirement to emulate approval, decline and error situations dictates that certain transaction variables initiate various response and error situations.

The test environment approves and declines transactions based on the penny value of the amount sent. For example, a transaction made for the amount of \$9.00 or \$1.00 is approved because of the .00 penny value.

Transactions in the test environment must not exceed \$11.00.

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For a list of all current test environment responses for various penny values, please see the Test Environment Penny Response Table available at <https://developer.moneris.com>.

**NOTE:** These responses may change without notice. Check the Moneris Developer Portal (<https://developer.moneris.com>) regularly to access the latest documentation and downloads.



## 13 Moving to Production

- 13.1 Activating a Production Store Account
- 13.2 Configuring a Store for Production
- 13.3 Receipt Requirements
- 13.4 Getting Help

### 13.1 Activating a Production Store Account

The steps below outline how to activate your production account so that you can process production transactions.

1. Obtain your activation letter/fax from Moneris.
2. Go to <https://www3.moneris.com/connect/en/activate/index.php>(Canada) or <https://esplus.moneris.com/usmpg/activate> (United States) as instructed in the letter/fax.
3. Input your store ID and merchant ID from the letter/fax and click **Activate**.
4. Follow the on-screen instructions to create an administrator account. This account will grant you access to the Merchant Resource Center.
5. Log into the Merchant Resource Center at <https://www3.moneris.com/mpg> (Canada) or <https://esplus.moneris.com/usmpg> (US) using the user credentials created in step 13.1.
6. Proceed to **ADMIN** and then **STORE SETTINGS**.
7. Locate the API token at the top of the page. You will use this API Token along with the store ID that you received in your letter/fax and to send any production transactions through the API.

When your production store is activated, you need to configure your store so that it points to the production host. To learn how do to this, see Configuring a Store for Production (page 296)

**NOTE:** For more information about how to use the Merchant Resource Center, see the Moneris Gateway Merchant Resource Center User's Guide, which is available at <https://developer.moneris.com>.

### 13.2 Configuring a Store for Production

After you have completed your testing and have activated your production store, you are ready to point your store to the production host.

To configure a store for production:

1. Change the test mode set method from `true` to `false`.
2. Change the Store ID to reflect the production store ID that you received when you activated your production store. To review the steps for activating a production store, see Activating a Production Store Account (page 296).
3. Change the API token to the production token that you received during activation.

The table below illustrates the steps above using the relevant code (and where **x** is an alphanumeric character).



Step	Code in Testing	Changes for Production
1	No string changes for this item, only set method is altered: <code>mpgReq.setTestMode(true);</code>	Set method for production: <code>mpgReq.setTestMode(false);</code>
2	String: <code>String store_id = "store5";</code> Associated Set Method: <code>mpgReq.setStoreId(store_id);</code>	String for Production: <code>String store_id = "monXXXXXXXXX";</code>
3	String: <code>String api_token = "yesguy";</code> Associated Set Method: <code>mpgReq.setApiToken(api_token);</code>	String for Production: <code>String api_token = "XXXXX";</code>

One more thing to keep in mind is which country you are configuring your store for. For the set method  
`mpgReq.SetProcCountryCode(processing_country_code);`

You need to declare the correct country code in the string:

For Canada: `string processing_country_code = "CA";`

For United States: `string processing_country_code = "US";`

### 13.2.1 Configuring an INTERAC® Online Payment Store for Production

Before you can process INTERAC® Online Payment transactions through your web site, you need to complete the certification registration process with Moneris, as described below. The production IDEBIT\_MERCHNUM value is provided by Moneris after you have successfully completed the certification.

Acxsys' production INTERAC® Online PaymentGateway URL is [https://gateway.interaonline.com/merchant\\_processor.do](https://gateway.interaonline.com/merchant_processor.do).

To access the Moneris Moneris Gateway production gateway URL, use the following:

**Store ID: Provided by Moneris**

**API Token: Generated during your store activation process.**

**Processing country code: CA**

The **production** Merchant Resource Center URL is <https://www3.moneris.com/mpg/>

### 13.2.1.1 Completing the Certification Registration - Merchants

To complete the certification registration, fax or email the information below to our Integration Support helpdesk:

- Merchant logo to be displayed on the INTERAC® Online Payment Gateway page
  - In both French and English
  - 120 × 30 pixels
  - Only PNG format is supported.
- Merchant business name
  - In both English and French
  - Maximum 30 characters.
- List of all referrer URLs. That is, URLs from which the customer may be redirected to the INTERAC® Online Payment gateway.
- List of all URLs that may appear in the IDEBIT\_FUNDEDURL field of the https form POST to the INTERAC® Online Payment Gateway.
- List of all URLs that may appear in the IDEBIT\_NOTFUNDEDURL field of the https form POST to the INTERAC® Online Payment Gateway.

### 13.2.1.2 Third-Party Service/Shopping Cart Provider

In your product documentation, instruct your clients to provide the information below to the Moneris Gateway Integration Support helpdesk for certification registration:

- Merchant logo to be displayed on the INTERAC® Online Payment Gateway page
  - In both French and English
  - 120 × 30 pixels
  - Only PNG format is supported.
- Merchant business name
  - In both English and French
  - Maximum 30 characters.
- List of all referrer URLs. That is, URLs from which the customer may be redirected to the INTERAC® Online Payment gateway.
- List of all URLs that may appear in the IDEBIT\_FUNDEDURL field of the https form POST to the INTERAC® Online Payment Gateway.
- List of all URLs that may appear in the IDEBIT\_NOTFUNDEDURL field of the https form POST to the INTERAC® Online Payment Gateway.

See 4.3.3, page 72 for additional client requirements.

## 13.3 Receipt Requirements

Visa and MasterCard expect certain details to be provided to the cardholder and on the receipt when a transaction is approved.

Receipts must comply with the standards outlined within the Integration Receipts Requirements. For all the receipt requirements covering all transaction scenarios, visit the Moneris Developer Portal at <https://developer.moneris.com>.

Production of the receipt must begin when the appropriate response to the transaction request is received by the application. The transaction may be any of the following:

- **Sale** (Purchase)
- **Authorization** (PreAuth, Pre-Authorization)
- **Authorization Completion** (Completion, Capture)
- **Offline Sale** (Force Post)
- **Sale Void** (Purchase Correction, Void)
- **Refund**.

The boldface terms listed above are the names for transactions as they are to be displayed on receipts. Other terms used for the transaction are indicated in brackets.

### 13.3.1 Certification Requirements

Card-present transaction receipts are required to complete certification.

#### **Card-not-present integration**

Certification is optional but highly recommended.

#### **Card-present integration**

After you have completed the development and testing, your application must undergo a certification process where all the applicable transaction types must be demonstrated, and the corresponding receipts properly generated.

Contact a Client Integration Specialist for the Certification Test checklist that must be completed and returned for verification. (See "Getting Help" below for contact details.) Be sure to include the application version of your product. Any further changes to the product after certification requires re-certification.

After the certification requirements are met, Moneris will provide you with an official certification letter.

## 13.4 Getting Help

Help is available to Moneris merchants at no cost. Ensure that you have your merchant number or store ID handy.

### **Getting Started**

If you are just getting started, a client integration specialist can help with integration and certification.

#### **Contact**

- [ClientIntegrations@moneris.com](mailto:ClientIntegrations@moneris.com)
- Monday-Friday: 8:30 am - 8 pm EST.

### **Development Assistance**

If you are already working with an integration specialist and need development assistance, our eProducts technical consultants offer development and technical support.

#### **Contact**

- 1-866-562-4354
- [eproducts@moneris.com](mailto:eproducts@moneris.com)
- Monday-Friday: 8 am - 8 pm EST

#### **Production Support**

Already have a live application and need production support? Our Customer Service specialists provide financial and technical support to merchants.

#### **Contact**

1-866-319-7450 (24 hours/day, 7 days/week)

[onlinepayments@moneris.com](mailto:onlinepayments@moneris.com)



## 14 Incorporating All Available Fraud Tools

- 14 Incorporating All Available Fraud Tools
- 14.2 Implementation Checklist
- 14.3 Making a Decision

To minimize fraudulent activity in online transactions, Moneris recommends that you implement all of the fraud tools available through the Moneris Gateway. These are explained below:

### **Address Verification Service (AVS)**

Verifies the cardholder's billing address information.

### **Verified by Visa, MasterCard Secure Code and Amex SafeKey (VbV/MCSC/SafeKey)**

Authenticates the cardholder at the time of an online transaction.

### **Card Validation Digit (CVD)**

Validates that cardholder is in possession of a genuine credit card during the transaction.

Note that all responses that are returned from these verification methods are intended to provide added security and fraud prevention. The response itself does not affect the completion of a transaction. Upon receiving a response, the choice to proceed with a transaction is left entirely to the merchant.

## 14.1 Implementation Options

### **Option A**

Process a Transaction Risk Management Tool query and obtain the response. You can then decide whether to continue with the transaction, abort the transaction, or use additional eFraud features.

If you want to use additional eFraud features, perform one or both of the following to help make your decision about whether to continue with the transaction or abort it:

- Process a VbV/MCSC/SafeKey transaction and obtain the response. The merchant then makes the decision whether to continue with the transaction or to abort it.
- Process a financial transaction including AVS/CVD details and obtain the response. The merchant then makes a decision whether to continue with the transaction or to abort it.

### **Option B**

1. Process a Transaction Risk Management Tool query and obtain the response.
2. Process a VbV/MCSC/SafeKey transaction and obtain the response.
3. Process a financial transaction including AVS/CVD details and obtain the response.
4. Merchant then makes a one-time decision based on the responses received from the eFraud tools.

## 14.2 Implementation Checklist

The following checklists provide high-level tasks that are required as part of your implementation of the Transaction Risk Management Tool. Because each organization has certain project requirements for implementing system and process changes, this list is only a guideline, and does not cover all aspects of your project.

**Download and review all of the applicable APIs and Integration Guides**

Please review the sections outlined within this document that refers to the following feature

**Table 116: API documentation**

Document/API	Use the document if you are....
Transaction Risk Management Tool Integration Guide (Section #)	Implementing or updating your integration for the Transaction Risk Management Tool
Moneris MPI – Verified by Visa/MasterCard SecureCode/American Express SafeKey – Java API Integration Guide	Implementing or updating Verified by Visa, MasterCard SecureCode or American Express SafeKey
Basic transaction with VS and CVD (Section#)	Implementing or updating transaction processing, AVS or CVD

**Design your transaction flow and business processes**

When designing your transaction flow, think about which scenarios you would like to have automated, and which scenarios you would like to have handled manually by your employees.

The “Understand Transaction Risk Management Transaction Flow” and Handling Response Information (page 196) sections can help you work through the design of your transaction and process flows.

Things to consider when designing your process flows:

- Processes for notifying people within your organization when there is scheduled maintenance for Moneris Gateway.
- Handling refunds, canceled orders and so on.
- Communicating with customers when you will not be shipping the goods because of suspected fraud, back-ordered goods and so on.

**Complete your development and testing**

- The North American API - Integration Guide provides the technical details required for the development and testing. Ensure that you follow the testing instructions and data provided.

**If you are an integrator**

- Ensure that your solution meets the requirements for PCI-DSS/PA-DSS as applicable.
- Send an email to [eproducts@moneris.com](mailto:eproducts@moneris.com) with the subject line “Certification Request”.
- Develop material to set up your customers as quickly as possible with your solution and a Moneris account. Include information such as:
  - Steps they must take to enter their store ID or API token information into your solution.
  - Any optional services that you support via Moneris Gateway (such as TRMT, AVS, CVD, VBV/MCSC/SafeKey and so on) so that customers can request these features.

### 14.3 Making a Decision

Depending on your business policies and processes, the information obtained from the fraud tools (such as AVS, CVD, VbV/MCSC/SafeKey and TRMT) can help you make an informed decision about whether to accept a transaction or deny it because it is potentially fraudulent.

If you do not want to continue with a likely fraudulent transaction, you must inform the customer that you are not proceeding with their transaction.

If you are attempting to do further authentication by using the available fraud tools, but you have received an approval response instead, cancel the financial transaction by doing one of the following:

- If the original transaction is a Purchase, use a Purchase Correction or Refund transaction. You will need the original order ID and transaction number.
- If the original transaction is a Pre-Authorization, use a Completion transaction for \$0.00.





## Appendix A Definition of Request Fields

This appendix deals with values that belong to transaction objects. For information on values that belong to the (HttpRequest) connection object, see "HttpRequest Object" on page 287.

### NOTE:

Alphanumeric fields allow the following characters: a-z A-Z 0-9 \_ - : . @ spaces

All other request fields allow the following characters: a-z A-Z 0-9 \_ - : . @ \$ = /

Note that the values listed in Table 117 are not mandatory for **every** transaction. Check the transaction definition. If it says that a value is mandatory, a further description is found here.

**Table 117: Mandatory request fields**

Value	Type	Limits	Sample code variable definition
	Description		
General transaction values			
Order ID	Alphanumeric	50 characters	String order_id
	Merchant-defined transaction identifier that must be unique for every Purchase, PreAuth and Independent Refund transaction. No two transactions of these types may have the same order ID.		
	For Refund, Completion and Purchase Correction transactions, the order ID must be the same as that of the original transaction.		
	<b>Canada:</b> The last 10 characters of the order ID are displayed in the “Invoice Number” field on the Merchant Direct Reports. However only letters, numbers and spaces are sent to Merchant Direct.		
	A minimum of 3 and a maximum of 10 valid characters are sent to Merchant Direct. Only the last characters beginning after any invalid characters are sent. For example, if the order ID is <b>1234-567890</b> , only <b>567890</b> is sent to Merchant Direct.		
	<b>US:</b> The last 32 characters of the order ID are sent on to the Client Line settlement reports.		
For either countries, If the order ID has fewer than 3 characters, it may display a blank or 0000000000 in the Invoice Number field.			

**Table 117: Mandatory request fields (continued)**

Value	Type	Limits	Sample code variable definition
	Description		
Amount	Decimal	9 characters	<code>String amount;</code>
	<p>Transaction amount. Used in a number of transactions. Note that this is different from the amount used in a Completion transaction, which is an alphanumeric value.</p> <p>This must contain at least 3 digits, two of which are penny values.</p> <p>The minimum allowable value is \$0.01, and the maximum allowable value is 999 999.99. Transaction amounts of \$0.00 are not allowed.</p>		
Credit card number	Numeric	20 characters (no spaces or dashes)	<code>String pan;</code>
	<p>Most credit card numbers today are 16 digits, but some 13-digit numbers are still accepted by some issuers. This field has been intentionally expanded to 20 digits in consideration for future expansion and potential support of private label card ranges.</p>		
Expiry date	Numeric	4 characters (YYMM format)	<code>String expdate;</code>
	<p><b>Note:</b> This is the reverse of the date displayed on the physical card, which is MMY.</p>		
E-Commerce indicator	Alphanumeric	1 character	<code>String crypt;</code>
	<p>1: Mail Order / Telephone Order—Single</p> <p>2: Mail Order / Telephone Order—Recurring</p> <p>3: Mail Order / Telephone Order—Instalment</p> <p>4: Mail Order / Telephone Order—Unknown classification</p> <p>5: Authenticated e-commerce transaction (VBV)</p> <p>6: Non-authenticated e-commerce transaction (VBV)</p> <p>7: SSL-enabled merchant</p> <p>8: Non-secure transaction (web- or email-based)</p> <p>9: SET non-authenticated transaction</p>		
Completion Amount	Decimal	9 characters	<code>String comp_amount;</code>
	<p>Amount of a Completion transaction. This may not be equal to the amount value (described on page 307), which appeared in the original Pre-Authorization transaction.</p>		

Table 117: Mandatory request fields (continued)

Value	Type	Limits	Sample code variable definition
	Description		
Transaction number	Variable characters	255 characters	<code>String txn_number;</code>
	Used when performing follow-on transactions. (That is, Completion, Purchase Correction or Refund.) This must be the value that was returned as the transaction number in the response of the original transaction.  When performing a Completion, this value must reference the Pre-Authorization. When performing a Refund or a Purchase Correction, this value must reference the Completion or the Purchase.		
Authorization code	Alphanumeric	8 characters	<code>String auth_code;</code>
	Authorization code provided in the transaction response from the issuing bank. This is required for Force Post transactions.		
ECR number	String	TBD	<code>String ecr_no;</code>
	Electronic cash register number.		
MPI transaction values			
XID	Alphanumeric	20 characters	<code>String xid;</code>
	Can also be used as your order ID when using Moneris Gateway.		
MD	String	1024-character alphanumeric	<code>String MD;</code>
	Information to be echoed back in the response.		
Merchant URL	String	TBD	<code>String merchantUrl;</code>
	URL to which the MPI response is to be sent.		
Accept	String		<code>String accept;</code>
	MIME types that the browser accepts		
User Agent	String		<code>String userAgent;</code>
	Browser details		
PAREs	String	Variable	(Not shown)
	Value passed back to the API during the TXN, and returned to the MPI when an ACS request is made.		

**Table 117: Mandatory request fields (continued)**

Value	Type	Limits	Sample code variable definition
	Description		
Cardholder Authentication Verification Value	Alphanumeric	50 characters	String cavv;
	Value provided by the Moneris MPI or by a third-party MPI. It is part of a VBV/MCSC transaction.		
ACH transaction values			
Routing number	Numeric	9 characters	String routing_num;
	Check routing number to identify the Financial Institution.		
Vault transaction values			
Data key	Alphanumeric	25-character	String data_key;
	Profile identifier that all future financial Vault transactions (that is, they occur after the profile was registered by a ResAddCC or ResTokenizeCC transaction) will use to associate with the saved information.  The data key is generated by Moneris, and is returned to the merchant (via the Receipt object) when the profile is first registered.		
Duration	String	3-numeric	String duration;
	Amount of time the temporary token should be available, up to 900 seconds.		
Mag Swipe transaction values			
POS code	Numeric	2 characters	String pos_code;
	Under normal presentment situations, the value is 00.		
	If a Pre-Authorization transaction was card-present and keyed-in, then the POS code for the corresponding Completion transaction is 71.		
	In an unmanned kiosk environment where the card is present, the value is 27.		
	If the solution is not “merchant and cardholder present”, contact Moneris for the proper POS code.		
Track2 data	Alphanumeric	40 characters	String track2;
	Retrieved from the mag stripe of a credit card by swiping it through a card reader, or the "fund guarantee" value returned by the INTERAC® Online Payment system (Canada only).		

Table 117: Mandatory request fields (continued)

Value	Type	Limits	Sample code variable definition
	Description		
Encrypted track2 data	Alphanumeric		<code>String enc_track2;</code>
	String that is retrieved by swiping or keying in a credit card number through a Moneris-provided encrypted mag swipe card reader. It is part of an encrypted keyed or swiped transaction only. This string must be retrieved by a specific device. (See below for the list of current available devices.)		
Device type	Alphanumeric	30 characters	<code>String device_type;</code>
	<p>Type of encrypted mag swipe reader that was read the credit card. This must be a Moneris-provided device so that the values are properly encrypted and decrypted.</p> <p>This field is case-sensitive. Available values are:</p> <p>"idtech_bdk" (Canada only)</p> <p>"idtech" (US only).</p>		

Note that the values listed in Table 118 are not supported by **every** transaction. Check the transaction definition. If it says that a value is optional, a further description is found here.

Table 118: Optional transaction values

Value	Type	Limits	Sample code variable definition
	Description		
General transaction values			
Customer ID	Alphanumeric	50 characters	String cust_id;
	This can be used for policy number, membership number, student ID, invoice number and so on.		
	This field is searchable from the Moneris Merchant Resource Centre.		
Status Check	Boolean	true/false	String status_check;
	See "Status Check" on page 328.		
Dynamic descriptor	Alphanumeric	20 characters.	String dynamic_descriptor;
		Combined with merchant's business name cannot exceed 25 characters.	
	Merchant-defined description sent on a per-transaction basis that will appear on the credit card statement appended to the merchant's business name.		
Commercial card invoice	Alphanumeric	17 characters	String commcard_invoice;
	(US only) Level 2 Invoice Number of the transaction used for Corporate Credit Card transactions (Commercial Purchasing Cards).		
	Characters allowed for commcard_invoice: a-z, A-Z, 0-9, spaces		
Commercial card tax amount	Decimal	9 characters. Must contain at least 3 digits, two of which must be penny values.	String commcard_tax_amount;
		0.00-999999.99	
	(US only) Level 2 Tax Amount of the transaction used for Corporate Credit Card transactions (Commercial Purchasing Cards).		
Vault transaction values			
Phone number	Alphanumeric	30 characters	String phone;
	Phone number of the customer. Can be sent in when creating or updating a Vault profile.		
Email address	Alphanumeric	30 characters	String email;
	Email address of the customer. Can be sent in when creating or updating a Vault profile.		

Table 118: Optional transaction values (continued)

Value	Type	Limits	Sample code variable definition
	Description		
Additional notes	Alphanumeric	30 characters	<code>String note;</code>
	This optional field can be used for supplementary information to be sent in with the transaction. This field can be sent in when creating or updating a Vault profile.		





## Appendix B Definition of Response Fields

- General response fields, Appendix B Definition of Response Fields
- Recurring Billing response fields, Appendix B Definition of Response Fields
- Status Check response fields, Appendix B Definition of Response Fields
- AVS response fields, AVS response fields (see Appendix E, page 336)
- CVD response fields, CVD response fields (see Appendix F, page 342)
- MPI response fields, page 318
- Vault response fields, Vault response fields (see 6.1, page 97)
- Mag Swipe response fields, Mag Swipe response fields (see 7, page 153)
- Convenience Fee response fields, Convenience Fee response fields (see Appendix H, page 352)

**Table 119: Receipt object response values**

Value	Type	Limits	Get Method
	Description		
General response fields			
Card type	String	2-character alphabetic (min. 1)	<code>receipt.getCardType()</code> ;
	Represents the type of card in the transaction, e.g., Visa, Mastercard.  Possible values: V = Visa, M = Mastercard, AX = American Express , DC = Diner's Card, NO = Novus/Discover in (Canada only), DS= Discover (US only), C = JCB (US only), SE = Sears (Canada only), CQ = ACH (US only), P = Pin Debit (US only), D = Debit (canada only), C1 = JCB (Canada only)		
Card level result	String	3-alphanumeric	<code>receipt.getCardLevelResult()</code> ;
	TBD		
Transaction amount	String	9-character decimal	<code>receipt.getTransAmount()</code> ;
	Transaction amount that was processed.		
Transaction number	String	20-character alphanumeric	<code>receipt.getTxnNumber()</code> ;
	Gateway Transaction identifier often needed for follow-on transactions (such as Refund and Purchase Correction) to reference the originally processed transaction.		
Receipt ID	String	50-character alphanumeric	<code>receipt.getReceiptId</code>
	Order ID that was specified in the transaction request.		

Table 119: Receipt object response values (continued)

Value	Type	Limits	Get Method
	Description		
Transaction type	String	2-character alphanumeric	<code>receipt.getTransType()</code> ;
	<ul style="list-style-type: none"> <li>• 0 = Purchase</li> <li>• 1 = PreAuth</li> <li>• 2 = Completion</li> <li>• 4 = Refund</li> <li>• 11 = Void</li> </ul>		
Reference number	String	18-character numeric	<code>receipt.getReferenceNum()</code> ;
	<p>Terminal used to process the transaction as well as the shift, batch and sequence number. This data is typically used to reference transactions on the host systems, and must be displayed on any receipt presented to the customer.</p> <p>This information is to be stored by the merchant.</p> <p>Example: 660123450010690030</p> <ul style="list-style-type: none"> <li>• 66012345: Terminal ID</li> <li>• 001: Shift number</li> <li>• 069: Batch number</li> <li>• 003: Transaction number within the batch.</li> </ul>		
Response code	String	3-character numeric?	<code>receipt.getResponseCode()</code> ;
	<ul style="list-style-type: none"> <li>• &lt; 50: Transaction approved</li> <li>• ≥ 50: Transaction declined</li> <li>• Null: Transaction incomplete.</li> </ul> <p>For further details on the response codes that are returned, see the Response Codes document at <a href="https://developer.moneris.com">https://developer.moneris.com</a>.</p>		
ISO	String	2-character numeric	<code>receipt.getISO()</code> ;
	ISO response code		
Bank totals	Object		<code>receipt.getBankTotals()</code> ;
	Response data returned in a Batch Close and Open Totals request. See "Definition of Response Fields" on the previous page.		
Message	String	100-character alpha-numeric	<code>receipt.getMessage()</code> ;
	<p>Response description returned from issuer.</p> <p>The message returned from the issuer is intended for merchant information only, and is <b>not</b> intended for customer receipts.</p>		

Table 119: Receipt object response values (continued)

Value	Type	Limits	Get Method
	Description		
Authorization code	String	8-character alphanumeric	<code>receipt.getAuthCode()</code> ;
	Authorization code returned from the issuing institution.		
Complete		true/false	<code>receipt.getComplete()</code> ;
	Transaction was sent to authorization host and a response was received		
Transaction date	String	Format: yyyy-mm-dd	<code>receipt.getTransDate()</code> ;
	Processing host date stamp		
Transaction time	String	Format: ##:##:##	<code>receipt.getTransTime()</code> ;
	Processing host time stamp		
Ticket	String	N/A	<code>receipt.getTicket()</code> ;
	Reserved field.		
Timed out		true/false	<code>receipt.getTimedOut()</code> ;
	Transaction failed due to a process timing out.		
Is Visa Debit		true/false	<code>receipt.getIsVisaDebit()</code> ;
	(Canada only) Indicates whether the card processed is a Visa Debit.		
Batch Close/Open Totals response fields (see )			
Processed card types	String Array	N/A	<code>receipt.getCreditCards(ecr_no)</code> ;
	Returns all of the processed card types in the current batch for the terminal ID/ECR Number from the request.		
Terminal IDs	String	8-character alphanumeric	<code>receipt.getTerminalIDs()</code> ;
	Returns the terminal ID/ECR Number from the request.		
Purchase count	String	4-character numeric	<code>receipt.getPurchaseCount(ecr, cardType)</code> ;
	Indicates the # of Purchase, ACH debit, Pre-Authorization Completion and Force Post transactions processed. If none were processed in the batch, then the value returned will be 0000.		

**Table 119: Receipt object response values (continued)**

Value	Type	Limits	Get Method
	Description		
Purchase amount	String	11-character alpha-numeric	<code>receipt.getPurchaseAmount (ecr, cardType) ;</code>
	Indicates the dollar amount processed for Purchase, ACH debit, Pre-Authorization Completion or Force Post transactions. This field begins with a + and is followed by 10 numbers, the first 8 indicate the amount and the last 2 indicate the penny value.  Example, +0000000000 = 0.00 and +0000041625 = 416.25		
Refund count	String	4-character numeric	<code>receipt.getRefundCount (ecr, cardType) ;</code>
	Indicates the # of Refund, Independent Refund or ACH Credit transactions processed. If none were processed in the batch, then the value returned will be 0000.		
Refund amount	String	11-character alpha-numeric	<code>receipt.getRefundAmount (ecr, cardType) ;</code>
	Indicates the dollar amount processed for Refund, Independent Refund or ACH Credit transactions. This field begins with a + and is followed by 10 numbers, the first 8 indicate the amount and the last 2 indicate the penny value.  Example, +0000000000 = 0.00 and +0000041625 = 416.25		
Correction count	String	4-character numeric	<code>receipt.getCorrectionCount (ecr, cardType) ;</code>
	Indicates the # of Purchase Correction or ACH Reversal transactions processed. If none were processed in the batch, then the value returned will be 0000.		
Correction amount	String	11-character alpha-numeric	<code>receipt.getCorrectionAmount (ecr, cardType) ;</code>
	Indicates the dollar amount processed for Purchase Correction or ACH Reversal transactions. This field begins with a + and is followed by 10 numbers, the first 8 indicate the amount and the last 2 indicate the penny value.  Example, +0000000000 = 0.00 and +0000041625 = 416.25		
Recurring Billing Response Fields (see Appendix G, page 345)			
Recurring billing success	String	true/false	<code>receipt.getRecurSuccess () ;</code>
	Indicates whether the recurring billing transaction has been successfully set up for future billing.		
Recur update success	String	true/false	<code>receipt.getRecurUpdateSuccess () ;</code>
	Indicates recur update success.		

Table 119: Receipt object response values (continued)

Value	Type	Limits	Get Method
	Description		
Next recur date	String	yyyy-mm-dd	<code>receipt.getNextRecurDate()</code> ;
	Indicates next recur billing date.		
Recur end date	String	yyyy-mm-dd	<code>receipt.getRecurEndDate()</code> ;
	Indicates final recur billing date.		
Status Check response fields (see Appendix C, page 328)			
Status code	String	3-character alpha-numeric	<code>receipt.getStatusCode()</code> ;
	<ul style="list-style-type: none"><li>&lt; 50: Transaction found and successful</li><li>≥ 50: Transaction not found and not successful</li></ul> <p>Note that the status code is only populated if the connection object's Status Check property is set to <b>true</b>.</p>		
Status message	String	found or not found	<code>receipt.getStatusMessage()</code> ;
	<ul style="list-style-type: none"><li>Found: <math>0 \leq \text{Status Code} \leq 49</math></li><li>Not Found or null: <math>50 \leq \text{Status Code} \leq 999</math>.</li></ul> <p>Note that The status message is only populated if the connection object's Status Check property is set to <b>true</b>.</p>		
AVS response fields (see Appendix E, page 336)			
AVS result code	String	1-character alpha-numeric	<code>receipt.getAvsResultCode()</code> ;
	Indicates the address verification result. For a full list of possible response codes refer to Section Appendix B.		
CVD response fields (see Appendix F, page 342)			
CVD result code	String	2-character alpha-numeric	<code>receipt.getCvdResultCode()</code> ;
	Indicates the CVD validation result. The first byte is the numeric CVD indicator sent in the request; the second byte is the response code. Possible response codes are shown in Appendix B		
MPI response fields (see "MPI" on page 1)			
Type	String	99-character alpha-numeric	
	VERes, PARes or error defines what type of response you are receiving .		

**Table 119: Receipt object response values (continued)**

Value	Type	Limits	Get Method
	Description		
Success	Boolean	true/false	<code>receipt.getMpiSuccess()</code> ;
	True if attempt was successful, false if attempt was unsuccessful.		
Message	String	100-character alphabetic	<code>receipt.getMpiMessage()</code> ;
	<p>MPI TXN transactions can produce the following values:</p> <ul style="list-style-type: none"> <li>Y: Create VBV verification form popup window.</li> <li>N: Send purchase or preauth with crypt type 6</li> <li>U: Send purchase or preauth with crypt type 7.</li> </ul> <p>MPI ACS transactions can produce the following values:</p> <ul style="list-style-type: none"> <li>Y or A: (Also <code>receipt.getMpiSuccess()=true</code>) Proceed with cavv purchase or cavv preauth.</li> <li>N: Authentication failed or high-risk transaction. It is recommended that you do not to proceed with the transaction. Depending on a merchant's risk tolerance and results from other methods of fraud detection, transaction may proceed with crypt type 7.</li> <li>U or time out: Send purchase or preauth as crypt type 7.</li> </ul>		
Term URL	String	255-character alphanumeric	
	URL to which the PAREs is returned		
MD	String	10024-character alphanumeric	
	Merchant-defined data that was echoed back		
ACS URL	String	255-character alphanumeric	
	URL that will be for the generated pop-up		
MPI CAVV	String	28-character alphanumeric	<code>receipt.getMpiCavv()</code> ;
	VbV/MCSC/American Express SafeKey authentication data		
MPI ECI	String	1-character alphanumeric	<code>receipt.getMPIEci()</code> ;

Table 119: Receipt object response values (continued)

Value	Type	Limits	Get Method
	Description		
CAVV result code	String	1-character alpha-numeric	receipt.getCavvResultCode();
	Indicates the Visa CAVV result. "Cavv Result Codes for Verified by Visa" on page 63. 0 = CAVV authentication results invalid 1 = CAVV failed validation; authentication 2 = CAVV passed validation; authentication 3 = CAVV passed validation; attempt 4 = CAVV failed validation; attempt 7 = CAVV failed validation; attempt (US issued cards only) 8 = CAVV passed validation; attempt (US issued cards only) The CAVV result code indicates the result of the CAVV validation.		
MPI inline form			receipt.getMpiInLineForm();
Vault response fields (see 6.1, page 97)			
Data key	String	25-character alpha-numeric	receipt.getDataKey();
	This field is created when the ResAddCC transaction or ResTokenizeCC transaction is sent. (That is, when the profile is created.) It is a unique profile identifier, and is a required value for for all future Vault transactions.		
Payment type	String	cc/ach	receipt.getPaymentType();
	Indicates the payment type associated with a Vault profile		
Masked PAN	String	20-character numeric	receipt.getMaskedPan()
	Returns the first 4 and/or last 4 of the card number saved in the profile.		
Expired card count	String		receipt.getExpiredCardCount();
	Total number of profiles (minus 1) that have a credit card that is expiring in the current or next calendar month. This value is returned by the ResGetExpiring transaction.		
Vault success	String	true/false	receipt.getResSuccess();
	Indicates whether Vault transaction was successful.		



Table 119: Receipt object response values (continued)

Value	Type	Limits	Get Method
	Description		
Vault customer ID	String	30-character alpha-numeric	<code>receipt.getResCustId()</code> ;
	Returns the customer ID saved in the profile.		
Vault phone number	String	30-character alpha-numeric	<code>receipt.getResPhone()</code> ;
	Returns the phone number saved in the profile.		
Vault email address	String	30-character alpha-numeric	<code>receipt.getResEmail()</code> ;
	Returns the email address saved in the profile.		
Vault note	String	30-character alpha-numeric	<code>receipt.getResNote()</code> ;
	Returns the note saved in the profile.		
Vault expiry date	String	4-character numeric	<code>receipt.getResExpdate()</code> ;
	Returns the expiry date of the card number saved in the profile. YYMM format.		
E-commerce indicator	String	1-character numeric	<code>receipt.getResCryptType()</code> ;
	Returns the e-commerce indicator saved in the profile.		
Vault AVS street number	String	19-character alpha-numeric	<code>receipt.getResAvsStreetNumber()</code> ;
	Returns the AVS street number saved in the profile. If no other AVS street number is passed in the transaction request, this value will be submitted along with the financial transaction to the issuer.		
Vault AVS street name	String	19-character alpha-numeric	<code>receipt.getResAvsStreetName()</code> ;
	Returns the AVS street name saved in the profile. If no other AVS street number is passed in the transaction request, this value will be submitted along with the financial transaction to the issuer.		
Vault AVS ZIP code	String	9-character alpha-numeric	<code>receipt.getResAvsZipcode()</code> ;
	Returns the AVS zip/postal code saved in the profile. If no other AVS street number is passed in the transaction request, this value will be submitted along with the financial transaction to the issuer.		
Vault customer first name	String	50-character alpha-numeric	<code>receipt.getResCustFirstName()</code>
	<b>(US ACH only)</b> Returns the customer first name saved in the profile.		

Table 119: Receipt object response values (continued)

Value	Type Limits		Get Method
	Description		
Vault customer last name	String	50-character alpha-numeric	<code>receipt.getResCustLastName()</code>
	<b>(US ACH only)</b> Returns the customer last name saved in the profile.		
Vault customer address 1	String	50-character alpha-numeric	<code>receipt.getResCustAddress1()</code>
	<b>(US ACH only)</b> Returns the customer address line 1 saved in the profile.		
Vault customer address 2	String	50-character alpha-numeric	<code>receipt.getResCustAddress2()</code>
	<b>(US ACH only)</b> Returns the customer address line 2 saved in the profile.		
Vault customer city	String	50-character alpha-numeric	<code>receipt.getResCustCity</code>
	<b>US ACH only</b> Returns the customer city saved in the profile.		
Vault customer state	String	2-character alpha-numeric	<code>receipt.getResCustState()</code>
	<b>US ACH only</b> Returns the customer state code saved in the profile.		
Vault customer ZIP code	String	10-character numeric	<code>receipt.getResCustZip();</code>
	<b>US ACH only</b> Returns the customer zip code saved in the profile.		
Vault check routing number	String	9-character numeric	<code>receipt.getResRoutingNum();</code>
	<b>US ACH only</b> Returns the customer check routing number saved in the profile.		
Vault masked account number	String	15-character alpha-numeric	<code>receipt.getResMaskedAccountNum();</code>
	<b>US ACH only</b> Returns the masked first 4 and last 4 digits of the account number saved in the profile.		
Vault check number	String	16-character numeric	<code>receipt.getResCheckNum();</code>
	<b>US ACH only</b> Returns the check number saved in the profile.		
Vault account type	String	savings/checking	<code>receipt.getResAccountType();</code>
	<b>US ACH only</b> Returns the type of account saved in the profile.		
Vault SEC code	String	3-character alpha-numeric	<code>receipt.getResSec();</code>
	<b>US ACH only</b> Returns the ACH SEC code saved in the profile.		

Table 119: Receipt object response values (continued)

Value	Type	Limits	Get Method
	Description		
Vault credit card number	String		<code>receipt.getResPan()</code> ;
Expiring customer ID	String		<code>receipt.getExpCustId(index)</code> ;
Expiring customer's phone number	String		<code>receipt.getExpPhone(index)</code> ;
Expiring customer's email address	String		<code>receipt.getExpEmail(index)</code>
Expiring customer note	String		<code>receipt.getExpEmail(index)</code>
Expired payment type	String		<code>receipt.getExpPaymentType(index)</code>
Masked expiring credit card number	String		<code>receipt.getExpMaskedPan(index)</code>
Expiry date of expiring credit card	String		<code>receipt.getExpExpdate(index)</code>
E-commerce type of expiring credit card	String		<code>receipt.getExpCryptType(index)</code>
AVS street number of expiring credit card	String		<code>receipt.getExpAvsStreetNumber(index)</code>
AVS street name of expiring credit card	String		<code>receipt.getExpAvsStreetName(index)</code>
AVS ZIP code of expiring credit card	String		<code>receipt.getExpAvsZipCode(index)</code>
	TBD		
Presentation type of expiring credit card	String		<code>receipt.getExpPresentationType(index)</code>

Table 119: Receipt object response values (continued)

Value	Type	Limits	Get Method
	Description		
P Account number of expiring credit card?	String		<code>receipt.getExpPAccountNumber(index)</code>
Corporate card		true/false	<code>receipt.getCorporateCard()</code> ;
	Indicates whether the card associated with the Vault profile is a corporate card.		
Mag Swipe response fields (see 7, page 153)			
Masked credit card number	String		<code>receipt.getMaskedPan()</code>
Convenience Fee response fields (see Appendix H, page 352)			
Convenience fee success		true/false	<code>receipt.getCfSuccess()</code> ;
	Indicates whether the Convenience Fee transaction processed successfully.		
Convenience fee status	String	2-character alpha-numeric	<code>receipt.getCfStatus()</code> ;
	Indicates the status of the merchant and convenience fee transactions. The CfStatus field provides details about the transaction behavior and should be referenced when contacting Moneris Customer Support.  Possible values are:  1 or 1F – Completed 1st purchase transaction  2 or 2F – Completed 2nd purchase transaction  3 – Completed void transaction  4A or 4D – Completed refund transaction  7 or 7F – Completed merchant independent refund transaction  8 or 8F – Completed merchant refund transaction  9 or 9F – Completed 1st void transaction  10 or 10F – Completed 2nd void transaction  11A or 11D – Completed refund transaction		
Convenience fee amount	Decimal	9 characters	<code>receipt.getFeeAmount()</code> ;
	The expected Convenience Fee amount. This field will return the amount submitted by the merchant for a successful transaction. For an unsuccessful transaction, it will return the expected convenience fee amount		

**Table 119: Receipt object response values (continued)**

Value	Type	Limits	Get Method
	Description		
Convenience fee rate	Decimal	9 characters	<code>receipt.getFeeRate()</code> ;
	The convenience fee rate that has been defined on the merchant's profile. For example:  1.00 – a fixed amount or  10.0 - a percentage amount		
Convenience fee type	String	AMT/PCT	<code>receipt.getFeeType()</code> ;
	The type of convenience fee that has been defined on the merchant's profile.  Available options are:  AMT – fixed amount  PCT – percentage		
Other			
ITD Response	String	1-character alpha-numeric	<code>receipt.getITDResponse()</code>
	The ITD (Internet Transaction Data) reviews several methods for performing a credit card transaction online. The ITDReponse indicates the AmEx ITD validation results. Applicable for AmEx and JCB only.  Y = data matches N = data does not match U = data not checked R = retry S = Service not allowed [space] = data not sent		
RuleName			
	The names of rules verified from the selected policy that have triggered. Each rule name is returned as a separate name/value pair.		
RuleCode			
	The codes of the rules verified from the selected policy that have triggered. Each rule code is returned as a separate name/value pair.		
RuleMessageEn			
	An English message description of the rule returned.		

**Table 119: Receipt object response values (continued)**

Value	Type	Limits	Get Method
	Description		
RuleMessageFr			
	A French message description of the rule returned.		
CorporateCard	Boolean string	true/ false	<code>receipt.getCorporateCard()</code> ;
	Indicates whether the card associated with the vault profile is a corporate card or not.		

**Table 120: Financial transaction response codes**

Code	Description
< 50	Transaction approved
≥ 50	Transaction declined
NULL	Transaction was not sent for authorization

For more details on the response codes that are returned, see the Response Codes document available at <https://developer.moneris.com>

**Table 121: Vault Admin Responses**

Code	Description
001	Successfully registered CC details. Successfully updated CC details. Successfully deleted CC details. Successfully located CC details. Successfully located # expiring cards. (NOTE: # = the number of cards located)
983	Cannot find previous
986	Incomplete: timed out
987	Invalid transaction
988	Cannot find expiring cards
Null	Error: Malformed XML



## Appendix C Status Check

### • C.1 Using Status Check Response Fields

Status Check is a connection object value that allows merchants to verify whether a previously sent transaction was processed successfully.

To submit a Status Check request, resend the original transaction with all the same parameter values, but set the status check value to either `true` or `false`.

Once set to “true”, the gateway will check the status of a transaction that has an `order_id` that matches the one passed.

- If the transaction is found, the gateway will respond with the specifics of that transaction.
- If the transaction is not found, the gateway will respond with a not found message.

Once it is set to “false”, the transaction will process as a new transaction.

For example, if you send a Purchase transaction with Status Check, include the same values as the original Purchase such as the order ID and the amount.

The feature must be enabled in your merchant profile. To have it enabled, contact Moneris.

#### Things to Consider:

- The Status Check request should only be used once and immediately (within 2 minutes) after the last transaction that had failed.
- The Status Check request should not be used to check `openTotals` & `batchClose` requests.
- Do not resend the Status Check request if it has timed out. Additional investigation is required.

### C.1 Using Status Check Response Fields

After you have used the connection object to send a Status Check request, you can use the Receipt object to obtain the information you want regarding the success of the original transaction.

The status response fields related to the status check are Status Code and Status Message.

Possible Status Code response values:

- 0-49: successful transaction
- 50-999: unsuccessful transaction.

Possible Status Message response values:

- Found: Status code is 0-49
- Not found or Null: Status code is 50-999)

If the Status Message is `Found`, all other response fields are the same as those from the original transaction.

If the Status Message is `Not found`, all other response fields will be Null.



**Sample Purchase transaction with Status Check**

```
public class TestCanadaPurchase
{
    public static void main(String[] args)
    {
        boolean status_check = false;
        Purchase purchase = new Purchase();

        HttpsPostRequest mpgReq = new HttpsPostRequest();
        mpgReq.setTransaction(purchase);
        mpgReq.setStatusCheck(status_check);
        mpgReq.send();
        try
        {
            Receipt receipt = mpgReq.getReceipt();
            System.out.println("StatusCode = " + receipt.getStatusCode());
            System.out.println("StatusMessage = " + receipt.getStatusMessage());
        }
        catch (Exception e)
        {
            e.printStackTrace();
        }
    }
}
```

## Appendix D Customer Information

- Appendix D Customer Information
- D.2 Customer Information Sample Code

An optional add-on to a number of transactions the Customer Information object. The Customer Information object offers a number of fields to be submitted as part of the financial transaction, and stored by Moneris. These details may be viewed in the future in the Merchant Resource Center.

The following transactions support the Customer Information object :

- Purchase (Basic, Interac Debit and Vault)
- Pre-Authorization (Basic and Vault)
- Re-Authorization (Basic)
- ACH Debit

The Customer Information object holds three types of information:

- Miscellaneous customer information properties (page 331)
- Billing/Shipping information (page 331)
- Item information (page 333).

### Things to Consider:

- If you send characters that are not included in the allowed list, these extra transaction details may not be stored.
- All fields are alphanumeric and allow the following characters: a-z A-Z 0-9 \_ - : . @ \$ = /
- All French accents should be encoded as HTML entities, such as &eacute;.
- The data sent in Billing and Shipping Address fields will not be used for any address verification.

## D.1 Using the CustInfo object

- Miscellaneous Properties (page 331)
- "Billing/Shipping information" on the next page
- "Item Information" on page 332

In addition to instantiating a transaction object and a connection object (as you would for a normal transaction), you must instantiate a CustInfo object.

Any transaction that supports CustInfo has a setCustInfo method. This is used to write the customer information to the transaction object before writing the transaction object to the connection object.

### CustInfo object definition

```
CustInfo customer = new CustInfo();
```

### Transaction object set method

```
<transaction>.setCustInfo(customer);
```

### D.1.1 Miscellaneous Properties

While most of the customer information data is organized into objects, there are some values that are properties of the CustInfo object itself. They are explained in Table 122

**Table 122: CustInfo object miscellaneous properties**

Value	Type	Limits	Set method
Email Address	String	60-character alphanumeric	<code>customer.setEmail("nick@widget.com");</code>
Instructions	String	100-character alphanumeric	<code>customer.setInstructions("Rush!");</code>

### D.1.2 Billing/Shipping information

Billing and shipping information is stored as part of the CustInfo object. They can be written to the object in one of two ways:

- Using set methods
- Using hash tables.

Whichever method you use, you will be writing the information found in Table 123 for both the billing information and the shipping information.

All values are alphanumeric strings. Their maximum lengths are given in the Limit column.

**Table 123: Billing and shipping information values**

Value	Limit	Hash table key
First name	30	"first_name"
Last name	30	"last_name"
Company name	50	"company_name"
Address	70	"address"
City	30	"city"
Province/State	30	"province"
Postal/Zip code	30	"postal_code"
Country	30	"country"
Phone number (voice)	30	"phone"
Fax number	30	"fax"
Federal tax	10	"tax1"

**Table 123: Billing and shipping information values (continued)**

Value	Limit	Hash table key
Provincial/State tax	10	"tax2"
County/Local/Specialty tax	10	"tax3"
Shipping cost	10	"shipping_cost"

### D.1.2.1 Set Methods

The billing information and the shipping information for a given CustInfo object are written by using the `customer.setBilling()` and `customer.setShipping()` methods respectively:

```
customer.setBilling(first_name, last_name, company_name, address, city,
province, postal_code, country, phone, fax, tax1, tax2, tax3, shipping_cost);

customer.setShipping(first_name, last_name, company_name, address, city,
province, postal_code, country, phone, fax, tax1, tax2, tax3, shipping_cost);
```

Both of these methods have the same set of mandatory arguments. They are explained in Table 123 (page 331).

For sample code, see D.2 (page 333).

### D.1.2.2 Hash Tables

Writing billing or shipping information using hash tables is done as follows:

1. Instantiate a CustInfo object.
2. Instantiate a Hashtable object. (The sample code uses a different hash table for billing and shipping for clarity purposes. However, the skillful developer can re-use the same one.)
3. Build the hashtable using put methods with the hash table keys in Table 123 (page 331).
4. Call the CustInfo object's setBilling/setShipping method to pass the hashtable information to the CustInfo object
5. Call the transaction object's setCustInfo method to write the CustInfo object (with the billing/-shipping information to the transaction object.

For sample code, see D.2 (page 333).

## D.1.3 Item Information

The CustInfo object can hold information about multiple items. For each item, the values in Table 124 can be written.

All values are strings, but note the guidelines in the Limits column.

**Table 124: Item information values**

Value	Limits	Hash table key
Item name	45-character alphanumeric	"name"
Item quantity	5-character numeric	"quantity"
Item product code	20-character alphanumeric	"product_code"
Item extended amount	9-character decimal with at least 3 digits and 2 penny values. 0.01-999999.99	"extended_amount"

One way of representing multiple items is with four arrays. This is the method used in the sample code. However, there are two ways to write the item information to the CustInfo object:

- Set methods
- Hash tables.

#### D.1.3.1 Set Methods

All the item information in Table 124 is written to the CustInfo in one instruction for a given item. Such as:

```
customer.setItem(item_description, item_quantity, item_product_code, item_extended_amount);
```

For sample code (showing how to use arrays to write information about two items), see D.2 (page 333).

#### D.1.3.2 Hash Tables

Writing item information using hash tables is done as follows:

1. Instantiate a CustInfo object.
2. Instantiate a Hashtable object. (The sample code uses a different hash table for each item for clarity purposes. However, the skillful developer can re-use the same one.)
3. Build the hashtable using put methods with the hash table keys in Table 123 (page 331).
4. Call the CustInfo object's setItem method to pass the hashtable information to the CustInfo object
5. Call the transaction object's setCustInfo method to write the CustInfo object (with the item information to the transaction object.

For sample code (showing how to use arrays to write information about two items), see D.2 (page 333).

## D.2 Customer Information Sample Code

Below are 2 examples of a Basic Purchase Transaction with Customer Information. Both samples start by declaring the same variables. Therefore, that part will only be shown once. Values that are not involved in the Customer Information feature are not shown.

Note that the two items ordered are represented by four arrays, and the billing and shipping details are the same.

```

/***** Billing/Shipping Variables *****/
String first_name = "Bob";
String last_name = "Smith";
String company_name = "ProLine Inc.";
String address = "623 Bears Ave";
String city = "Chicago";
String province = "Illinois";
String postal_code = "M1M2M1";
String country = "Canada";
String phone = "777-999-7777";
String fax = "777-999-7778";
String tax1 = "10.00";
String tax2 = "5.78";
String tax3 = "4.56";
String shipping_cost = "10.00";

/***** Order Line Item Variables *****/
String[] item_description = new String[] { "Chicago Bears Helmet", "Soldier Field Poster" };
String[] item_quantity = new String[] { "1", "1" };
String[] item_product_code = new String[] { "CB3450", "SF998S" };
String[] item_extended_amount = new String[] { "150.00", "19.79" };
/*****

```

### Sample Purchase with Customer Information—Set method version

```

CustInfo customer = new CustInfo();

/***** Miscellaneous Customer Information Methods *****/
customer.setEmail("nick@widget.com");
customer.setInstructions("Make it fast!");

/***** Set Customer Billing Information *****/
customer.setBilling(first_name, last_name, company_name, address, city, province, postal_code,
    country, phone, fax, tax1, tax2, tax3, shipping_cost);

/***** Set Customer Shipping Information *****/
customer.setShipping(first_name, last_name, company_name, address, city, province, postal_code,
    country, phone, fax, tax1, tax2, tax3, shipping_cost);

/***** Order Line Items *****/
customer.setItem(item_description[0], item_quantity[0], item_product_code[0], item_extended_amount
    [0]);
customer.setItem(item_description[1], item_quantity[1], item_product_code[1], item_extended_amount
    [1]);

Purchase purchase = new Purchase();
purchase.setCustInfo(customer);

HttpPostRequest mpgReq = new HttpPostRequest();
mpgReq.setTransaction(purchase);
mpgReq.send();

```

### Sample Purchase with Customer Information—Hash table version

```

CustInfo customer2 = new CustInfo();
/***** Miscellaneous Customer Information Methods *****/
customer.setEmail("nick@widget.com");
customer.setInstructions("Make it fast!");

```

### Sample Purchase with Customer Information—Hash table version

```

/***** Billing Hashtable *****/
Hashtable<String, String> b = new Hashtable<String, String>(); //billing hashtable
b.put("first_name", first_name);
b.put("last_name", last_name);
b.put("company_name", company_name);
b.put("address", address);
b.put("city", city);
b.put("province", province);
b.put("postal_code", postal_code);
b.put("country", country);
b.put("phone", phone);
b.put("fax", fax);
b.put("tax1", tax1); //federal tax
b.put("tax2", tax2); //prov tax
b.put("tax3", tax3); //luxury tax
b.put("shipping_cost", shipping_cost); //shipping cost
customer2.setBilling(b);
/***** Shipping Hashtable *****/
Hashtable<String, String> s = new Hashtable<String, String>(); //shipping hashtable
s.put("first_name", first_name);
s.put("last_name", last_name);
s.put("company_name", company_name);
s.put("address", address);
s.put("city", city);
s.put("province", province);
s.put("postal_code", postal_code);
s.put("country", country);
s.put("phone", phone);
s.put("fax", fax);
s.put("tax1", tax1); //federal tax
s.put("tax2", tax2); //prov tax
s.put("tax3", tax3); //luxury tax
s.put("shipping_cost", shipping_cost); //shipping cost
customer2.setShipping(s);
/***** Order Line Item1 Hashtable *****/
Hashtable<String, String> i1 = new Hashtable<String, String>(); //item hashtable #1
i1.put("name", item_description[0]);
i1.put("quantity", item_quantity[0]);
i1.put("product_code", item_product_code[0]);
i1.put("extended_amount", item_extended_amount[0]);
customer2.setItem(i1);
/***** Order Line Item2 Hashtable *****/
Hashtable<String, String> i2 = new Hashtable<String, String>(); //item hashtable #2
i2.put("name", "item2's name");
i2.put("quantity", "7");
i2.put("product_code", "item2's product code");
i2.put("extended_amount", "5.01");
customer2.setItem(i2);

Purchase purchase = new Purchase();
purchase.setCustInfo(customer);
HttpPostRequest mpgReq = new HttpPostRequest();
mpgReq.setTransaction(purchase);
mpgReq.send();

```

## Appendix E Address Verification Service

- Appendix E Address Verification Service
- Appendix E Address Verification Service
- Appendix E Address Verification Service
- Appendix E Address Verification Service

Address Verification Service (AVS) is an optional fraud-prevention tool offered by issuing banks whereby a cardholder's address is submitted as part of the transaction authorization. The AVS address is then compared to the address kept on file at the issuing bank. AVS checks whether the street number, street name and zip/postal code match. The issuing bank returns an AVS result code indicating whether the data was matched successfully. Regardless of the AVS result code returned, the credit card is authorized by the issuing bank.

The response that is received from AVS verification is intended to provide added security and fraud prevention, but the response itself does not affect the completion of a transaction. Upon receiving a response, the choice to proceed with a transaction is left entirely to the merchant. The responses is **not** a strict guideline of whether a transaction will be approved or declined.

The following transactions support AVS:

- Purchase (Basic and Mag Swipe)
- Pre-Authorization (Basic)
- Re-Authorization (Basic)
- ResAddCC (Vault)
- ResUpdateCC (Vault)

### Things to Consider:

- AVS is only supported by Visa, MasterCard, Discover and American Express.
- When testing AVS, you must **only** use the Visa test card numbers 4242424242424242 or 4005554444444403, and the amounts described in the Simulator eFraud Response Codes document available at the Moneris developer portal (<https://developer-moneris.com>).
- Store ID "store5" is set up to support AVS testing.

### E.1 Using AVS

In addition to instantiating a transaction object and a connection object (as you would for a normal transaction), you must instantiate an `AvsInfo` object. This object has a number of mandatory values that must be set (Appendix E, page 336) and optional values that may be set (Appendix E, page 336).

Any transaction that supports AVS has a `setAvsInfo` method. This is used to write the AVS information to the transaction object before writing the transaction object to the connection object.

#### AVSInfo object definition

```
AvsInfo avsCheck = new AvsInfo();
```

#### Transaction object set method

```
<transaction>.setAvsInfo(avsCheck);
```



## E.2 AVS Request Fields

**Table 125: AvsInfo object mandatory values**

Value	Type	Limits	Set method
	Description		
AVS street number	String	19-character alphanumeric <sup>1</sup>	<code>avsCheck.setAvsStreetNumber("212");</code>
	Cardholder street number.		
AVS street name	String	See AVS street number	<code>avsCheck.setAvsStreetName("Payton Street");</code>
	Cardholder street name.		
AVS zip/postal code	String	9-character alphanumeric	<code>avsCheck.setAvsZipCode("M1M1M1");</code>
	Cardholder zip/postal code.		

**Table 126: AvsInfo object optional values**

Value	Type	Limits	Set method
	Description		
AVS email address	String	60-character alphanumeric	<code>avsCheck.setAvsEmail("test@host.com");</code>
	Email address provided by the customer at the point of sale. Applicable for American Express and JCB only.		
AVS host name	String	60-character alphanumeric	<code>avsCheck.setAvsHostname("host-name");</code>
	Applicable for American Express and JCB only.		
AVS browser type	String	60-character alphabetic	<code>avsCheck.setAvsBrowser("Mozilla");</code>
	Web browser used to make the purchase. Applicable for American Express and JCB only.		
AVS ship-to-country code	String	3-character alphabetic	<code>avsCheck.setAvsShiptoCountry("CAN");</code>
	Applicable for AmEx and JCB only.		

<sup>1</sup>19 characters is the combined limit between AVS street number and AVS street name.

**Table 126: AvsInfo object optional values (continued)**

Value	Type	Limits	Set method
	Description		
AVS Shipping Method	String	X-character alphanumeric	<code>avsCheck.setAvsShipMethod("G");</code>
Merchant product SKU	String	15-character alphanumeric	<code>avsCheck.setAvsMerchProdSku("123456");</code>
	For multiple items, the SKU of the most expensive item should be entered. Applicable for AmEx and JCB only.		
AVS customer's IP address	String	15-character alphanumeric	<code>avsCheck.setAvsCustIp("192.168.0.1");</code>
	IP address of device from which transaction is being sent. Applicable for AmEx and JCB only.		
AVS customer's phone number	String	10-character numeric	<code>avsCheck.setAvsCustPhone("5556667777");</code>
	Telephone number provided at point of sale. Applicable for American Express and JCB only.		

### E.3 AVS Result Codes

Below is a full list of possible AVS response codes. These can be returned when you call the `receipt.getAvsResultCode()` method.

**Table 127: AVS result codes**

Value	Visa	MasterCard/Discover	Amex/JCB
A	Street address matches, zip/postal code does not. Acquirer rights not implied.	Address matches, zip/-postal code does not.	Billing address matches, zip/postal code does not.
B	Street address matches. Zip/Postal code not verified due to incompatible formats. (Acquirer sent both street address and zip/-postal code.)	N/A	N/A
C	Street address not verified due to incompatible formats. (Acquirer sent both street address and zip/postal code.)	N/A	N/A

**Table 127: AVS result codes (continued)**

Value	Visa	MasterCard/Discover	Amex/JCB
D	Street address and zip/postal code match.	N/A	Customer name incorrect, zip/postal code matches
E	N/A	N/A	Customer name incorrect, billing address and zip/postal code match
F	(Applies to UK only) Street address and zip/-postal code match.	N/A	Customer name incorrect, billing address matches.
G	Address information not verified for international transaction. Any of the following may be true: <ul style="list-style-type: none"> <li>• Issuer is not an AVS participant.</li> <li>• AVS data was present in the request, but issuer did not return an AVS result.</li> <li>• Visa performs AVS on behalf of the issuer and there was no address record on file for this account.</li> </ul>	N/A	N/A
I	Address information not verified.	N/A	N/A
K	N/A	N/A	Customer name matches.
L	N/A	N/A	Customer name and postal code match.
N/A	N/A	Customer name and zip/postal code match.	
M	Street address and zip/postal code match.	N/A	Customer name, billing address, and zip/postal code match.
N	No match.  Also used when acquirer requests AVS but sends no AVS data.	Neither address nor postal code matches.	Billing address and postal code do not match.
O	N/A	N/A	Customer name and billing address match

**Table 127: AVS result codes (continued)**

Value	Visa	MasterCard/Discover	Amex/JCB
P	Postal code matches. Acquirer sent both postal code and street address, but street address not verified due to incompatible formats.	N/A	N/A
R	<p>Retry: System unavailable or timed out. Issuer ordinarily performs AVS, but was unavailable.</p> <p>The code R is used by Visa when issuers are unavailable. Issuers should refrain from using this code.</p>	Retry. System unable to process.	Retry. System unavailable.
S	N/A	AVS currently not supported.	AVS currently not supported.
T	N/A	Nine-digit zip/postal code matches, address does not match.	N/A
U	<p>Address not verified for domestic transaction. One of the following is true:</p> <ul style="list-style-type: none"> <li>• Issuer is not an AVS participant</li> <li>• AVS data was present in the request, but issuer did not return an AVS result</li> <li>• Visa performs AVS on behalf of the issuer and there was no address record on file for this account.</li> </ul>	No data from Issuer/Authorization system.	Information is unavailable.
W	Not applicable. If present, replaced with 'Z' by Visa. Available for U.S. issuers only.	For US Addresses, nine-digit zip/postal code matches, address does not. For addresses outside the US, zip/postal code matches, address does not.	Customer name, billing address, and zip/postal code are all correct.
X	N/A	For US addresses, nine-digit zip/postal code and address match. For addresses outside the US, zip/postal code and address match.	N/A
Y	Street address and zip/postal code match.	For US addresses, five-digit zip/postal code and address match.	Billing address and zip/postal code match.

**Table 127: AVS result codes (continued)**

Value	Visa	MasterCard/Discover	Amex/JCB
Z	Zip/postal code matches, but street address either does not match or street address was not included in request.	For U.S. addresses, five-digit zip code matches, address does not match.	Postal code matches, billing address does not match.

## E.4 AVS Sample Code

This is a sample of Java code illustrating how AVS is implemented with a Purchase transaction. Purchase object information that is not relevant to AVS has been removed.

Sample Purchase with AVS information
<pre> AvsInfo avsCheck = new AvsInfo(); avsCheck.setAvsStreetNumber("212"); avsCheck.setAvsStreetName("Payton Street"); avsCheck.setAvsZipCode("M1M1M1"); avsCheck.setAvsEmail("test@host.com"); avsCheck.setAvsHostname("hostname"); avsCheck.setAvsBrowser("Mozilla"); avsCheck.setAvsShiptoCountry("CAN"); avsCheck.setAvsShipMethod("G"); avsCheck.setAvsMerchProdSku("123456"); avsCheck.setAvsCustIp("192.168.0.1"); avsCheck.setAvsCustPhone("5556667777");  Purchase purchase = new Purchase(); purchase.setAvsInfo(avsCheck); </pre>

## Appendix F Card Validation Digits

- F.1 Using CVD
- F.2 CVD Request Fields
- F.3 CVD Result Definitions
- F.4 CVD Sample Code

The Card Validation Digits (CVD) value refers to the numbers appearing on the back of the credit card rather than the numbers imprinted on the front<sup>1</sup>. It is an optional fraud prevention tool that enables merchants to verify data provided by the cardholder at transaction time. This data is submitted along with the transaction to the issuing bank, which provides a response indicating whether the data is a match.

The response that is received from CVD verification is intended to provide added security and fraud prevention, but the response itself does not affect the completion of a transaction. Upon receiving a response, the choice whether to proceed with a transaction is left entirely to the merchant. The responses is **not** a strict guideline of which transaction will approve or decline.

The following transactions support CVD:

- Purchase (Basic, Vault and Mag Swipe)
- Pre-Authorization (Basic and Vault)
- Re-Authorization

### Things to Consider:

- CVD is only supported by Visa, MasterCard and American Express.
- When testing CVD, you must **only** use the Visa test card numbers 4242424242424242 or 4005554444444403, and the amounts described in the Simulator eFraud Response Codes document available at the Moneris developer portal (<https://developer.moneris.com>).
- Test store\_id "store5" is set up to support CVD testing.
- To have CVD for American Express added to your profile, contact American Express directly.

### F.1 Using CVD



#### Security

The CVD value must only be passed to the payment gateway. Under **no** circumstances may it be stored for subsequent uses or displayed as part of the receipt information.

In addition to instantiating a transaction object and a connection object (as you would for a normal transaction), you must instantiate an CVDInfo object. This object has a number of mandatory values that must be set (Table 128, page 343).

---

<sup>1</sup>The exception to this rule is with American Express cards, which have the CVD printed on the front.

Any transaction that supports CVD has a `setCvdInfo` method. This is used to write the CVD information to the transaction object before writing the transaction object to the connection object.

### CvdInfo object definition

```
CvdInfo cvdCheck = new CvdInfo();
```

### Transaction object set method

```
transaction.setCvdInfo(cvdCheck);
```

## F.2 CVD Request Fields



#### Security

The CVD value must only be passed to the payment gateway. Under **no** circumstances may it be stored for subsequent uses or displayed as part of the receipt information.

**Table 128: CvdInfo object mandatory values**

Value	Type Limits		Set method
	Description		
CVD indicator	String	1-character numeric	<code>cvdCheck.setCvdIndicator("1");</code>
	CVD presence indicator: 0: CVD value is deliberately bypassed or is not provided by the merchant. 1: CVD value is present. 2: CVD value is on the card, but is illegible. 9: Cardholder states that the card has no CVD imprint.		
CVD value	String	4-character numeric	<code>cvdCheck.setCvdValue("099");</code>
	CVD value located on credit card. The CVD value (supplied by the cardholder) must only be passed to the payment gateway. Under <b>no</b> circumstances may it be stored for subsequent use or displayed as part of the receipt information.		

## F.3 CVD Result Definitions

**Table 129: CVD result definitions**

Value	Definition
M	Match
N	No Match
P	Not Processed
S	CVD should be on the card, but Merchant has indicated that CVD is not present.
U	Issuer is not a CVD participant
Y	Match for AmEx/JCB only
D	Invalid security code for AmEx/JCB
Other	Invalid response code

## F.4 CVD Sample Code

This is a sample of Java code illustrating how CVD is implemented with a Purchase transaction. Purchase object information that is not relevant to CVD has been removed.

### Sample purchase with CVD information

```
CvdInfo cvdCheck = new CvdInfo();  
cvdCheck.setCvdIndicator("1");  
cvdCheck.setCvdValue("099");  
  
Purchase purchase = new Purchase();  
purchase.setCvdInfo(cvdCheck);
```



## Appendix G Recurring Billing

- G.1 Setting up a new recurring payment
- G.2 Updating a Recurring Payment
- Appendix A Recurring Billing Response Fields and Codes, page 1

Recurring Billing allows you to set up payments whereby Moneris automatically processes the transactions and bills customers on your behalf based on the billing cycle information you provide.

Section 1.1 outlines how to set up a new recurring payment when you submit a Purchase transaction (for various features), and Section 1.2 outlines how to update the details of a previously registered recurring payment by using the Recur Update transaction.

In addition to Recur Update, the features that support Purchase transactions with recurring billing are:

- Basic
- ACH (referred to as ACH Debit)
- Vault

### Things to Consider:

- To avoid shifting, do not set the `start_date` after the 28th if the `recur_unit` is `month`. To set the billing date for the last day of the month, set `recur_unit` to `eom`.
- When completing the update recurring billing portion please keep in mind that the recur bill dates cannot be changed to have an end date greater than 10 years from today and cannot be changed to have an end date end today or earlier.

### G.1 Setting up a new recurring payment

In addition to instantiating a transaction object and a connection object (as you would for a normal transaction), you must instantiate a Recur object. This object has a number of mandatory properties that must be set (Table 130, page 346).

Any transaction that supports Recurring Billing has a `setRecur` method. This is used to write the Recurring Billing information to the transaction object before writing the transaction object to the connection object.

#### Recur Object Definition

```
Recur recurring_cycle = new Recur(recur_unit, start_now, start_date, num_rekurs, period, recur_amount);
```

For an explanation of these fields, see Table 130 (page 346).

#### Transaction object set method

```
<transaction>.setRecur(recurring_cycle);
```

For Recurring Billing response fields, see page 1.

**Table 130: Recur object mandatory arguments**

Value	Type	Limits	Argument name in example
	Description		
Recur unit	String	day, week, month or eom	recur_unit
	Unit to be used as a basis for the interval. This can be set as day, week, month or the end of the month.  Works in conjunction with the period argument (see below) to define the billing frequency.		
Start Now	String	true/false	start_now
	If a single charge is to be made against the card immediately, set this value to true. The amount to be billed immediately may differ from the amount billed on a regular basis thereafter.  If the billing is to start in the future, set this value to false.		
Start Date	String	YYYY/MM/DD format	start_date
	Date of the first future recurring billing transaction. This value <b>must</b> be a date in the future.  If an additional charge is to be made immediately, the start_now argument must be set to true.		
Number of Recurs	String	numeric 1-99	num_recurs
	The number of times that the transaction must recur.		
Period	String	numeric 1-999	period
	Number of recur units that must pass between recurring billings.		
Recurring Amount	String	9-character decimal 0.01-99999999.99.	recur_amount
	Amount of the recurring transaction. This must contain at least three digits, two of which are penny values.  This is the amount that will be billed on the start_date, and then billed repeatedly based on the interval defined by period and recur_unit.		

### Recurring billing examples

```
Recur recurring_cycle = new Recur(recur_unit, start_now, start_date, num_recurs, period, recur_amount);
```

Given a Recur object with the above syntax, Table 131 shows how the transaction is interpreted for different argument values.

**Table 131: Recurring Billing examples**

Argument	Values	Description
recur_unit	"month";	The first transaction occurs on January 2, 2030 (because start_now="false").  The card is billed \$30.00 every 2 months on the 2nd of each month.  The card will be billed a total of 12 times. This includes the transaction on January 2, 2030
start_date	"2030/01/02"	
num_rekurs	"12"	
start_now	"false"	
period	"2"	
recur_amount	"30.00"	The first charge is billed immediately (because start_now=true). The initial charge is \$15.00.  Beginning on January 2, 2030 the credit card will be billed \$30.00 every 2 weeks for 26 recurring charges.  Therefore, the card will be billed a total of 27 times. (1 immediate and 26 recurring.)
recur_unit	"week";	
start_date	"2030/01/02"	
num_rekurs	"26"	
start_now	"true"	
period	"2"	
recur_amount	"30.00"	

#### Sample Purchase with Recurring Billing

```
public class TestPurchaseRecur
{
    public static void main(String[] args)
    {
        /**Purchase transaction arguments removed for space
```

### Sample Purchase with Recurring Billing

```

/***** Recur Variables *****/
String recur_unit = "month"; //eom = end of month
String start_now = "true";
String start_date = "2016/07/28";
String num_rekurs = "12";
String period = "1";
String recur_amount = "30.00";
/***** Recur Object Option1 *****/
Recur recurring_cycle = new Recur(recur_unit, start_now, start_date, num_rekurs, period,
    recur_amount);
/***** Recur Object Option2 *****/
Hashtable<String, String> recur_hash = new Hashtable<String, String>();
recur_hash.put("recur_unit", recur_unit);
recur_hash.put("start_now", start_now);
recur_hash.put("start_date", start_date);
recur_hash.put("num_rekurs", num_rekurs);
recur_hash.put("period", period);
recur_hash.put("recur_amount", recur_amount);
/***** Transactional Object *****/
Purchase purchase = new Purchase();
/**Purchase transaction arguments removed for space
*****/
purchase.setRecur(recurring_cycle);
/***** Https Post Request *****/
HttpPostRequest mpgReq = new HttpPostRequest();
/**Connection object arguments removed for space

mpgReq.send();
catch (Exception e)
}
}

```

## G.2 Updating a Recurring Payment

After you have set up a Recurring Billing transaction, you can change the details of it. The `RecurUpdate` transaction object works like any of the basic transactions. That is, you must instantiate the `RecurUpdate` object, instantiate a connection object, update the connection object with the `RecurUpdate` transaction object, invoke the connection object's `send` method.

### RecurUpdate transaction object definition

```
RecurUpdate recurUpdate = new RecurUpdate();
```

### HttpPostRequest object for recurring billing update transaction

```

HttpPostRequest mpgReq = new HttpPostRequest();

mpgReq.setTransaction(recurUpdate);

```

**Table 132: RecurUpdate transaction object mandatory values**

Value	Type	Limits	Set method
	Description		
Order ID	String	50-character alphanumeric	<code>recurUpdate.setOrderId(order_id);</code>
	Order ID of the previously registered recurring billing transaction.		

With the exception of Status Check, the values/actions in Table 133 are optional because they are the values that were specified in the original Recurring Billing transaction that you may now update. You can update any or all of them.

Status Check is used to determine whether a previous Recur Update transaction was properly processed.

**Table 133: RecurUpdate transaction optional values**

Value/Action	Type	Limits	Set method
	Description (if any)		
Non-recurring billing values (see "Definition of Request Fields" on page 306 for more details).			
Customer ID	String	50-character alphanumeric	<code>recurUpdate.setCustId (cust_id) ;</code>
Credit card number	String	20-character alphanumeric	<code>recurUpdate.setPan (pan) ;</code>
Credit card expiry date	String	4-character alphanumeric (YYMM format)	<code>recurUpdate.setExpdate (expiry_date) ;</code>
Status Check	Boolean	true/false	<code>mpgReq.setStatusCheck (status_check) ;</code>
Recurring billing values			
Recurring amount	String	9-character decimal  At least 3 digits with two penny values. (0.01-9999999.99).	<code>recurUpdate.setRecurAmount (recur_amount) ;</code>
	Changes the amount that is billed recurrently. The change takes effect on the next charge.		

Table 133: RecurUpdate transaction optional values (continued)

Value/Action	Type	Limits	Set method
	Description (if any)		
Add number of recurs	String	Numeric 1-999	<code>recurUpdate.setAddNumRecurs(add_num);</code>
	<p><b>Adds</b> to the given number of recurring transactions to the current (remaining) number.</p> <p>This can be used if a customer decides to extend a membership/subscription. However, because this must be a positive number, it cannot be used to decrease the current number of recurring transactions. For that, use the <code>setTotalNumRecurs</code> method below.</p>		
Change number of recurs	String	Numeric 1-999	<code>recurUpdate.setTotalNumRecurs(total_num);</code>
	<p><b>Replaces</b> the current (remaining) number of recurring transactions. Note how this differs from the <code>setAddNumRecurs</code> method above.</p>		
Hold recurring billing	String	TBD	<code>recurUpdate.setHold(hold);</code>
	<p>Temporarily pauses recurring billing.</p> <p>While a transaction is on hold, it is not billed for the recurring amount. However, the number of remaining recurs continues to be decremented during that time.</p>		
Terminate recurring transaction	String	TBD	<code>recurUpdate.setTerminate(terminate);</code>
	<p>Terminates recurring billing.</p> <p>Note: After it has been terminated, a recurring transaction <b>cannot</b> be reactivated. A new purchase transaction with recurring billing must be submitted.</p>		

## Sample Purchase with Recurring Billing

```

public class TestCanadaRecurUpdate
{
    public static void main(String[] args)
    {
        String store_id = "store5";
        String api_token = "yesguy";
        String order_id = "Test155409282";
        String cust_id = "antonio";
        String recur_amount = "1.50";
        String pan = "4242424242424242";
        String expiry_date = "1902";
        //String add_num = "";
        //String total_num = "";
        //String hold = "";
    }
}

```

**Sample Purchase with Recurring Billing**

```
//String terminate = "";
String processing_country_code = "CA";
boolean status_check = false;

RecurUpdate recurUpdate = new RecurUpdate();
recurUpdate.setOrderId(order_id);
recurUpdate.setCustId(cust_id);
recurUpdate.setRecurAmount(recur_amount);
recurUpdate.setPan(pan);
recurUpdate.setExpdate(expiry_date);
//recurUpdate.setAddNumRecurs(add_num);
//recurUpdate.setTotalNumRecurs(total_num);
//recurUpdate.setHold(hold);
//recurUpdate.setTerminate(terminate);

HttpPostRequest mpgReq = new HttpPostRequest();
mpgReq.setProcCountryCode(processing_country_code);
mpgReq.setTestMode(true); //false or comment out this line for production transactions
mpgReq.setStoreId(store_id);
mpgReq.setApiToken(api_token);
mpgReq.setTransaction(recurUpdate);
mpgReq.setStatusCheck(status_check);
mpgReq.send();

catch (Exception e)
{
    e.printStackTrace();
}
}
```

## Appendix H Convenience Fee

- H.1 Using Convenience Fee
- H.2 Convenience Fee Request Fields
- H.3 Convenience Fee Sample Code

The Convenience Fee program allows merchants to apply an additional charge to a customer's bill (with their consent) for the convenience of being able to pay for goods and services using an alternative payment channel. This applies only when providing a true convenience in the form of a channel outside the merchant's customary face-to-face payment channels.

The convenience fee is a charge in addition to what the consumer is paying for the provided goods/services. This charge appears as a separate line item on the consumer's statement.

The Convenience Fee program provides several benefits. It may allow you an opportunity to reduce or eliminate credit card processing fees and improve customer satisfaction.

This document outlines how to use the Java API for processing Convenience Fee credit card and ACH transactions. In particular, it describes the format for sending transactions with the appropriate convenience fee amount and the corresponding responses you will receive.

It is supported by the following transactions:

- Basic Purchase
- CAVV Purchase
- ACH Debit.

### H.1 Using Convenience Fee

In addition to instantiating a transaction object and a connection object (as you would for a normal transaction), you must instantiate a `ConvFeeInfo` object. This object has one mandatory value that must be set (Table 134, page 353).

Any transaction that supports Convenience Fee has a `setConvFeeInfo` method. This is used to write the Convenience Fee information to the transaction object before writing the transaction object to the connection object.

#### ConvFeeInfo object definition

```
ConvFeeInfo convFeeInfo = new ConvFeeInfo();
```

#### Transaction object set method

```
<transaction>.setConvFeeInfo(convFeeInfo);
```



## H.2 Convenience Fee Request Fields

Table 134: ConvFeeInfo object mandatory values

Value	Type	Limits	Set method
	Description		
Convenience fee amount	Decimal	9 characters	convFeeInfo.setConvenienceFee("5.00");
	Amount customer is being charged as a convenience fee.		

## H.3 Convenience Fee Sample Code

This is a sample of Java code illustrating how the Convenience Fee option is implemented with a Purchase transaction. Purchase object information that is not relevant to Convenience Fee has been removed.

Sample Purchase with Convenience Fee information
<pre>Purchase purchase = new Purchase();  ConvFeeInfo convFeeInfo = new ConvFeeInfo(); convFeeInfo.setConvenienceFee("5.00"); purchase.setConvFeeInfo(convFeeInfo);</pre>

## Appendix I Definition of Request Fields for Level 2/3 - MasterCard

**Table 1: Objects - Level 2/3 MasterCard**

MCCorpais Objects	Description
MCCorpac	Corporate Card Common data
MCCorpal	Line Item Details

**Table 2: MasterCard - Corporate Card Common Data (MCCorpac) - Level 2 Request Fields**

Req	Variable Name	Field Name	Size/Type	Description
N	AustinTetraNumber	Austin-Tetra Number	15-character alphanumeric	Merchant's Austin-Tetra Number
N	NaicsCode	NAICS Code	15-character alphanumeric	North American Industry Classification System (NAICS) code assigned to the merchant
N	CustomerCode	Customer Code	25-character alphanumeric	A control number, such as purchase order number, project number, department allocation number or name that the purchaser supplied the merchant. Left-justified; may be spaces
N	UniqueInvoiceNumber	Unique Invoice Number	17-character alphanumeric	Unique number associated with the individual transaction provided by the merchant
N	CommodityCode	Commodity Code	15-character alphanumeric	Code assigned by the merchant that best categorizes the item(s) being purchased

Req	Variable Name	Field Name	Size/Type	Description
N	OrderDate	Order Date	6-character numeric	The date the item was ordered. If present, must contain a valid date in the format YYMMDD.
N	CorporationVatNumber	Corporation VAT Number	20-character alphanumeric	Contains a corporation's value added tax (VAT) number
N	CustomerVatNumber	Customer VAT Number	20-character alphanumeric	Contains the VAT number for the customer/cardholder used to identify the customer when purchasing goods and services from the merchant
N	FreightAmount	Freight Amount	9-character alphanumeric	The freight on the total purchase. Must have 2 decimals
N	DutyAmount	Duty Amount	9-character alphanumeric	The duty on the total purchase, Must have 2 decimals
N	DestinationProvinceCode	Destination State / Province Code	3-character alphanumeric	State or Province of the country where the goods will be delivered. Left justified with trailing spaces. e.g., ONT - Ontario
N	DestinationCountryCode	Destination Country Code	3-character alphanumeric	The country code where goods will be delivered. Left justified with trailing spaces. e.g., CAN - Canada
N	ShipFromPosCode	Ship From Postal Code	10-character alphanumeric	The postal code or zip code from which items were shipped

Req	Variable Name	Field Name	Size/Type	Description
N	ShipToPosCode	Destination Postal Code	10-character alphanumeric	The postal code or zip code where goods will be delivered
N	AuthorizedContactName	Authorized Contact Name	36-character alphanumeric	Name of an individual or company contacted for company authorized purchases
N	AuthorizedContactPhone	Authorized Contact Phone	17-character alphanumeric	Phone number of an individual or company contacted for company authorized purchases
N	AdditionalCardAcceptordata	Additional Card Acceptor Data	40-character alphanumeric	Information pertaining to the card acceptor
N	CardAcceptorType	Card Acceptor Type	8-character alphanumeric	<p>Various classifications of business ownership characteristics.</p> <p>First character represents 'Business Type'</p> <p>The second represents 'Business Owner Type'.</p> <p>The third represents 'Business Certification Type'.</p> <p>The fourth represents 'Business Racial/Ethnic Type'.</p> <p>The fifth represents 'Business Type Provided Code'.</p> <p>The sixth represents 'Business Owner Type Provided Code'.</p> <p>The seventh represents 'Business Cer-</p>

Req	Variable Name	Field Name	Size/Type	Description
				<p>tification Type Provided Code'.</p> <p>The eighth represents 'Business Racial/Eth- nic Type</p>
N	CardAcceptorTaxId	Card Acceptor Tax ID	20-character alphanumeric	US Federal tax ID num- ber for value added tax (VAT) ID.
N	CardAcceptorReferenceNumber	Card Acceptor Reference Num- ber	25-character alphanumeric	Code that facilitates card accept- or/corporation com- munication and record keeping
N	CardAcceptorVatNumber	Card Acceptor VAT Number	20-character alphanumeric	Value added tax (VAT) number for the card acceptor location used to identify the card acceptor when collecting and report- ing taxes
M*	Tax	Tax	6-character array	<p>Can have up to 6 arrays contains dif- ferent tax details. See Tax Array below for each field description.</p> <p>*This field is con- ditionally mandatory — if you use this array, you must fill in all tax array fields as listed in the Tax Array Request Fields below.</p>

**Table 3: MasterCard - Line Item Details (MCCorpal) - Level 3 Request Fields**

Req	Variable Name	Field Name	Size/Type	Description
	CustomerCode	Customer Code	25-character alphanumeric	A control number, such as purchase order number, project number, department allocation number or name that the purchaser supplied the merchant. Left-justified; may be spaces
N	LineItemDate	Line Item Date	6-character numeric	The purchase date of the line item referenced in the associated Corporate Card Line Item Detail.  YYMMDD format
N	ShipDate	Ship Date	6-character numeric	The date the merchandise was shipped to the destination.  YYMMDD format
N	OrderDate	Order Date	6-character numeric	The date the item was ordered  YYMMDD format
N	ProductCode	Product Code	12-character alphanumeric	Line item Product Code (if this field is not sent, then itemComCode)  If the order has a Freight/Shipping line item, the productCode value has to be "Freight/Shipping"  If the order has a Discount line item, the productCode value has to be "Discount"
N	ItemDescription	Item Description	35-character alphanumeric	Line Item description
N	ItemQuantity	Item Quantity	5-character alphanumeric	Quantity of line item
N	UnitCost	Unit Cost	9-character decimal	Line item cost per unit. Must contain 2 decimal places
N	ItemUnitMeasure	Item Unit Measure	12-character alphanumeric	The line item unit of measurement code

Req	Variable Name	Field Name	Size/Type	Description
N	ExtItemAmount	Ext Item Amount	9-character decimal	The discount amount can only be set when the product code is set to "Discount". When the product code is set to "Discount" then discount amount cannot be blank. Must contain 2 decimal places.
N	DiscountAmount	Discount Amount	9-character decimal	The discount amount can only be set when the product code is set to "Discount". When the product code is set to "Discount" then discount amount cannot be blank. Must contain 2 decimal places.
N	CommodityCode	Commodity Code	15-character alphanumeric	Code assigned to the merchant that best categorizes the item(s) being purchased
M*	Tax	Tax	6-character array	Can have up to 6 arrays contains different tax details. See Tax Array below for each field description.  *This field is conditionally mandatory — if you use this array, you must fill in all tax array fields as listed in the Tax Array Request Fields below.

**Table 4: Tax Array Request Fields - MasterCard Level 2/3 Transactions**

Req	Variable Name	Field Name	Size/Type	Description
M	tax_amount	Tax Amount	9-character decimal	Contains detail tax amount for purchase of goods or services. Must be 2 decimal places. Maximum 999999.99
M	tax_rate	Tax Rate	5-character numeric	Contains the detailed tax rate applied in relationship to a specific tax amount. Like 5% GST should be '5.0'. May contain upto 2 decimals with maximum

Req	Variable Name	Field Name	Size/Type	Description
				upto to 999.99
M	tax_type	Tax Type	4-character alphanumeric	Contains tax type such as GST,QST,PST,HST
M	tax_id	Tax ID	20-character alphanumeric	Provides an identification number used by the card acceptor with the tax authority in relationship to a specific tax amount such as GST/HST number
M	tax_included_in_sales	Tax included in sales indicator	1-character alphanumeric	<p>This is the indicator used to reflect additional tax capture and reporting.</p> <p>Valid values are:</p> <p>Y = Tax included in total purchase amount</p> <p>N = Tax not included in total purchase amount</p>

Table 5: MasterCard Level 3 Request Fields - DEPRECATED

Req	Variable Name	Field Name	Size/Type	Description
Y	productCode	Product Code	12-character alphanumeric	<p>The product code of the individual item purchased</p> <p>Mandatory, cannot contain all spaces or all zeroes.</p>
Y	itemDescription	Item Description	35-character alphanumeric	<p>The description of the individual item purchased</p> <p>Mandatory, cannot contain all spaces or all zeroes</p>
Y	itemQuantity	Item Quantity	5-character alphanumeric	<p>The quantity of the individual item purchased</p> <p>Mandatory, cannot contain all spaces or all zeroes</p>



Req	Variable Name	Field Name	Size/Type	Description
Y	itemUom	Item unit of measure	3-character alphanumeric	A three-position unit of measurement code  Mandatory, cannot contain all spaces or all zeroes
Y	extItemAmount	Extended item amount	9-character alphanumeric	The amount of the item that is normally calculated as price x quantity  Mandatory, cannot contain all spaces or all zeroes, must contain two decimals
N	discountInd	Discount indicator	1-character alphanumeric	Values:  Y = Item amount includes tax amount  N = Item amount does not include tax amount  Space = not supported
N	discountAmt	Discount amount	9-character alphanumeric	Leading zeros with 2 decimals
N	netGroIndForExtItemAmt	Net/gross indicator for extended item amount	1-character alphanumeric	Values:  Y = Item amount includes tax amount  N = Item amount does not include tax amount  Space = not supported
N	taxRateApp	Tax rate applied	alphanumeric	This is a numeric decimal rate for GST/HST. May contain 2 decimals.
N	taxTypeApp	Tax type applied	alphanumeric	Description of tax applied as per tax type and tax amount. Use (GST) or (HST)
N	taxAmount	Tax Amount	alphanumeric	The GST/HST amount applied to item. Must have 2 decimals

Req	Variable Name	Field Name	Size/Type	Description
N	debitCreditInd	Debit or Credit Indicator	alphanumeric	Values:  D = extended item amount is a Debit  C = extended item amount is a Credit  Space = does not apply
N	altTaxIdeAmt	Alternate Tax Identifier (Amount)	alphanumeric	Insert the QST/PST tax amount  Must have 2 decimals

## Appendix J Definition of Request Fields for Level 2/3 - Visa (VSPurchal)

**Table 1: Visa - Corporate Card Common Data- Level 2 Request Fields (VSPurcha)**

Req	Variable Name	Field Name	Size/Type	Description
Y*	buyerName	Buyer Name	30-character alphanumeric	Buyer/Receipient Name  *only required by CRA if transaction is >\$150
N*	localTaxRate	Local Tax Rate	4-character numeric	Indicates the detailed tax rate applied in relationship to a local tax amount. e.g., 8% PST should be 8.0.  maximum 99.99  *Must be provided if Local Tax (PST or QST) applies.
N	dutyAmount	Duty Amount	9-character decimal	Duty on total purchase amount  A minus sign means 'amount is a credit', plus sign or no sign means 'amount is a debit'  maximum without sign is 999999.99
N	discountTreatment	Invoice Discount Treatment	1-character numeric	Indicates how the merchant is managing discounts  Must be one of the following values:  0 - if no invoice level discounts apply for this invoice  1 - if Tax was calculated on Post-Discout totals  2 - if Tax was calculated on Pre-Discout totals
N	discountAmt	Invoice Level Dis-	9-character	Amount of discount (if

Req	Variable Name	Field Name	Size/Type	Description
		count Amount	decimal	provided at the invoice level according to the Invoice Discount Treatment)  Must be non-zero if Invoice Discount Treatment is 1 or 2  Minimum amount is 0.00 and maximum is 999999.99
N*	shipToPosCode	Ship To Postal Code / Zip Code	10-character alphanumeric	The postal code or zip code for the destination where goods will be delivered  *Required if shipment is involved  Full alpha postal code - Valid ANA<space>NAN format required if shipping to an address within Canada
N	shipFromPosCode	Ship From Postal Code / Zip Code	10-character alphanumeric	The postal code or zip code from which items were shipped  For Canadian addresses, requires full alpha postal code for the merchant with Valid ANA<space>NAN format
N*	desCouCode	Destination Country Code	2-character alphanumeric	Code of country where purchased goods will be delivered  *Required if it appears on the invoice for an international transaction
Y	vatRefNum	Unique VAT Invoice Reference Number	15-character alphanumeric	Unique Value Added Tax Invoice Reference Number  Must be populated with the invoice number. Must not be all spaces or all zeroes.
N	taxTreatment	Tax Treatment	1-character numeric	Must be one of the following values:

Req	Variable Name	Field Name	Size/Type	Description
				<p>0 = Net Prices with tax calculated at line item level;</p> <p>1 = Net Prices with tax calculated at invoice level;</p> <p>2 = Gross prices given with tax information provided at line item level;</p> <p>3 = Gross prices given with tax information provided at invoice level;</p> <p>4 = No tax applies (small merchant) on the invoice for the transaction</p>
N	freightAmount	Freight/Shipping Amount (Ship Amount)	9-character decimal	<p>Freight charges on total purchase</p> <p>If shipping is not provided as a line item it must be provided here, if applicable</p> <p>Signed monetary amount: minus sign means 'amount is a credit', plus sign or no sign means 'amount is a debit', maximum without sign is 999999.99</p>
N	gstHstFreightRate	GST HST Freight Rate	4-character decimal	<p>Rate of GST (excludes PST) or HST charged on the shipping amount (in accordance with the Tax Treatment)</p> <p>If Freight/Shipping Amount is provided then this (National GST or HST) tax rate must be provided.</p> <p>Monetary amount, maximum is 99.99. Such as 13% HST is 13.00</p>
N	gstHstFreightAmount	GST HST Freight Amount	9-character decimal	Amount of GST (excludes PST) or HST charged on the shipping amount

Req	Variable Name	Field Name	Size/Type	Description
				<p>If Freight/Shipping Amount is provided then this (National GST or HST) tax amount must be provided if taxTreatment is 0 or 2</p> <p>Signed monetary amount: maximum without sign is 999999.99.</p>

**Table 2: Visa - Line Item Details - Level 3 Request Fields (VSPurchl)**

Req	Variable Name	Field Name	Size/Type	Description
N	itemComCode	Item Commodity Code	12-character alphanumeric	Line item Commodity Code (if this field is not sent, then productCode must be sent)
N	productCode	Product Code	12-character alphanumeric	<p>Line item Product Code (if this field is not sent, then itemComCode)</p> <p>If the order has a Freight/Shipping line item, the productCode value has to be "Freight/Shipping"</p> <p>If the order has a Discount line item, the productCode value has to be "Discount"</p>
N	itemDescription	Item Description	26-character alphanumeric	Line item description
N	itemQuantity	Item Quantity	12-character decimal	<p>Quantity of line item</p> <p>Max Value 9999999.9999</p>
N	itemUom	Item UOM	3-character alphanumeric	Unit of Measure
N	unitCost	Unit Cost	9-character decimal	Line item cost per unit. Must contain 2 decimal places.
N	vatTaxAmt	VAT Tax Amount	9-character decimal	Any value-added tax or other sales tax amount

Req	Variable Name	Field Name	Size/Type	Description
N	vatTaxRate	VAT Tax Rate	4-character decimal	Sales tax rate e.g., 8% PST should be 8.0 maximum 99.99
N	discountTreatment	Discount Treatment	1-character numeric	Must be one of the following values:  0 if no invoice level discounts apply for this invoice  1 if Tax was calculated on Post-Discout totals  2 if Tax was calculated on Pre-Discout totals.
N	discountAmtL	Discount Amount	9-character decimal	The discountAmt can only be set when the product code is set to "Discount". When the product code is set to "Discount" then discountAmt cannot be blank. Must contain 2 decimal places

## Appendix K Definition of Request Fields for Level 2/3 - Amex

Table 1: Amex- Level 2/3 Request Fields - Heading Fields

Req	Variable Name	Field Name	Size/Type	Description												
N	big04	Purchase Order Number	22-character alphanumeric													
N	big05	Release Number	30-character alphanumeric													
N	big10	Invoice Number	10-character alphanumeric													
Y	n101	Entity Identifier Code	2-character alpha-numeric	‘R6’ - Requester (required) ‘BG’ - Buying Group (optional) ‘SF’ - Ship From (optional) ‘ST’ - Ship To (optional) ‘40’ - Receiver (optional)												
Y	n102	Name	40-character alphanumeric	<table><tr><th>n101 code</th><th>n102 meaning</th></tr><tr><td>R6</td><td>Requester Name</td></tr><tr><td>BG</td><td>Buying Group Name</td></tr><tr><td>SF</td><td>Ship From Name</td></tr><tr><td>ST</td><td>Ship To Name</td></tr><tr><td>40</td><td>Receiver Name</td></tr></table>	n101 code	n102 meaning	R6	Requester Name	BG	Buying Group Name	SF	Ship From Name	ST	Ship To Name	40	Receiver Name
n101 code	n102 meaning															
R6	Requester Name															
BG	Buying Group Name															
SF	Ship From Name															
ST	Ship To Name															
40	Receiver Name															
N	n301	Address	40-character alphanumeric	Address												
N	n401	City	30-character alphanumeric	City												
N	n402	State or Province	2-character alpha-	State or Province												



Req	Variable Name	Field Name	Size/Type	Description																						
			numeric																							
N	n403	Postal Code	15-character alphanumeric	Postal Code																						
Y	ref01	Reference Identification Qualifier	2-character alphanumeric	‘VR’ – Vendor ID Number  ‘14’ – Master Account Number  ‘12’ – Billing Account  ‘4C’ – Shipment Destination Code (required)  ‘CR’ – Customer Reference Number																						
Y	ref02	Reference Identification	alphanumeric, # of characters depend on the value entered for ref01, as follows:  <table><thead><tr><th>ref01 code</th><th>character limit</th></tr></thead><tbody><tr><td>VR</td><td>10</td></tr><tr><td>14</td><td>10</td></tr><tr><td>12</td><td>30</td></tr><tr><td>4C</td><td>6</td></tr><tr><td>CR</td><td>17</td></tr></tbody></table>	ref01 code	character limit	VR	10	14	10	12	30	4C	6	CR	17	VR is the Vendor ID Number, other codes describe the following:  <table><thead><tr><th>ref01 code</th><th>ref02 meaning</th></tr></thead><tbody><tr><td>14</td><td>Amex CAP number (optional)</td></tr><tr><td>12</td><td>Billing Account (optional)</td></tr><tr><td>4C</td><td>Ship to Zip or Canadian Postal Code (required)</td></tr><tr><td>CR</td><td>Cardmember Reference Number (optional)</td></tr></tbody></table>	ref01 code	ref02 meaning	14	Amex CAP number (optional)	12	Billing Account (optional)	4C	Ship to Zip or Canadian Postal Code (required)	CR	Cardmember Reference Number (optional)
ref01 code	character limit																									
VR	10																									
14	10																									
12	30																									
4C	6																									
CR	17																									
ref01 code	ref02 meaning																									
14	Amex CAP number (optional)																									
12	Billing Account (optional)																									
4C	Ship to Zip or Canadian Postal Code (required)																									
CR	Cardmember Reference Number (optional)																									

Table 2: Amex - Level 2/3 Request Fields - Detail Fields

Req	Variable Name	Field Name	Size/Type	Description
Y	it102	Line Item Quantity Invoiced	10-character R	
Y	it103	Unit or Basis for Measurement	2-character alphanumeric	

Req	Variable Name	Field Name	Size/Type	Description								
		Code										
Y	it104	Unit Price	15-character R									
N	it105	Basis or Unit Price Code	2-character alpha-numeric									
N	it10618	Product/Service ID Qualifier	2-character alpha-numeric	‘MG’ - Manufacturer’s Part Number  ‘VC’ - Supplier Catalog Number  ‘SK’ - Supplier Stock Keeping Unit Number  ‘UP’ - Universal Product Code  ‘VP’ – Vendor Part Number  ‘PO’ – Purchase Order Number  ‘AN’ – Client Defined Asset Code								
N	it10719	Product/Service ID	<table><tr><th>it10618 code</th><th>character limit</th></tr><tr><td>VC</td><td>20</td></tr><tr><td>PO</td><td>22</td></tr><tr><td>other</td><td>30</td></tr></table>	it10618 code	character limit	VC	20	PO	22	other	30	
it10618 code	character limit											
VC	20											
PO	22											
other	30											
Y	txi01	Tax Type code	2-character alpha-numeric	‘CA’ – City Tax (optional)  ‘CP’ – County/Parish Sales Tax (optional)  ‘CT’ – County/Tax (optional)  ‘EV’ – Environmental Tax (optional)  ‘GS’ – Good and Services Tax (GST) (optional)  ‘LS’ – State and Local Sales Tax (optional)								

Req	Variable Name	Field Name	Size/Type	Description
				'LT' – Local Sales Tax (optional) 'PG' – Provincial Sales Tax (PST) (optional) 'SP' – State/Provincial Tax a.k.a. Quebec Sales Tax (QST) (optional) 'ST' – State Sales Tax (optional) 'TX' – All Taxes (required) 'VA' – Value-Added Tax a.k.a. Canadian Harmonized Sales Tax (HST) (optional)
N	txi02	Monetary Amount	6-character decimal	
N	txi03	Percent	10-character decimal	
N	txi06	Tax Exempt Code	1-character alpha-numeric	'1' – Yes (Tax Exempt) '2' – No (Not Tax Exempt) 'A' – Labor Taxable, Material Exempt 'B' – Material Taxable, Labor Exempt 'C' – Not Taxable 'F' – Exempt (Goods/Services Tax) 'G' – Exempt (Provincial Sales Tax) 'L' – Exempt Local Service 'R' – Recurring Exempt 'U' – Usage Exempt
Y	pam05	Line Item Extended Amount	8-character decimal	

Req	Variable Name	Field Name	Size/Type	Description
Y	pid06	Line Item Description	80-character alpha-numeric	

**Table 3: Amex - Level 2/3 Request Fields - Summary Fields**

Req	Variable Name	Field Name	Size/Type	Description
Y	txi01	Tax Type code	2-character alphanumeric	'CA' – City Tax (optional) 'CP' – County/Parish Sales Tax (optional) 'CT' – County/Tax (optional) 'EV' – Environmental Tax (optional) 'GS' – Good and Services Tax (GST) (optional) 'LS' – State and Local Sales Tax (optional) 'LT' – Local Sales Tax (optional) 'PG' – Provincial Sales Tax (PST) (optional) 'SP' – State/Provincial Tax a.k.a. Quebec Sales Tax (QST) (optional) 'ST' – State Sales Tax (optional) 'TX' – All Taxes (required) 'VA' – Value-Added Tax a.k.a. Canadian Harmonized Sales Tax (HST) (optional)
N	txi02	Monetary Amount	6-character decimal	
N	txi03	Percent	10-character decimal	
N	txi06	Tax Exempt Code	1-character alphanumeric	'1' – Yes (Tax Exempt) '2' – No (Not Tax Exempt)

Req	Variable Name	Field Name	Size/Type	Description
				'A' – Labor Taxable, Material Exempt 'B' – Material Taxable, Labor Exempt 'C' – Not Taxable 'F' – Exempt (Goods/Services Tax) 'G' – Exempt (Provincial Sales Tax) 'L' – Exempt Local Service 'R' – Recurring Exempt 'U' – Usage Exempt

# Appendix L Error Messages

## Error messages that are returned if the gateway is unreachable

### Global Error Receipt

You are not connecting to our servers. This can be caused by a firewall or your internet connection.

### Response Code = NULL

The response code can be returned as null for a variety of reasons. The majority of the time, the explanation is contained within the Message field.

When a 'NULL' response is returned, it can indicate that the issuer, the credit card host, or the gateway is unavailable. This may be because they are offline or because you are unable to connect to the internet.

A 'NULL' can also be returned when a transaction message is improperly formatted.

## Error messages that are returned in the Message field of the response

### XML Parse Error in Request: <System specific detail>

An improper XML document was sent from the API to the servlet.

### XML Parse Error in Response: <System specific detail>

An improper XML document was sent back from the servlet.

### Transaction Not Completed Timed Out

Transaction timed out before the host responds to the gateway.

### Request was not allowed at this time

The host is disconnected.

### Could not establish connection with the gateway: <System specific detail>

Gateway is not accepting transactions or server does not have proper access to internet.

### Input/Output Error: <System specific detail>

Servlet is not running.

### The transaction was not sent to the host because of a duplicate order id

Tried to use an order id which was already in use.

### The transaction was not sent to the host because of a duplicate order id

Expiry Date was sent in the wrong format.

## Vault error messages

### Can not find previous

Data key provided was not found in our records or profile is no longer active.

### Invalid Transaction

Transaction cannot be performed because improper data was sent.

or

Mandatory field is missing or an invalid SEC code was sent.

### Malformed XML

Parse error.

### Incomplete

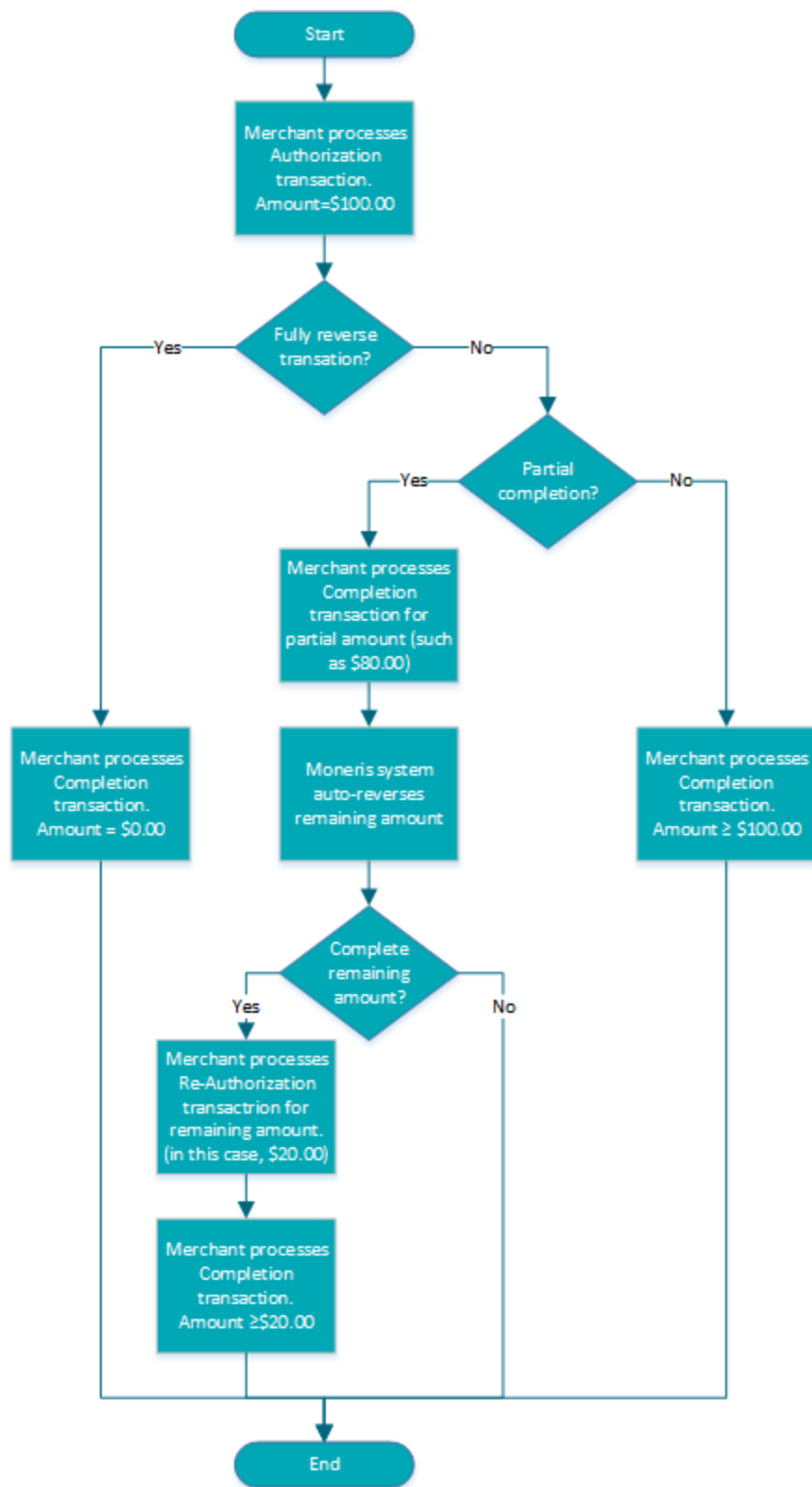
Timed out.

or

Cannot find expiring cards.



## Appendix M Process Flow for Basic PreAuth, ReAuth and Completion Transactions





## Appendix N Merchant Checklists for INTERAC® Online Payment Certification Testing

### Merchant Information

Name and URL	Merchant Name (English)	
	Homepage URL (English)	
	Merchant Name (French)	
	Homepage URL (French)	
Number	Merchant Number	
Transaction fee category (Circle one)	Government Education General	

### Checklist for Front-End Tests

Case #	Date Completed	Remarks
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		

Case #	Date Completed	Remarks
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		
31		
32		
33		
34		
35		
36		
37		
38		
39		

### Merchant Requirements

Table 135: Checklist for web display requirements

Done	Requirement
	Checkout page

**Table 135: Checklist for web display requirements (continued)**

Done	Requirement
	Displays the INTERAC Online design (logo), wordmark (text "INTERAC Online) or both
<b>Design and Wordmark Requirements (any page)</b>	
	Other payment option logos: <ul style="list-style-type: none"> <li>Displays the INTERAC Online design (logo) if the merchant displays the trademarks or logos of other payment options.</li> <li>Design is equal in size and no less prominent than other payment option trademarks.</li> </ul>
	INTERAC wordmark: <ul style="list-style-type: none"> <li>INTERAC is always either in capital letters or italics (as in "the INTERAC Online service")</li> <li>In the first use of the INTERAC Online wordmark, INTERAC is followed by the ® notation in superscript. For example, "<i>Interac</i><sup>®</sup>" (English) or "&lt;&lt;<i>Interac</i><sup>MD</sup>&gt;&gt;" (French).</li> <li>On the same page as the first occurrence of the wordmark, the following language-appropriate footnote appears: <ul style="list-style-type: none"> <li>® Trademark of Interac Inc. Used under licence"</li> <li><sup>MD</sup> Marque de commerce d'Interac Inc. Utilisée sous licence</li> </ul> </li> </ul>
<b>Version of design</b>	
	Uses the two-colour design on the web: <ul style="list-style-type: none"> <li>Horizontal version—height no shorter than 25 pixels (width-to-height ratio of 2:37:1)</li> <li>Vertical version—width no narrower than 30 pixels (width-to-height ratio of 1:1:37)</li> </ul>
<b>"Learn more" information</b>	
	Provides consumers with a link to <a href="http://www.interaonline.com/learn">www.interaonline.com/learn</a> (preferably on the checkout page)
<b>Confirmation page</b>	
	States that the transaction is successful
	Displays the financial institution's name and confirmation number
	Provides ability to print
<b>Error page</b>	
	Indicates that payment was unsuccessful
	States that the order is cancelled or displays other payment options
<b>Timeout message</b>	

**Table 135: Checklist for web display requirements (continued)**

Done	Requirement
	Is displayed if consumer has less than 30 minutes to complete payment
<b>Payment</b>	
	Displays the total in Canadian dollars

**Table 136: Checklist for security/privacy requirements**

Done	Requirement
<b>Merchant</b>	
	Uses no less than 128-bit SSL encryption when collecting personal information
	Protects consumer information in accordance with applicable federal and provincial privacy legislation
	Adheres to the Canadian Code of Practice for Consumer Protection in Electronic Commerce
<b>Provided screenshots</b>	
	Checkout page (where customer selects INTERAC Online option)
	Confirmation page (one of the test case 1, 2, or 3)
	Error page (test case 4)

## Appendix O Third-Party Service Provider Checklists for INTERAC® Online Payment Certification Testing

### Third-Party Service Provider Information

Name	English	
	French	
Merchant Web Application	Solution Name	
	Version	
Acquirer		

### Interaonline.com/Interacnlgne.com Web Site Listing Information

See [http://www.interaonline.com/merchants\\_thirdparty.php](http://www.interaonline.com/merchants_thirdparty.php) for examples.

English contact information	5 lines maximum. 35 characters/line maximum. For example, contact name and title, department, telephone, web site, email.
English logo	File type: PNG. Maximum size: 120x120 pixels.
French contact information	5 lines maximum. 35 characters/line maximum. For example, contact name and title, department, telephone, web site, email.
French logo	File type: PNG. Maximum size: 120x120 pixels.

Table 137: Checklist for front-end tests

Case #	Date Completed	Remarks
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		

**Table 137: Checklist for front-end tests**

Case #	Date Completed	Remarks
30		
31		
32		
33		
34		
35		
36		
37		
38		
39		

## Merchant Requirements

**Table 138: Checklist for web display requirements**

Done	Requirement
<b>Checkout page</b>	
	Displays the INTERAC Online design (logo), wordmark (text "INTERAC Online) or both
<b>Design and Wordmark Requirements (any page)</b>	
	<p>Other payment option logos:</p> <ul style="list-style-type: none"> <li>• Displays the INTERAC Online design (logo) if the merchant displays the trademarks or logos of other payment options.</li> <li>• Design is equal in size and no less prominent than other payment option trademarks.</li> </ul>
	<p>INTERAC wordmark:</p> <ul style="list-style-type: none"> <li>• INTERAC is always either in capital letters or italics (as in "the INTERAC Online service")</li> <li>• In the first use of the INTERAC Online wordmark, INTERAC is followed by the ® notation in superscript. For example, "<i>Interac</i><sup>®</sup>" (English) or "&lt;&lt;<i>Interac</i><sup>MD</sup>&gt;&gt;" (French).</li> <li>• On the same page as the first occurrence of the wordmark, the following language-appropriate footnote appears: <ul style="list-style-type: none"> <li>• ® Trademark of Interac Inc. Used under licence"</li> <li>• <sup>MD</sup> Marque de commerce d'Interac Inc. Utilisée sous licence</li> </ul> </li> </ul>

**Table 138: Checklist for web display requirements (continued)**

Done	Requirement
<b>Version of design</b>	
	Uses the two-colour design on the web: <ul style="list-style-type: none"> <li>Horizontal version—height no shorter than 25 pixels (width-to-height ratio of 2:37:1)</li> <li>Vertical version—width no narrower than 30 pixels (width-to-height ratio of 1:1:37)</li> </ul>
<b>"Learn more" information</b>	
	Provides consumers with a link to <a href="http://www.interaonline.com/learn">www.interaonline.com/learn</a> (preferably on the checkout page)
<b>Confirmation page</b>	
	States that the transaction is successful
	Displays the financial institution's name and confirmation number
	Provides the ability to print
<b>Error page</b>	
	Indicates that payment was unsuccessful
	States that the order is cancelled or displays other payment options
<b>Timeout message</b>	
	Is displayed if consumer has less than 30 minutes to complete payment
<b>Payment</b>	
	Displays the total in Canadian dollars

**Table 139: Checklist for security/privacy requirements**

Done	Requirement
<b>Merchant</b>	
	Uses no less than 128-bit SSL encryption when collecting personal information
	Protects consumer information in accordance with applicable federal and provincial privacy legislation
	Adheres to the Canadian Code of Practice for Consumer Protection in Electronic Commerce



**Table 140: Checklist for required screenshots**

Done	Requirement
Provided screenshots	
	Checkout page (where customer selects INTERAC Online option)
	Confirmation page (one of the test case 1, 2, or 3)
	Error page (test case 4)

## Appendix P Merchant Checklists for INTERAC® Online Payment Certification

### Merchant Information

Name and URL	Merchant Name (English)	
	Homepage URL (English)	
	Merchant Name (French)	
	Homepage URL (French)	
Number	Merchant Number	
Transaction fee category (Circle one)	Government Education General	
Third-party service provider	Company name	
Service provider's merchant web application	Solution name	
	Version	

### Merchant Requirements

**Table 141: Checklist for web display requirements**

Done	Requirement
<b>Checkout page</b>	
	Displays the INTERAC Online design (logo), wordmark (text "INTERAC Online) or both
<b>Design and Wordmark Requirements (any page)</b>	
	Other payment option logos: <ul style="list-style-type: none"> <li>Displays the INTERAC Online design (logo) if the merchant displays the trademarks or logos of other payment options.</li> <li>Design is equal in size and no less prominent than other payment option trademarks.</li> </ul>

**Table 141: Checklist for web display requirements (continued)**

Done	Requirement
	<p>INTERAC wordmark:</p> <ul style="list-style-type: none"> <li>• INTERAC is always either in capital letters or italics (as in "the INTERAC Online service")</li> <li>• In the first use of the INTERAC Online wordmark, INTERAC is followed by the ® notation in superscript. For example, "<i>Interac</i><sup>®</sup>" (English) or "&lt;&lt;<i>Interac</i><sup>MD</sup>&gt;&gt;" (French).</li> <li>• On the same page as the first occurrence of the wordmark, the following language-appropriate footnote appears: <ul style="list-style-type: none"> <li>• ® Trademark of Interac Inc. Used under licence"</li> <li>• <sup>MD</sup> Marque de commerce d'Interac Inc. Utilisée sous licence</li> </ul> </li> </ul>
<b>Version of design</b>	
	<p>Uses the two-colour design on the web:</p> <ul style="list-style-type: none"> <li>• Horizontal version—height no shorter than 25 pixels (width-to-height ratio of 2:37:1)</li> <li>• Vertical version—width no narrower than 30 pixels (width-to-height ratio of 1:1:37)</li> </ul>
<b>"Learn more" information</b>	
	Provides consumers with a link to <a href="http://www.interaonline.com/learn">www.interaonline.com/learn</a> (preferably on the checkout page)
<b>Confirmation page</b>	
	States that the transaction is successful
	Displays the financial institution's name and confirmation number
	Provides ability to print
<b>Error page</b>	
	Indicates that payment was unsuccessful
	States that the order is cancelled or displays other payment options
<b>Timeout message</b>	
	Is displayed if consumer has less than 30 minutes to complete payment
<b>Payment</b>	
	Displays the total in Canadian dollars

**Table 142: Checklist for security/privacy requirements**

Done	Requirement
<b>Merchant</b>	
	Uses no less than 128-bit SSL encryption when collecting personal information
	Protects consumer information in accordance with applicable federal and provincial privacy legislation
	Adheres to the Canadian Code of Practice for Consumer Protection in Electronic Commerce
<b>Provided screenshots</b>	
	Checkout page (where customer selects INTERAC Online option)
	Confirmation page (one of the test case 1, 2, or 3)
	Error page (test case 4)

# Appendix Q INTERAC® Online Payment Certification

## Test Case Detail

- Q.1 Common Validations
- Q.2 Test Cases
- Q.3 Merchant front-end test case values

### Q.1 Common Validations

The Merchant sends a request to the INTERAC Online Merchant Test Tool, which validates the fields as follows:

- All mandatory fields are present.
- All fields are valid according to their definition in the *INTERAC Online Functional Specifications* (including field lengths, valid characters and so on).
- Merchant number is that of a valid registered merchant.
- Funded URL matches one of the merchant's registered funded URLs that were provided during merchant registration.
- The not funded URL matches one of the merchant's registered Not Funded URLs that were provided during merchant registration.
- No additional fields are present.

### Q.2 Test Cases

**Table 143: Cases 1-3**

Objective	To test that the merchant can do all of the following: <ul style="list-style-type: none"><li>• Send a valid request to the Gateway page</li><li>• Receive a valid confirmation of funding from the Issuer Online Banking application</li><li>• Issue a request for purchase completion to the acquirer</li><li>• Receive an approved response from the acquirer.</li></ul>
Pre-requisites	None
Configuration	Merchant sends form posts to the Merchant Test Tool, which in turn responds to either the Funded or Not Funded URL.  The Merchant is connected to an acquirer emulator, which can be set to confirm any request for payment confirmation. (That is, the back-end process of sending a 0200 Message to the issuer is emulated to always accept the purchase request).
Special tools required	None

**Table 143: Cases 1-3 (continued)**

Input data requirements	<p>Acquirer must have registered the merchant using the administration system, and have supplied the following:</p> <ul style="list-style-type: none"> <li>• IDEBIT_FUNDEDURL(S)</li> <li>• IDEBIT_NOTFUNDEDURL(S)</li> <li>• HTTP REFERERURL(S)</li> </ul> <p>Data will be provided by the Merchant Test Tool.</p>
Execution strategy	Initiate a payment at the merchant. The two least significant digits of the dollar amount must be equal to the test case number. For example, if you are executing test case 3, the format of the amount must be ### ## #03.##.
Expected outcome	<p>The merchant indicates to the customer that the purchase was completed and presents a confirmation screen that includes (depending on the test case) the correct amount, the issuer name and the issuer confirmation number.</p> <p>Test case 1</p> <ul style="list-style-type: none"> <li>• Issuer name: 123Bank</li> <li>• Issuer confirmation number: CONF#123</li> </ul> <p>Test case 2</p> <ul style="list-style-type: none"> <li>• Issuer name: Bank Éàëëï#\$,-/?@'</li> <li>• Issuer confirmation number: #\$,-/?@'UPdn9</li> </ul> <p>Test case 3</p> <ul style="list-style-type: none"> <li>• Issuer name: B</li> <li>• Issuer confirmation number: C</li> </ul>
Applicable logs	<ul style="list-style-type: none"> <li>• Merchant Test Tool logs</li> <li>• Screen capture of the merchant's confirmation page.</li> </ul>

**Table 144: Case 4**

Objective	To test that the merchant handles a rejection in response to the acquirer
Pre-requisites	None
Configuration	Same as test cases 1-3 except that the acquirer emulator must be set to decline the request for payment confirmation. (That is, to emulate the scenario in which an issuer sends a decline in the 0210 response to the acquirer's 0200 message.)
Special tools required	None

**Table 144: Case 4 (continued)**

Input data requirements	Acquirer must have registered the merchant using the administration system, and have supplied the following: <ul style="list-style-type: none"> <li>• IDEBIT_FUNDEDURL(S)</li> <li>• IDEBIT_NOTFUNDEDURL(S)</li> <li>• HTTP REFERERURL(S)</li> </ul> <p>Data will be provided by the Merchant Test Tool.</p>
Execution strategy	Initiate a payment at the merchant for any amount where the two least significant dollar digits are 04. (That is, of the form #### ##04.##.)
Expected outcome	The merchant indicates to the customer that the purchase was declined. Neither the issuer name nor the issuer confirmation number are displayed.
Applicable logs	Merchant Test Tool logs

**Table 145: Cases 5-22**

Objective	To test that a merchant safely handles redirections to the Funded URL with invalid data, and treats the transaction as funded.
Pre-requisites	None
Configuration	None.  The acquirer emulator is not needed because the merchant does not submit any requests for payment confirmation.
Special tools required	None
Input data requirements	Acquirer must have registered the merchant using the administration system, and have supplied the following: <ul style="list-style-type: none"> <li>• IDEBIT_FUNDEDURL(S)</li> <li>• IDEBIT_NOTFUNDEDURL(S)</li> <li>• HTTP REFERERURL(S)</li> </ul> <p>Data will be provided by the Merchant Test Tool.</p>
Execution strategy	Initiate a payment at the merchant. The two least significant digits of the dollar amount must be equal to the test case number. For example, if you are executing test case 13, the format of the amount must be #### ##13.##.
Expected outcome	The merchant indicates to the customer that the purchase was declined. Neither the issuer name nor the issuer confirmation number are displayed.
Applicable logs	Merchant Test Tool logs

**Table 146: Case 23**

Objective	To test that a merchant can receive a valid redirection from the issuer that indicates the payment was not funded.
Pre-requisites	None
Configuration	None.  The acquirer emulator is not needed because the merchant does not submit any requests for payment confirmation.
Special tools required	None
Input data requirements	Acquirer must have registered the merchant using the administration system, and have supplied the following: <ul style="list-style-type: none"> <li>• IDEBIT_FUNDEDURL(S)</li> <li>• IDEBIT_NOTFUNDEDURL(S)</li> <li>• HTTP REFERERURL(S)</li> </ul> Data is provided by the Merchant Test Tool.
Execution strategy	Initiate a payment at the merchant for any amount where the two least significant dollar digits are 23. (That is, of the form #### ## #23.##.)
Expected outcome	The merchant indicates to the customer that the purchase was declined. Neither the issuer name nor the issuer confirmation number are displayed.
Applicable logs	Merchant Test Tool logs

**Table 147: Cases 24-39**

Objective	To test that a merchant safely handles redirections to the Not Funded URL with invalid data, and treats the transaction as not funded.
Pre-requisites	None
Configuration	None.  The acquirer emulator is not needed because the merchant does not submit any requests for payment confirmation.
Special tools required	None



**Table 147: Cases 24-39 (continued)**

Input data requirements	Acquirer must have registered the merchant using the administration system, and have supplied the following: <ul style="list-style-type: none"> <li>• IDEBIT_FUNDEDURL(S)</li> <li>• IDEBIT_NOTFUNDEDURL(S)</li> <li>• HTTP REFERERURL(S)</li> </ul> <p>Data is provided by the Merchant Test Tool.</p>
Execution strategy	Initiate a payment at the merchant. The two least significant digits of the dollar amount must be equal to the test case number. For example, if you are executing test case 27, the format of the amount must be ### ## #27.##.
Expected outcome	The merchant indicates to the customer that the purchase was declined. Neither the issuer name nor the issuer confirmation number are displayed.
Applicable logs	Merchant Test Tool logs

### Q.3 Merchant front-end test case values

These values are automatically sent by the INTERAC Online Merchant Test Tool. They are provided here for reference only.

**Table 148: Test cases 1 and 4—Funded URL**

Redirection URL	Funded
ISSLANG	en
TRACK2	3728024906540591206=12010123456789XYZ
ISSCONF	CONF#123
ISSNAME	123Bank
INVOICE	(Same as supplied by merchant)
MERCHDATA	(Same as supplied by merchant)
VERSION	1

**Table 149: Test case 2—Funded URL**

Redirection URL	Funded
ISSLANG	en
TRACK2	5268051119993326=2912999999999999000
ISSCONF	#\$.,-/?@'UPdn9
ISSNAME	987Bank Éàëëï#\$.,-/?@'Àôùüÿç

**Table 149: Test case 2—Funded URL**

INVOICE	(Same as supplied by merchant)
MERCHDATA	(Same as supplied by merchant)
VERSION	1

**Table 150: Test case 3—Funded URL**

Redirection URL	Funded
ISSLANG	fr
TRACK2	453781122255=1001ABC11223344550000000
ISSCONF	C
ISSNAME	B
INVOICE	(Same as supplied by merchant)
MERCHDATA	(Same as supplied by merchant)
VERSION	123

**Table 151: Test cases 5-22—invalid fields, Funded URL**

Test case	Purpose	Field	Value
5	missing field	IDEBIT_INVOICE	(missing)
6	missing field	IDEBIT_MERCHDATA	(missing)
7	missing field	IDEBIT_ISSLANG	(missing)
8	missing field	IDEBIT_TRACK2	(missing)
9	missing field	IDEBIT_ISSCONF	(missing)
10	missing field	IDEBIT_ISSNAME	(missing)
11	missing field	IDEBIT_VERSION	(missing)
12	missing field	IDEBIT_TRACK2, IDEBIT_ISSCONF, IDEBIT_ISSNAME	(missing)
13	wrong value	IDEBIT_INVOICE	XXX
14	wrong value	IDEBIT_MERCHDATA	XXX
15	invalid value	IDEBIT_ISSLANG	de
16	value too long	IDEBIT_TRACK2	3728024906540591206=12010123456789XYZA
17	invalid check digit	IDEBIT_TRACK2	3728024906540591207=12010123456789XYZ

**Table 151: Test cases 5-22—invalid fields, Funded URL (continued)**

Test case	Purpose	Field	Value
18	field too long	IDEBIT_ISSCONF	Too long confirm
19	invalid character	IDEBIT_ISSCONF	CONF<123
20	field too long	IDEBIT_ISSNAME	Very, very, very long issuer name
21	invalid character	IDEBIT_ISSNAME	123<Bank
22	invalid value	IDEBIT_VERSION	2

**Table 152: Test case 23—valid data, Not Funded URL**

Redirection URL	Not funded
ISSLANG	en
INVOICE	(Same as supplied by merchant)
MERCHDATA	(Same as supplied by merchant)
VERSION	1

**Table 153: Test cases 5-22—invalid fields, Funded URL**

Test case	Purpose	Field	Value
24	missing field	IDEBIT_INVOICE	(missing)
25	missing field	IDEBIT_MERCHDATA	(missing)
26	missing field	IDEBIT_ISSLANG	(missing)
27	IDEBIT_TRACK2 is present and valid	IDEBIT_TRACK2	3728024906540591206=12010123456789XYZ
28	IDEBIT_ISSCONF is present and valid	IDEBIT_ISSCONF	CONF#123
29	IDEBIT_ISSNAME is present and valid	IDEBIT_ISSNAME	12Bank
30	missing field	IDEBIT_VERSION	(missing)
31	wrong value	IDEBIT_INVOICE	XXX
32	invalid value	IDEBIT_INVOICE	invalid </html> tricky data
33	wrong value	IDEBIT_MERCHDATA	XXX

**Table 153: Test cases 5-22—invalid fields, Funded URL (continued)**

Test case	Purpose	Field	Value
34	invalid value	IDEBIT_MERCHDATA	<2000 characters in the range hex 20-7E
35	invalid value	IDEBIT_ISSLANG	de
36	invalid IDEBIT_TRACK2 is present	IDEBIT_TRACK2	INVALIDTRACK2, incorrect format and too long
37	invalid IDEBIT_ISSCONF is present	IDEBIT_ISSCONF	Too long confirm
38	invalid IDEBIT_ISSNAME is present	IDEBIT_ISSNAME	Very, very, very long issuer name
39	invalid value	IDEBIT_VERSION	2



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