



Merchant Integration Guide

ColdFusion API

v. 1.2.2

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V1.2.1	September 6, 2011	-New download link updated in various locations http://www.esselectplus.ca/en/downloadable-content -Section 4. Transaction Types and Transaction Process Flow -Added Process Flow for PreAuth/ReAuth/capture Transactions -Section 5. Transaction Examples -PreAuth (basic) - Added PreAuth reversal note -Added ReAuth example -Capture - Added PreAuth reversal note -Section 6. Transaction with Extra features: Purchase(with VbV) -Added enhanced AVS values -Section 6. Transaction with Extra features -Added Purchase with Status Check -Appendix A. Definition of Request Fields -Added orig_order_id -Added enhanced AVS request fields -Added status_check request field -Appendix B. Definitions of Response Fields -Added CavvResultCode response field -Added ITDResponse response field -Added StatusCode response field -Added StatusMsg response field -Added Appendix C. CustInfo Fields -Appendix F. Card Validation Digits (CVD) -Added American Express/JCB response codes -Appendix G. Address Verification Services(AVS) -Added American Express/JCB response codes -Appendix H. additional Information for CVD and AVS -Added American Express -Added Appendix I. CAVV Result Code
V1.2.2	March 26, 2012	-Section 4. Transaction Types and Transaction Flow -Added Card Verification -Section 5. Transaction Examples -Added Card Verification example -Section 8.How do I test my Solution? -Added Card verification Test Card numbers. -Appendix A. Definition of Request Fields -Added new Variable Name (dynamic_descriptor) -Appendix B. Definitions of Response Fields -Removed variable Name CardLevelResult. -Removed Appendix J. Card Level Result Value

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****** PLEASE READ CAREFULLY******

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.

1. About this Documentation

This document describes the basic information for using the ColdFusion 5.0 API for sending credit card transactions. In particular, it describes the format for sending transactions and the corresponding responses you will receive. If you are interested in also being able to accept INTERAC payments via your online application, please refer to the ColdFusion API with INTERAC Online Payment document found at: <http://www.eselectplus.ca/en/downloadable-content>.

2. System and Skill Requirements

In order to use the ColdFusion API your system will need to have the following:

1. Port 443 open for bi-directional communication
2. Web server with an SSL certificate
3. ColdFusion 5.0 Server

As well, you will need to have the following knowledge and/or skill set:

1. Knowledge of CFML

Note:

It is important to note that 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". Failure to comply with PCI DSS and the Card Association Compliance Programs may result in a Merchant being subject to fines, fees or assessments and/or termination of processing services. Non-compliant solutions may prevent merchants boarding with Moneris Solutions.

As a Moneris Solutions 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.

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

For more information on how to get your application PCI-DSS compliant, please contact our Integration Specialists and visit <http://www.eselectplus.ca/en/downloadable-content> to download the PCI-DSS Implementation Guide.

3. What is the Process I will need to follow?

You will need to follow these steps.

1. Do the required development as outlined in this document
2. Test your solution in the test environment
3. Activate your store
4. Make the necessary changes to move your solution from the test environment into production as outlined in this document

4. Transaction Types and Transaction Process Flow

eSELECTplus supports a wide variety of transactions through the API. Below is a list of transactions supported by the API, other terms used for the transaction type are indicated in brackets.

Purchase – (sale) The Purchase transaction verifies funds on the customer's card, removes the funds and readies them for deposit into the merchant's account.

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's account a Capture must be performed. A PreAuth may only be Captured once.

ReAuth – (reauthorisation) A PreAuth may only be Captured once. If the PreAuth is Captured for less than the original amount, the ReAuth will allow the merchant to verify and lock the remaining funds on the customer's credit card, so they may also be Captured. To retrieve the funds from a ReAuth so that they may be settled in the merchant's account, a Capture must be performed. A ReAuth can only be Captured once however if the Capture was for less than the ReAuth amount, another ReAuth will allow the merchant to verify and lock the remaining funds on the customer's credit card, so they may also be Captured.

Capture – (Completion / PreAuth Completion) A PreAuth and a ReAuth can only be captured once. Once a PreAuth or a ReAuth 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 into the merchant's account.

Void – (Correction / Purchase Correction) Purchases and Captures 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's statement.

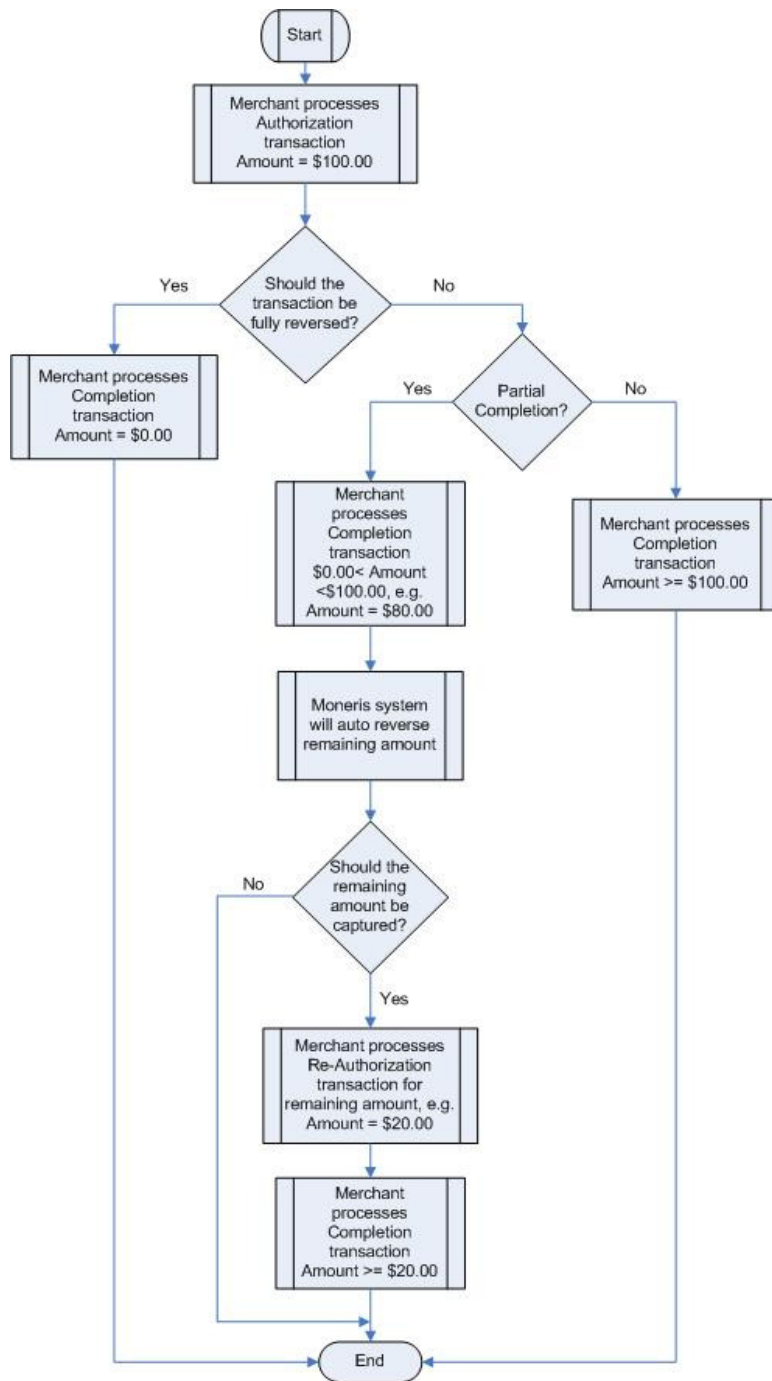
Refund – (Credit) A Refund can be performed against a Purchase or a Capture to refund any part, or all of the transaction.

Batch Close – (End of Day / Settlement) When a batch close is performed it takes the monies from all Purchase, Capture and Refund transactions so 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 EST.

Open Totals – (Current Batch Report) When an Open Totals is performed it returns the details about the currently open Batch. This transaction is similar to the Batch Close, though it does not close the Batch for settlement.

Card Verification – (Account Status Inquiry) 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.

* A Void 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.

Process Flow for PreAuth / ReAuth / Capture Transactions

5. Transaction Examples

The ColdFusion 5.0 API uses a custom tag called CF_mpgAPI_CF5 to send transactions to the Moneris eSELECTplus payment gateway. Below is a commented version of the test_purchase.cfm file that can be found in the ColdFusion 5.0 API download. This example demonstrates sending a test purchase transaction to the test environment gateway. The CF_mpgAPI_CF5 tag accepts 4 required attributes: host, store_id, api_token, and txn_array. The txn_array attribute is an array containing the transaction information such as transaction type, order_id, amount, pan, expiry_date, and crypt. The custom tag will process the transaction through the gateway once all the required attributes are accepted. A response to the transaction is then available in the response_struct variable that the custom tag uses to store all the response variables it received from eSELECTplus.

Purchase (basic)

In the purchase example we require several variables (store_id, api_token, order_id, amount, pan, expiry_date, crypt and status_check). There are also a number of optional fields such as cust_id and dynamic_descriptor available. Please refer to Appendix A. Definition of Request Fields for variable definitions.

```
<cftry>

    <cfinclude template="mpgAPIFunctions.cfm">

    <cfset mytime = TimeFormat(Now(), 'hhmmss')>
    <cfset myday = DateFormat(Now(), 'mmddyyyy')>
    <cfset OrderID = '#myday##mytime#>

    <cfscript>
    order_id = "cfm5-001" & OrderID;
    myTxn = formPurchaseArray( order_id, "1.00", "5454545454545454", "1212", "7" );
    </cfscript>

    <CF_mpgAPI_CF5 host="https://esqa.moneris.com/gateway2/servlet/MpgRequest" store_id="store5"
        api_token="yesguy" status_check = "false" txn_array="#myTxn#" cust_id="custiddata"
        dynamic_descriptor = "descriptor1">
    <cfscript>

    keyArray = arrayNew(1);
    keyArray = structKeyArray(response_struct);
    for( i=1; i LTE arrayLen(keyArray); i=i+1 ) {
        writeoutput( "<br>" & keyArray[i] & " is:_____ " & structFind(response_struct,
            keyArray[i]) );
    }
    </cfscript>

<cfcatch type="Custom.Tag.mpgAPI_CF5">
    <cfoutput>#cfcatch.message#</cfoutput>
</cfcatch>
<cfcatch type="Any">
    <cfoutput>#cfcatch.message#</cfoutput>
</cfcatch>

</cftry>
```


PreAuth (basic)

The PreAuth is virtually identical to the Purchase with the exception of the transaction type. It is 'formPreauthArray' instead of 'formPurchaseArray'. Like the Purchase example, PreAuth's require several variables (store_id, api_token, order_id, amount, pan, expiry_date, and crypt). There are also a number of optional fields such as cust_id and dynamic_descriptor available. Please refer to Appendix A. Definition of Request Fields for variable definitions.

A PreAuth transaction **must** be reversed if it is not to be captured. To reverse an authorization, please refer to the Capture transaction. If you have any questions regarding uncaptured authorization transactions, please refer to the Service Centre at 1-866-319-7450. For a process flow, please refer to the Process Flow for PreAuth / ReAuth / Capture Transactions.

```
<cftry>
```

```
    <cfinclude template="mpgAPIFunctions.cfm">
```

```
    <cfset mytime = TimeFormat(Now(), 'hhmmss')>
```

```
    <cfset myday = DateFormat(Now(), 'mmddyyyy')>
```

```
    <cfset OrderID = '#myday##mytime#'
```

```
    <cfscript>
```

```
    order_id = "cfm5-401" & OrderID;
```

```
    myTxn = formPreauthArray( order_id, "1.00", "4716019111111115", "0605", "7" );
```

```
    </cfscript>
```

```
    <CF_mpgAPI_CF5 host="https://esqa.moneris.com/gateway2/servlet/MpgRequest" store_id="store5"
```

```
        api_token="yesguy" txn_array="#myTxn#" dynamic_descriptor = "descriptor1">
```

```
    <cfscript>
```

```
    keyArray = arrayNew(1);
```

```
    keyArray = structKeyArray(response_struct);
```

```
    for( i=1; i LTE arrayLen(keyArray); i=i+1 ) {
        writeoutput( "<br>" & keyArray[i] & " is:_____" & structFind(response_struct,
            keyArray[i]) );
    }
```

```
    </cfscript>
```

```
<cfcatch type="Custom.Tag.mpgAPI_CF5">
```

```
    <cfoutput>#cfcatch.message#</cfoutput>
```

```
</cfcatch>
```

```
<cfcatch type="Any">
```

```
    <cfoutput>#cfcatch.message#</cfoutput>
```

```
</cfcatch>
```

```
</cftry>
```

ReAuth

The ReAuth is similar to the PreAuth with the addition of the 'original_order_id' with the exception of the transaction type. It is 'ReAuth' instead of 'PreAuth'. Like the PreAuth example, ReAuth's require several variables (store_id, api_token, order_id, amount, orig_order_id, txn_number, and crypt). There are also optional fields such as cust_id and dynamic_descriptor available. Please refer to Appendix A. Definition of Request Fields for variable definitions.

Please note, a PreAuth may only be Captured once for less than, equal to, or greater than the original PreAuth amount. If the PreAuth is captured for less than its total amount, then a ReAuth is first required to be able to capture the remainder. The ReAuth references the original transaction by the orig_order_id and will only allow the merchant to re-authorize funds on the credit card used in the original transaction for no more than the uncaptured amount. For a process flow, please refer to Process Flow for PreAuth / ReAuth / Capture Transactions.

<cftry>

```

<cfinclude template="mpgAPIFunctions.cfm">

<cfset mytime = TimeFormat(Now(), 'hhmmss')>
<cfset myday = DateFormat(Now(), 'mmddyyyy')>
<cfset OrderID = '#myday##mytime#>

<cfscript>
order_id = "cfm5-401" & OrderID;
myTxn = formReauthArray( order_id, "original_order_id", "123_45-6", "1.00", "7" );
</cfscript>

<CF_mpgAPI_CF5 host="https://esqa.moneris.com/gateway2/servlet/MpgRequest" store_id="store5"
api_token="yesguy" txn_array="#myTxn#">

<cfscript>
keyArray = arrayNew(1);
keyArray = structKeyArray(response_struct);
for( i=1; i LTE arrayLen(keyArray); i=i+1 ) {
    writeoutput( "<br>" & keyArray[i] & " is:_____ " & structFind(response_struct,
    keyArray[i]) );
}
</cfscript>

<cfcatch type="Custom.Tag.mpgAPI_CF5">
    <cfoutput>#cfcatch.message#</cfoutput>
</cfcatch>
<cfcatch type="Any">
    <cfoutput>#cfcatch.message#</cfoutput>
</cfcatch>

</cftry>

```

Capture

The Capture (Completion) transaction is used to secure the funds locked by a PreAuth transaction. When sending a 'completion' request you will need two pieces of information from the original PreAuth – the order_id and the txn_number from the returned response.

A PreAuth or ReAuth transaction can only be captured ones. Please refer to the ReAuth transaction for more information on how to perform multiple Captures.

To reverse the full amount of the PreAuth, please use the Capture transaction with a dollar amount of "0.00". For a process flow, please refer to the Process Flow for PreAuth / ReAuth / Capture Transactions.

```
<cftry>

    <cfinclude template="mpgAPIFunctions.cfm">

    <cfscript>
myTxn = formCompletionArray( "cfm5-001", "43.02", "816030-8-0", "7" );
    </cfscript>

    <CF_mpgAPI_CF5 host="https://esqa.moneris.com:43924/gateway2/servlet/MpgRequest" store_id="store5"
        api_token="yesguy" txn_array="#myTxn#">

    <cfscript>
keyArray = arrayNew(1);
keyArray = structKeyArray(response_struct);
for( i=1; i LTE arrayLen(keyArray); i=i+1 ) {
        writeoutput( "<br>" & keyArray[i] & " is:_____ " & structFind(response_struct,
            keyArray[i]) );
    }
    </cfscript>

<cfcatch type="Custom.Tag.mpgAPI_CF5">
    <cfoutput>#cfcatch.message#</cfoutput>
</cfcatch>
<cfcatch type="Any">
    <cfoutput>#cfcatch.message#</cfoutput>
</cfcatch>

</cftry>
```

Void

The 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 transactions that can be Voided are Captures and Purchases. To send a Void the order_id and txn_number from the Capture or Purchase are required.

```
<cftry>

    <cfinclude template="mpgAPIFunctions.cfm">

    <cfscript>
myTxn = formPurchaseCorrectionArray( "cfm5-002", "816031-9-1", "7" );
    </cfscript>

    <CF_mpgAPI_CF5 host="https://esqa.moneris.com:43924/gateway2/servlet/MpgRequest" store_id="store5"
        api_token="yesguy" txn_array="#myTxn#">

    <cfscript>
keyArray = arrayNew(1);
keyArray = structKeyArray(response_struct);
for( i=1; i LTE arrayLen(keyArray); i=i+1 ) {
        writeoutput( "<br>" & keyArray[i] & " is:_____" & structFind(response_struct,
            keyArray[i]) );
    }
    </cfscript>

    <cfcatch type="Custom.Tag.mpgAPI_CF5">
        <cfoutput>#cfcatch.message#</cfoutput>
    </cfcatch>
    <cfcatch type="Any">
        <cfoutput>#cfcatch.message#</cfoutput>
    </cfcatch>

</cftry>
```

Refund

The 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 or Purchase. To send a Refund you will require the order_id and txn_number from the original Capture or Purchase.

```
<cftry>

    <cfinclude template="mpgAPIFunctions.cfm">

    <cfscript>
myTxn = formRefundArray( "cfm5-002", "43.02", "816031-9-1", "7" );
    </cfscript>

    <CF_mpgAPI_CF5 host="https://esqa.moneris.com:43924/gateway2/servlet/MpgRequest" store_id="store5"
        api_token="yesguy" txn_array="#myTxn#">

    <cfscript>
keyArray = arrayNew(1);
keyArray = structKeyArray(response_struct);
for( i=1; i LTE arrayLen(keyArray); i=i+1 ) {
        writeoutput( "<br>" & keyArray[i] & " is:_____ " & structFind(response_struct,
            keyArray[i]) );
    }
    </cfscript>

    <cfcatch type="Custom.Tag.mpgAPI_CF5">
        <cfoutput>#cfcatch.message#</cfoutput>
    </cfcatch>
    <cfcatch type="Any">
        <cfoutput>#cfcatch.message#</cfoutput>
    </cfcatch>

</cftry>
```

Independent Refund

The 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 eSELECTplus gateway; however, the credit card number and expiry date will need to be passed. The Independent Refund transaction requires several variables (store_id, api_token, order_id, amount, pan, expiry_date and crypt). There are also a number of optional fields such as cust_id and dynamic_descriptor available. The transaction format is almost identical to a Purchase or a PreAuth.

```
<cftry>

    <cfinclude template="mpgAPIFunctions.cfm">

    <cfset mytime = TimeFormat(Now(), 'hhmmss')>
    <cfset myday = DateFormat(Now(), 'mmdyyy')>
    <cfset OrderID = '#myday##mytime#>

    <cfscript>
    order_id = "cfm5-301" & OrderID;
    myTxn = formIndRefundArray( order_id, "43.02", "5454545454545454", "0405", "7" );
    </cfscript>

    <CF_mpgAPI_CF5 host="https://esqa.moneris.com/gateway2/servlet/MpgRequest" store_id="store5"
        api_token="yesguy" txn_array="#myTxn#" dynamic_descriptor = "descriptor1">

    <cfscript>
    keyArray = arrayNew(1);
    keyArray = structKeyArray(response_struct);
    for( i=1; i LTE arrayLen(keyArray); i=i+1 ) {
        writeoutput( "<br>" & keyArray[i] & " is:_____ " & structFind(response_struct,
            keyArray[i]) );
    }
    </cfscript>

    <cfcatch type="Custom.Tag.mpgAPI_CF5">
        <cfoutput>#cfcatch.message#</cfoutput>
    </cfcatch>
    <cfcatch type="Any">
        <cfoutput>#cfcatch.message#</cfoutput>
    </cfcatch>

</cftry>
```

Batch Close

At the end of every day (11pm EST) the Batch needs to be closed in order to have the funds settled the next business day. *By default eSELECTplus will close your Batch automatically for you daily whenever there are funds in the open Batch.* Some merchants prefer to control Batch Close, and disable the automatic functionality. For these merchants we have provided the ability to close your Batch through the API. When a Batch is closed the response will include the transaction count and amount for each type of transaction for each type of card. To disable automatic close you will need to call the technical support line.

```
<cftry>

    <cfinclude template="mpgAPIFunctions.cfm">

    <CF_mpgAPI_CF5 host="https://esqa.moneris.com:43924/gateway2/servlet/MpgRequest" store_id="store5"
        api_token="yesguy" txn_array="#formBatchCloseArray( "66002163" )#">

    <cfscript>
        keyArray = arrayNew(1);
        keyArray = structKeyArray(response_struct);
        for( i=1; i LTE arrayLen(keyArray); i=i+1 ) {
            writeoutput( "<br>" & keyArray[i] & " is:_____ " & structFind(response_struct,
keyArray[i]) );
        }
    </cfscript>

    <cfcatch type="Custom.Tag.mpgAPI_CF5">
        <cfoutput>#cfcatch.message#</cfoutput>
    </cfcatch>
    <cfcatch type="Any">
        <cfoutput>#cfcatch.message#</cfoutput>
    </cfcatch>

</cftry>
```

Open Totals

Open Totals allows the merchant to retrieve details about all Credit Card transactions within the currently open Batch. The response will include the transaction count and amount for each type of transaction. Open Totals returns a similar response to the Batch Close without closing the current Batch.

```
<cftry>

    <cfinclude template="mpgAPIFunctions.cfm">

    <CF_mpgAPI_CF5 host="https://esqa.moneris.com:43924/gateway2/servlet/MpgRequest" store_id="store5"
api_token="yesguy" txn_array="#formOpenTotalsArray( "66002173" )#">

    <cfscript>
    keyArray = structKeyArray(response_struct);
    for( i=1; i LTE arrayLen(keyArray); i=i+1 ) {
        writeoutput( "<br>" & keyArray[i] & " is:_____" & structFind(response_struct,
keyArray[i]) );
    }
    </cfscript>

<cfcatch type="Custom.Tag.mpgAPI_CF5">
    <cfoutput>#cfcatch.message#</cfoutput>
</cfcatch>
<cfcatch type="Any">
    <cfoutput>#cfcatch.message#</cfoutput>
</cfcatch>
</cftry>
```


Card Verification

The Card Verification (CardVerification) transaction is available to check the validity of a 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. The CardVerification transaction requires several variables (store_id, api_token, order_id, pan, expiry_date). Also, Address Verification (AVS) and Card Verification Digits (CVD) are optional. This transaction type will not place a charge on the credit card. Please refer to Appendix A. Definition of Request Fields for variable definitions.

```
<cftry>

    <cfinclude template="mpgAPIFunctions.cfm">

    <cfset mytime = TimeFormat(Now(), 'hhmmss')>
    <cfset myday = DateFormat(Now(), 'mmddyyyy')>
    <cfset OrderID = '#myday##mytime#>

    <cfscript>
    order_id = "cfm5-401" & OrderID;

    // Declaring AVS values
    avs_street_number = "2345";
    avs_street_name = "Dundas Street West";
    avs_zipcode = "M1M2E2";
    avs_email = "test@host.com";
    avs_hostname = "hostname";
    avs_browser = "Mozilla";
    avs_shiptocountry = "Canada";
    avs_shipmethod = "shipping";
    avs_merchprodsku = "123456";
    avs_custip = "192.168.0.1";
    avs_custphone = "5556667777";

    // Declaring CVD values

    cvd_indicator = "0";
    cvd_value = "333";

    avsInfo = setAvsInfo(avs_street_number, avs_street_name, avs_zipcode, avs_email, avs_hostname,
    avs_browser, avs_shiptocountry, avs_shipmethod, avs_merchprodsku, avs_custip, avs_custphone);
    cvdInfo = setCvdInfo(cvd_indicator, cvd_value);

    myTxn = formCardVerificationArray( order_id, "4716019111111115", "0605");

    </cfscript>

    <CF_mpgAPI_CF5 host="https://esqa.moneris.com/gateway2/servlet/MpgRequest" store_id="store5"
    api_token="yesguy" txn_array="#myTxn#" avs_info_array="#avsInfo#" cvd_info_array="#cvdInfo#">

    <cfscript>
    keyArray = arrayNew(1);
    keyArray = structKeyArray(response_struct);
    for( i=1; i LTE arrayLen(keyArray); i=i+1 ) {
    writeoutput( "<br>" & keyArray[i] & " is:_____ " & structFind(response_struct, keyArray[i]) );
    }
    </cfscript>

    <cfcatch type="Custom.Tag.mpgAPI_CF5">
        <cfoutput>#cfcatch.message#</cfoutput>
    </cfcatch>
    <cfcatch type="Any">
        <cfoutput>#cfcatch.message#</cfoutput>
    </cfcatch>

</cftry>
```

6. Transaction with Extra features - Examples

In the previous section the instructions were provided for the basic transaction set. eSELECTplus also provides several extra features/functionalities. These features include storing customer and order details, Verified by Visa, sending transactions to the recurring billing feature, and purchases with CVD and AVS information. Verified by Visa, Recurring Billing, and CVD/AVS must be added to your account, please call the Service Centre at 1 866 319 7450 to have your profile updated.

Purchase (with Customer and Order details)

Below is an example of sending a Purchase with the customer and order details. If one piece of information is sent then all fields must be included in the request. Unwanted fields need to be blank. The identical format is used for PreAuth with the exception of transaction type which changes from 'Purchase' to 'PreAuth'. Customer details can only be sent with Purchase and PreAuth. It can be used in conjunction with other extra features such as VBV and Recurring Billing. ***Please note that the custInfo fields are not used for any type of address verification or fraud check.***

```
<cftry>

    <cfinclude template="mpgAPIFunctions.cfm">

    <cfset mytime = TimeFormat(Now(), 'hhmmss')>
    <cfset myday = DateFormat(Now(), 'mmdyyyy')>
    <cfset OrderID = '#myday##mytime#>

    <cfscript>
        order_id = "cfm5-101" & OrderID;

        bill = arrayNew(1);
        bill = setBilling( "bfname", "blname", "bCompany Name", "baddress", "bcity", "bprovince",
            "bpostal", "bcountry", "bphone1", "bfax" , "btax1", "btax2", "btax3", "bshipping_cost" );

        ship = arrayNew(1);
        ship = setShipping( "sfname", "slname", "sCompany Name", "saddress", "scity", "sprovince",
            "spostal", "scountry", "sphone1", "sfax" , "stax1", "stax2", "stax3", "sshipping_cost" );

        email = arrayNew(1);
        email = setEmail( "myemail@email.com" );

        instructions = arrayNew(1);
        instructions = setInstructions( "Make it so!" );

        item1 = arrayNew(1);
        item1 = setItem( "prodname1", "qty1", "prodcode1", "extamount1" );
        item2 = arrayNew(1);
        item2 = setItem( "prodname2", "qty2", "prodcode2", "extamount2" );

        custInfo = arrayNew(1);
        custInfo[1] = bill;
        custInfo[2] = ship;
        custInfo[3] = email;
        custInfo[4] = instructions;
        custInfo[5] = item1;
        custInfo[6] = item2;

        myTxn = formPurchaseArray( order_id, "43.02", "5454545454545454", "0405", "7" );
    </cfscript>

    <CF_mpgAPI_CF5 host="https://esqa.moneris.com:43924/gateway2/servlet/MpgRequest" store_id="store5"
        api_token="yesguy" txn_array="#myTxn#" cust_info_array="#custInfo#">

    <cfscript>
        keyArray = arrayNew(1);
        keyArray = structKeyArray(response_struct);
        for( i=1; i LTE arrayLen(keyArray); i=i+1 ) {
```

```
        writeoutput( "<br>" & keyArray[i] & " is:_____" & structFind(response_struct,  
keyArray[i]) );  
    }  
</cfscript>  
  
<cfcatch type="Custom.Tag.mpgAPI_CF5">  
    <cfoutput>#cfcatch.message#</cfoutput>  
</cfcatch>  
<cfcatch type="Any">  
    <cfoutput>#cfcatch.message#</cfoutput>  
</cfcatch>  
  
</cftry>
```

Purchase (with Verified by Visa – VBV)

Below is an example of sending a Purchase with the Verified by Visa extra fields. The 'cavv' is obtained by using either the Moneris MPI or a third party MPI (in the example we use the method to get the CAVV from the Moneris MPI). The format outlined below is identical for a PreAuth with the exception of the transaction array type which changes from 'formCavvPurchaseArray' to 'formCavvPreauthArray'. VBV must be added to your account, please call the Service Centre at 1 866 319 7450 to have your profile updated. The optional customer and order details can be included in the transaction using steps 1, 2 and 5 from the method above - *Purchase (with Customer and Order Details)*. For more information on sending VBV transactions, please refer to our "Moneris MPI – Verified By Visa ColdFusion API" document.

```
<cftry>

<cfinclude template="mpgAPIFunctions.cfm">
<cfset mytime = TimeFormat(Now(), 'hhmmss')>
<cfset myday = DateFormat(Now(), 'mmdyyy')>
<cfset OrderID = '#myday##mytime#>

<cfscript>
order_id = "cfm5-201" & OrderID;

// Declaring AVS values

avs_street_number = "2345";
avs_street_name = "Dundas Street West";
avs_zipcode = "M1M2E2";
avs_email = "test@host.com";
avs_hostname = "hostname";
avs_browser = "Mozilla";
avs_shiptocountry = "Canada";
avs_shipmethod = "shipping";
avs_merchprodsku = "123456";
avs_custip = "192.168.0.1";
avs_custphone = "5556667777";

// Declaring CVD values

cvd_indicator = "0";
cvd_value = "333";

avsInfo = setAvsInfo(avs_street_number, avs_street_name, avs_zipcode, avs_email, avs_hostname,
    avs_browser, avs_shiptocountry, avs_shipmethod, avs_merchprodsku, avs_custip,
    avs_custphone);
cvdInfo = setCvdInfo(cvd_indicator, cvd_value);

myTxn = formCavvPurchaseArray( order_id, "1.00", "5454545454545454", "1212",
    "AAABBJg0VhI0VniQEjRWAAAAA" );

</cfscript>

<CF_mpgAPI_CF5 host="https://esqa.moneris.com:43924/gateway2/servlet/MpgRequest" store_id="store5"
    api_token="yesguy" txn_array="#myTxn#" avs_info_array="#avsInfo#"
    cvd_info_array="#cvdInfo#" dynamic_descriptor = "descriptor1">

<cfscript>
keyArray = arrayNew(1);
keyArray = structKeyArray(response_struct);
for( i=1; i LTE arrayLen(keyArray); i=i+1 ) {
    writeoutput( "<br>" & keyArray[i] & " is:_____ " & structFind(response_struct,
        keyArray[i]) );
}
</cfscript>
<cfcatch type="Custom.Tag.mpgAPI_CF5">
    <cfoutput>#cfcatch.message#</cfoutput>
</cfcatch>
<cfcatch type="Any">
    <cfoutput>#cfcatch.message#</cfoutput>
</cfcatch>
</cftry>
```

Purchase (with Recurring Billing)

Recurring Billing is a feature that allows the transaction information to be sent once and then be billed on a specified interval for a certain number of times. This is a feature commonly used for memberships, subscriptions, or any other charge that is billed on a regular basis. The transaction is split into two parts; the recur information and the transaction information. Please see Appendix D. Recur Fields for description of each of the fields. The optional customer and order details can be included in the transaction using steps 1, 2 and 5 from the method above -*Purchase (with Customer and Order Details)*. Recurring Billing must be added to your account, please call the Service Centre at 1 866 319 7450 to have your profile updated.

```
import java.io.*;

<cftry>

    <cfinclude template="mpgAPIFunctions.cfm">

    <cfset mytime = TimeFormat(Now(), 'hhmmss')>
    <cfset myday = DateFormat(Now(), 'mmddyyyy')>
    <cfset OrderID = '#myday##mytime#>

    <cfscript>
        order_id = "cfm5-101" & OrderID;

        myTxn = formPurchaseArray( order_id, "25.00", "4242424242424242", "0808", "7" );

        recur_unit = "month";
        start_now = "true";
        start_date = "2006/07/01";
        num_recur = "4";
        period = "1";
        recur_amount = "1.00";

        myRecur = formRecurArray( recur_unit, start_now, start_date, num_recur, period, recur_amount );
    </cfscript>

    <CF_mpgAPI_CF5 host="https://esqa.moneris.com/gateway2/servlet/MpgRequest" store_id="store5"
    api_token="yesguy" txn_array="#myTxn#" recur="#myRecur#">

    <cfscript>
        keyArray = arrayNew(1);
        keyArray = structKeyArray(response_struct);
        for( i=1; i LTE arrayLen(keyArray); i=i+1 ) {
            writeoutput( "<br>" & keyArray[i] & " is:_____ " & structFind(response_struct,
keyArray[i]) );
        }
    </cfscript>

    <cfcatch type="Custom.Tag.mpgAPI_CF5">
        <cfoutput>#cfcatch.message#</cfoutput>
    </cfcatch>
    <cfcatch type="Any">
        <cfoutput>#cfcatch.message#</cfoutput>
    </cfcatch>

</cftry>
```

Recur Update

Recur Update allows a user to alter characteristics of a previously registered Recurring Billing transaction. This feature is commonly used to update customer's credit card information and the number of recurs to the account. Please see Appendix A. Definition of Request Fields and Appendix D. Recur Fields for description of each of the fields.

```
<cftry>

    <cfinclude template="mpgAPIFunctions.cfm">

    <cfscript>
        order_id = "mjr150208";
        myTxn = formRecurUpdateArray( order_id );

        cust_id = "my cust id";
        recur_amount = "1.00";
        pan = "4242424242424242";
        expdate = "1111";
        add_num = "20";
        total_num = "999";
        hold = "false";
        terminate = "false";

    </cfscript>

    <CF_mpgAPI_CF5 host="https://esqa.moneris.com:443/gateway2/servlet/MpgRequest" store_id="store5"
        api_token="yesguy" txn_array="#myTxn#" cust_id="#cust_id#" recur_amount="#recur_amount#" pan="#pan#"
        expdate="#expdate#" add_num_recur="#add_num#" total_num_recur="#total_num#" hold="#hold#"
        terminate="#terminate#">

    <cfscript>
        keyArray = arrayNew(1);
        keyArray = structKeyArray(response_struct);
        for( i=1; i LTE arrayLen(keyArray); i=i+1 ) {
            if (structFind(response_struct, keyArray[i]) IS NOT "")
            {
                writeoutput( "<br>" & keyArray[i] & " is:_____ " & structFind(response_struct,
keyArray[i]) );
            }
        }
    </cfscript>

    <cfcatch type="Custom.Tag.mpgAPI_CF5">
        <cfoutput>#cfcatch.message#</cfoutput>
    </cfcatch>
    <cfcatch type="Any">
        <cfoutput>#cfcatch.message#</cfoutput>
    </cfcatch>

</cftry>
```

Purchase with CVD and AVS (eFraud)

Below is an example of a Purchase transaction with CVD and AVS information. These values can be sent in conjunction with other additional variables such as Recurring Billing or customer information. With this feature enabled in your merchant profile, you will be able to pass in these fields for the following transactions Purchase, PreAuth, CavvPurchase, and CavvPreAuth. To form CvdInfo please refer to Appendix F. Card Validation Digits (CVD), to form AvsInfo please refer to Appendix G. Address Verification Service (AVS). To have the eFraud feature added to your profile, please call the Service Centre at 1-866-319-7450 to have your profile updated.

When testing eFraud (AVS and 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 <http://www.eselectplus.ca/en/downloadable-content>. These tests will only work with "store5" as the store_id.



NOTE

The CVD Value supplied by the cardholder should simply be passed to the eSelectPlus payment gateway. Under no circumstances should it be stored for subsequent uses or displayed as part of the receipt information.

```
<cftry>
<cfinclude template="mpgAPIFunctions.cfm">
<cfset mytime = TimeFormat(Now(), 'hhmmss')>
<cfset myday = DateFormat(Now(), 'mmdyyy')>
<cfset OrderID = '#myday##mytime#>

<cfscript>
order_id = "MARTINEZeSelect" & OrderID;

// Declaring AVS values
avs_street_number = "2345";
avs_street_name = "Dundas Street West";
avs_zipcode = "M1M2E2";
avs_email = "test@host.com";
avs_hostname = "hostname";
avs_browser = "Mozilla";
avs_shiptocountry = "Canada";
avs_shipmethod = "shipping";
avs_merchprodsku = "123456";
avs_custip = "192.168.0.1";
avs_custphone = "5556667777";

// Declaring CVD values
cvd_indicator = "0";
cvd_value = "333";

avsInfo = setAvsInfo(avs_street_number, avs_street_name, avs_zipcode, avs_email,
    avs_hostname, avs_browser, avs_shiptocountry, avs_shipmethod, avs_merchprodsku, avs_custip,
    avs_custphone);
cvdInfo = setCvdInfo(cvd_indicator, cvd_value);


myTxn = formPurchaseArray( order_id, "1.00", "4242424242424242", "0909", "7" );
</cfscript>
<CF_mpgAPI_CF5 host="https://esqa.moneris.com:43924/gateway2/servlet/MpgRequest" store_id="store5"
api_token="yesguy" txn_array="#myTxn#" avs_info_array="#avsInfo#" cvd_info_array="#cvdInfo#">
<cfscript>
keyArray = arrayNew(1);
keyArray = structKeyArray(response_struct);
for( i=1; i LTE arrayLen(keyArray); i=i+1 ) {
    writeoutput( "<br>" & keyArray[i] & " is:_____ " & structFind(response_struct,
        keyArray[i]) );
}
</cfscript>
<cfcatch type="Custom.Tag.mpgAPI_CF5">
<cfoutput>#cfcatch.message#</cfoutput>
</cfcatch>
<cfcatch type="Any">
<cfoutput>#cfcatch.message#</cfoutput>
</cfcatch>
</cftry>
```

Purchase with Status Check

The Status Check (SC) flag is set to true or false at the request level as opposed to being at the transaction level. You should send the same parameter values for the transaction level fields in the SC request, i.e. if you send a Completion with SC, include the same values as the original Completion such as the Order ID, amount, Txn number, etc. What you will get back is a SC and Status Message in the Receipt as shown in the sample. A Status Code (SC) of 0-49 indicates successful and 50-999 is not successful. The Status Message will be Found (SC of 0-49) or Not Found or null (SC of 50-999). When it is found, the other Response parameter in the Receipt values will be those of the original transaction. When it is not found, they will be null

Below is an example of a Purchase transaction with Status Check. The same parameter values for the original transaction should be sent in the Status Check request, i.e. if you send a purchase with Status Check, include the same values as the original Purchase such as the store_id, api_token, order_id, amount, pan, expdate, crypt_type and status. Please refer to Appendix A. Definition of Request Fields for variable definitions.

With this feature enabled in your merchant profile, you will be able to pass in the Status Check flag for the following transactions: 'Purchase', 'Refund', 'IndependentRefund', 'PreAuth', 'Completion', 'PurchaseCorrection'. To have the Status Check feature added to your profile, please call the Service Centre at 1-866-319-7450 to have your profile updated.

 The Status Check request should only be used once and immediately (within 2 minutes) after the last transaction that had failed.

note 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 as additional investigation is required.

```
<cftry>
<cfinclude template="mpgAPIFunctions.cfm">

<cfset mytime = TimeFormat(Now(), 'hhmmss')>
<cfset myday = DateFormat(Now(), 'mmdyyy')>
<cfset OrderID = '#myday##mytime#>'

<cfscript>
order_id = "cfm5-001" & OrderID;
myTxn = formPurchaseArray( order_id, "1.00", "5454545454545454", "1212", "7" );
</cfscript>

<!--Status Check Example -->
<CF_mpgAPI_CF5 host="https://esqa.moneris.com/gateway2/servlet/MpgRequest" store_id="store5"
api_token="yesguy" status_check = "false" txn_array="#myTxn#" cust_id="custiddata">

<cfscript>
keyArray = arrayNew(1);
keyArray = structKeyArray(response_struct);
for( i=1; i LTE arrayLen(keyArray); i=i+1 ) {
    writeoutput( "<br>" & keyArray[i] & " is:_____ " & structFind(response_struct,
keyArray[i]) );
}
</cfscript>
<cfcatch type="Custom.Tag.mpgAPI_CF5">
<cfoutput>#cfcatch.message#</cfoutput>
</cfcatch>
<cfcatch type="Any">
<cfoutput>#cfcatch.message#</cfoutput>
</cfcatch>
</cftry>
```

As part of the Status Check response there will be two additional methods called status_code() and status_message(). Please refer to Appendix B. Definitions of Response Fields for a full description of each field.

7. What Information will I get as a Response to My Transaction Request?

For each transaction you will receive a response message. For a full description of each field please refer to Appendix B. Definitions of Response Fields.

To determine whether a transaction is successful or not the field that must be checked is ResponseCode. See the table below to determine the transaction result.

Response Code	Result
0 – 49 (inclusive)	Approved
50 – 999 (inclusive)	Declined
Null	Incomplete

For a full list of response codes and the associated message please refer to the Response Code document available for download at <http://www.eselectplus.ca/en/downloadable-content>.

8. How Do I Test My Solution?

A testing environment is available for you to connect to while you are integrating your site to our payment gateway. The test environment is generally available 7x24, however since it is a test environment we cannot guarantee 100% availability. Also, please be aware that other merchants are using the test environment so you may see transactions and user IDs that you did not create. As a courtesy to others that are testing we ask that when you are processing Refunds, changing passwords and/or trying other functions that you use only the transactions/users that you created.

When using the APIs in the test environment you will need to use test store_id and api_token. These are different than your production IDs. The IDs that you can use in the test environment are in the table below.

Test IDs			
store_id	api_token	Username	Password
store1	yesguy	DemoUser	password
store2	yesguy	DemoUser	password
store3	yesguy	DemoUser	password
store5 *	yesguy	DemoUser	password
moneris **	hurgle	DemoUser	password

* test store "store5" is intended for testing the eFraud (AVS & CVD) transactions.

** test store "moneris" is intended for testing the VbV transactions.

When testing you may use the following test card numbers with any future expiry date.

Test Card Numbers	
Card Plan	Card Number
MasterCard	5454545454545454
Visa	4242424242424242
Amex	373599005095005
JCB	3566007770015365
Diners	36462462742008

Test Card Numbers for Card Verification	
Card Plan	Card Number
Visa	4761739012345678
	4761739012345686
	4761739012345694
	4761739012345603
	4761739012345611
	4761739012345629
	4761739012345637
	4761739012345645

To access the Merchant Resource Centre in the test environment go to <https://esqa.moneris.com/mpg>. And use the logins provided in the previous table.

The test environment has been designed to replicate our production environment as closely as possible. One major difference is that we are unable to send test transactions onto the production authorization network and thus Issuer responses are simulated. Additionally, the requirement to emulate approval, decline and error situations dictates that we use certain transaction variables to initiate various response and error situations.

The test environment will approve and decline transactions based on the penny value of the amount field.

For example, a transaction made for the amount of \$399.00 or \$1.00 will approve since the .00 penny value is set to approve in the test environment. Transactions in the test environment should not exceed \$1000.00. This limit does not exist in the production environment. For a list of all current test environment responses for various penny values, please see the Test Environment Penny Response table as well as the Test Environment eFraud Response table, available at <http://www.eselectplus.ca/en/downloadable-content>.


NOTE

These responses may change without notice. Moneris Solutions recommends you regularly refer to our website to check for possible changes.

9. What Do I Need to Include in the Receipt?

Visa and MasterCard expect certain variables be returned to the cardholder and presented as a receipt when a transaction is approved. These 12 fields are listed below. A sample receipt is provided in Appendix I. Sample Receipt .

1. Amount
2. Transaction Type
3. Date and Time
4. Auth Code
5. Response Code
6. ISO Code
7. Response Message
8. Reference Number
9. Goods and Services Order
10. Merchant Name
11. Merchant URL
12. Cardholder Name
13. Return Policy (only a requirement for e-commerce transactions)

10. How Do I Activate My Store?

Once you have received your activation letter/fax go to <https://www3.moneris.com/connect/en/activate/index.php> as instructed in the letter/fax. You will need to input your store ID and merchant ID then click on 'Activate'. In this process you will need to create an administrator account that you will use to log into the Merchant Resource Centre to access and administer your eSELECTplus store. You will need to use the Store ID and API Token to send transactions through the API.

Once you have created your first Merchant Resource Centre user, please log on to the Interface by clicking the "eSELECTplus" button. Once you have logged in please proceed to ADMIN and then STORE SETTINGS. At the bottom please place a check beside the APIs that you are using. This will allow us to keep you up to date regarding any changes to the APIs that may affect your store. Also, this is where you may locate your production API Token.

11. How Do I Configure My Store For Production?

Once you have completed your testing you are ready to point your store to the production host. You will need to change the "host" to be www3.moneris.com. You will also need to change the store_id to reflect your production store ID and well the api_token must be changed to your production token to reflect the token that you received during activation.

Once you are in production you will access the Merchant Resource Centre at <https://www3.moneris.com/mpg>. You can use the store administrator ID you created during the activation process and then create additional users as needed.

For further information on how to use the Merchant Resource Centre please see the eSELECTplus Merchant Resource Centre User's Guide which is available at <http://www.eselectplus.ca/en/downloadable-content>

12. How Do I Get Help?

If you require technical assistance while integrating your store, please contact the eSELECTplus Support Team:

For technical support:

Phone: 1-866-319-7450 (Technical Difficulties)

For integration support:

Phone: 1-866-562-4354

Email: eselectplus@moneris.com

When sending an email support request please be sure to include your name and phone number, a clear description of the problem as well as the type of API that you are using. **For security reasons, please do not send us your API Token combined with your store ID, or your merchant number and device number in the same email.**

13. Appendix A. Definition of Request Fields

Request Fields		
Variable Name	Size/Type	Description
order_id	50 / an	<p>Merchant defined unique transaction identifier - must be unique for every Purchase, PreAuth and Independent Refund attempt. For Refunds, Completions and Voids the order_id must reference the original transaction.</p> <p>The last 10 characters of the order_id will be displayed in the "Invoice Number" field on the Merchant Direct Reports. Only the following character sets will be sent to Merchant Direct (A_Z, a-z, space, 0-9). A minimum of 3 and a maximum of 10 characters will be sent to Merchant Direct. If the order_id has less than 3 characters, it may display a blank or 0000000000 in the Invoice Number field. Only the last characters up to the invalid character will be sent. E.G. 1234-567890, 567890 will be sent to Merchant Direct.</p>
orig_order_id	50 / an	Merchant defined transaction identifier – used in the ReAuth transaction to refer to the original PreAuth that has been partially captured.
pan	20 / num	Credit Card Number - no spaces or dashes. Most credit card numbers today are 16 digits in length but some 13 digits are still accepted by some issuers. This field has been intentionally expanded to 20 digits in consideration for future expansion and/or potential support of private label card ranges.
expiry_date	4 / num	<p>Expiry Date - format YYMM no spaces or slashes.</p> <p>PLEASE NOTE THAT THIS IS REVERSED FROM THE DATE DISPLAYED ON THE PHYSICAL CARD WHICH IS MMY</p>
amount	9 / decimal	Amount of the transaction. This must contain 3 digits with two penny values. The minimum value passed can be 0.01 and the maximum 9999999.99
crypt	1 / an	<p>E-Commerce Indicator:</p> <ul style="list-style-type: none"> 1 - Mail Order/Telephone Order - Single 2 - Mail Order/Telephone Order - Recurring 3 - Mail Order Telephone Order - Instalment 4 - Mail Order Telephone Order - Unknown Classification 5 - Authenticated E-commerce Transaction (VBV) 6 - Non Authenticated Ecommerce Transaction (VBV) 7 - SSL enabled merchant 8 - Non Secure Transaction (Web or Email Based) 9 - SET Non Authenticated transaction
txn_number	255 / varchar	Used when performing follow on transactions - this must be filled with the value that was returned as the Txn_number in the response of the original transaction. When performing a Capture this must reference the PreAuth. When performing a Refund or a Void this must reference the Capture or the Purchase.
cust_id	50/an	This is an optional field that can be sent as part of a Purchase or PreAuth request. It is searchable in the Moneris Merchant Resource Centre. It is commonly used for policy number, membership number, student ID or invoice number.
dynamic_descriptor	20/an	Merchant defined description sent on a per-transaction basis that will appear on the credit card statement appended to the merchant's business name. The Dynamic Descriptor can be passed with the following transactions: 'Purchase', 'PreAuth', 'IndependentRefund', 'CavvPurchase' and 'CavvPreAuth'. Please note, the combined length of the merchant's business name and dynamic_descriptor may not exceed 25 characters.
cavv		This is a value that is provided by the Moneris MPI or by a third party MPI. It is part of a VBV / SecureCode transaction.
avs_street_number	19 / an	Street Number & Street Name (max – 19 digit limit for street number and street name)

avs_street_name		combined). This must match the address that the issuing bank has on file.
avs_zipcode	10 / an	Zip or Postal Code – This must match what the issuing banks has on file.
avs_email	60 / an	The e-mail address provided by the customer at the point of sale, with the card member's e-mail address on file with the issuer. Applicable for AmEx and JCB only.
avs_hostname	60 / an	The customer's hostname is used to help mitigate fraud before a transaction is authorized. Applicable for AmEx and JCB only.
avs_browser	60 / alpha	The customer's HTTP browser type is used to help mitigate fraud before a transaction is authorized. Applicable for AmEx and JCB only.
avs_shiptocountry	3 / alpha	The Ship To Country code used to help mitigate fraud before a transaction is authorized. Applicable for AmEx and JCB only.
avs_method	2 / an	Shipping method indicator: 01 = Same Day 02 = overnight or next day 04 = ground; (4 or more days) 05 = electronic delivery Applicable for AmEx and JCB only.
avs_merchprodsku	15 / an	The Merchant's product SKU is used to help mitigate fraud before a transaction is authorized. For multiple items, the SKU of the most expensive item should be entered. Applicable for AmEx and JCB only.
avs_custip	15 / an	The customer's IP address, in the format of: nnn.nnn.nnn.nnn, is used to help mitigate fraud before a transaction is authorized. Applicable for AmEx and JCB only.
avs_custphone	10 / num	The telephone number provided by the customer at the point of sale is verified with the card member's telephone number on file with the issuer. Applicable for AmEx and JCB only.
cvd_value	4 / num	Credit Card CVD value – this number accommodates either 3 or 4 digit CVD values. Note: The CVD value supplied by the cardholder should simply be passed to the eSELECTplus payment gateway. Under no circumstances should it be stored for subsequent uses or displayed as part of the receipt information
cvd_indicator	1 / num	CVD presence indicator (1 digit – refer to Appendix F. Card Validation Digits (CVD) for values)
status_check	true/false	Once set to "true", the gateway will check the status of a transaction that has an order_id that matches the one passed. <ul style="list-style-type: none"> • 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. The Status Check flag can be passed with the following transactions: 'Purchase', 'Refund', 'IndependentRefund', 'PreAuth', 'Completion', 'PurchaseCorrection'.



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

14. Appendix B. Definitions of Response Fields

Response Fields		
Variable Name	Size/Type	Description
ReceiptId	50 / an	order_id specified in request
ReferenceNum	18 / num	The reference number is an 18 character string that references the 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. This information should be stored by the merchant. The following illustrates the breakdown of this field where "660123450010690030" is the reference number returned in the message, "66012345" is the terminal ID, "001" is the shift number, "069" is the batch number and "003" is the transaction number within the batch. Moneris Host Transaction identifier.
ReponseCode	3 / num	Transaction Response Code < 50: Transaction approved >= 50: Transaction declined NULL: Transaction was not sent for authorization * If you would like further details on the response codes that are returned please see the Response Codes document available at http://www.esselectplus.ca/en/downloadable-content
ISO	2 / num	ISO response code
AuthCode	8 / an	Authorization code returned from the issuing institution
TransTime	##:##:##	Processing host time stamp
TransDate	yyyy-mm-dd	Processing host date stamp
TransType	an	Type of transaction that was performed
Complete	True/False	Transaction was sent to authorization host and a response was received
Message	100 / an	Response description returned from issuing institution.
TransAmount		
CardType	2 / an	Credit Card Type
Txn_number	20 / an	Gateway Transaction identifier
TimedOut	True/False	Transaction failed due to a process timing out
Ticket	n/a	reserved
RecurSucess	True / false	Indicates whether the transaction successfully registered.
AvsResultCode	1 / an	Indicates the Address Verification Service (AVS) result. Refer to Appendix G. Address Verification Service (AVS).
CvdResultCode	2 / an	Indicates the Card Validation Digits (CVD) result. Refer to Appendix F. Card Validation Digits (CVD).
CavvResultCode	1 / an	The CAVV result code indicates the result of the CAVV validation. 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) 9 = CAVV failed validation; attempt (US issued cards only) A = CAVV passed validation; attempt (US issued cards only) B = CAVV passed validation; information only, no liability shift Please refer to Appendix I. CAVV Result Code for a description for each response.
ITDResponse	1/alpha	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
StatusCode	3/an	The StatusCode is populated when status_check is set to "true" in the request. <50: Transaction found >=50: Transaction not found
StatusMsg	found/ not found	The StatusMsg is populated when status_check is set to "true" in the request.

15. Appendix C. CustInfo Fields

Field Definitions		
Field Name	Size/Type	Description

Billing and Shipping Information

NOTE: The fields for billing and shipping information are identical. Please refer to section 6 - Purchase (with Customer and Order details) for an example.

first_name	30 / an
last_name	30 / an
company_name	50 / an
address	70 / an
city	30 / an
province	30 / an
postal_code	30 / an
country	30 / an
phone	30 / an
fax	30 / an
tax1	10 / an
tax2	10 / an
tax3	10 / an
shipping_cost	10 / an

Item Information

NOTE: You may send multiple items. Please refer to section 6 - Purchase (with Customer and Order details) for an example.

item_name	45 / an	
item_quantity	5 / num	You must send a quantity > 0 or the item will not be added to the item list (i.e. minimum 1, maximum 99999)
item_product_code	20 / an	
item_extended_amount	9 /decimal	This must contain 3 digits with two penny values. The minimum value passed can be 0.01 and the maximum 9999999.99

Extra Details

email	60 / an
instructions	100 / an

If you send characters that are not included in the allowed list, these extra transaction details may not be stored.



NOTE

All fields are alphanumeric and allow the following characters: **a-z A-Z 0-9 _ - . @ \$ = /**
All French accents should be encoded as HTML entities, e.g. ´

Also, the data sent in Billing and Shipping Address fields will not be used for any address verification.
Please refer to section 6 - Purchase (with Customer and Order details) for an example.

16. Appendix D. Recur Fields

Recur Request Fields		
Variable Name	Size/Type	Description
recur_unit	day, week, month, eom	The unit that you wish to use as a basis for the Interval. This can be set as day, week, month or end of month. Then using the "period" field you can configure how many days, weeks, months between billing cycles.
period	0 – 999 / num	This is the number of recur_units you wish to pass between billing cycles. Example : period = 45, recur_unit=day -> Card will be billed every 45 days. period = 4, recur_unit=weeks -> Card will be billed every 4 weeks. period = 3, recur_unit=month -> Card will be billed every 3 months. period = 3, recur_unit=eom -> Card will be billed every 3 months (on the last day of the month) Please note that the total duration of the recurring billing transaction should not exceed 5-10 years in the future.
start_date	YYYY/MM/DD	This is the date on which the first charge will be billed. The value must be in the future. It cannot be the day on which the transaction is being sent. If the transaction is to be billed immediately the start_now feature must be set to true and the start_date should be set at the desired interval after today.
start_now	true / false	When a charge is to be made against the card immediately start_now should be set to true. If the billing is to start in the future then this value is to be set to false. When start_now is set to true the amount to be billed immediately may differ from the recur_amount billed on a regular basis thereafter.
recur_amount	9 / decimal	Amount of the recurring transaction. This must contain 3 digits with two penny values. The minimum value passed can be 0.01 and the maximum 9999999.99. This is the amount that will be billed on the start_date and every interval thereafter.
num_recur	1 – 99 / num	The number of times to recur the transaction. Moneris advises not set the duration longer than 5 - 10 years in the future.
amount	9 / decimal	When start_now is set to true the amount field in the transaction array becomes the amount to be billed immediately. When start_now is set to false the amount field in the transaction array should be the same as the recur_amount field.

Recur Request Examples	
Recur Request Example	Description
<pre>recur_unit = "month"; start_now = "false"; start_date = "2007/01/02"; num_recur = "12"; period = "2"; recur_amount = "30.00"; myRecur = formRecurArray(recur_unit, start_now, start_date, num_recur, period, recur_amount);</pre>	In the example to the left the first transaction will occur in the future on July 2 nd 2006. It will bill \$30.00 every 2 months on the 2 nd of each month. The card will be billed a total of 12 times.
<pre>recur_unit = "week"; start_now = "true"; start_date = "2007/01/02"; num_recur = "26"; period = "2"; recur_amount = "15.00"; myRecur = formRecurArray(recur_unit, start_now, start_date, num_recur, period, recur_amount);</pre>	In the example on the left the first charge will be billed immediately. The initial charge will be for \$15.00. Then starting on July 2 nd 2006 the credit card will be billed \$30.00 every 2 weeks for 26 recurring charges. The card will be billed a total of 27 times. (1 x \$15.00 (immediate) and 26 x \$30.00 (recurring))

**NOTE**

When completing the recurring billing portion please keep in mind that to prevent the shifting of recur bill dates, avoid setting the start_date for anything past the 28th of any given month when using the recur_unit set to "month". For example, all billing dates set for the 31st of May will shift and bill on the 30th in June and will then bill the cardholder on the 30th for every subsequent month. To set the billing dates for the end of the month please set the recur_unit to "eom".

Recur Update Request Fields		
Variable Name	Size/Type	Description
cust_id	50 / an	This updates the current cust_id associated with the recurring transaction and will be submitted with all future recurring purchases.
pan	20 / variable	Credit Card Number - no spaces or dashes. Most credit card numbers today are 16 digits in length but some 13 digits are still accepted by some issuers. This field has been intentionally expanded to 20 digits in consideration for future expansion and/or potential support of private label card ranges. This will be the new credit card number charged with all future recurs. This field pertains only to credit card transactions.
expiry_date	YYMM / num	Expiry Date - format YYMM no spaces or slashes, replaces the current expiry date in the payment details and must be today's date or later. PLEASE NOTE THAT THIS IS REVERSED FROM THE DATE DISPLAYED ON THE PHYSICAL CARD WHICH IS MMY
avs_street_number	19 / an	Street Number & Street Name (max – 19 digit limit for street number and street name combined). This must match the address that the issuing bank has on file. The updated AVS details will be submitted for all future credit card recurs. Please note; the store must have the AVS feature enabled.
avs_street_name		
avs_zipcode	9 / an	Zip or Postal Code – This must match what the issuing banks has on file.
recur_amount	9 / decimal	Amount of all future recurring transaction. This must contain 3 digits with two penny values. The minimum value passed can be 0.01 and the maximum 9999999.99.
add_num	1-999 / num	This is the number of recurring transactions to be added to the current total number of recurs on file. Example: num_recurs* = 5, add_num = 2, New total number of recurs = 7 *the "num_recurs" initially sent in while registering the recurring transaction. Please refer to Recur Request Fields table for variable definition.
total_num	1-999 / num	This is an update to replace the current total number of recurs on file. Example: num_recurs* = 5, total_num = 2, New total number of recurs = 2 *the "num_recurs" initially sent in while registering the recurring transaction. Please refer to Recur Request Fields table for variable definition.
hold	true / false	A transaction can be put 'On Hold' at any time. While a transaction is 'On Hold' it will not be billed when the time comes for it to recur, but the number of recurs will be decremented.
terminate	true / false	A Recurring Billing transaction can be Terminated at any time. PLEASE NOTE TERMINATED RECURRING TRANSACTION CAN NO LONGER BE REACTIVATED.

Recur Update Response codes:

The Recur Update response is a 3 digit numeric value. The following is a list of all possible responses once a Recur Update transaction has been sent thru.

Recur Update RESPONSE CODES	
RESULT VALUE	DEFINITION
001	Recurring transaction successfully updated (optional: terminated)
983	Can not find the previous transaction
984	Data error: (optional: field name)
985	Invalid number of recurs
986	Incomplete: timed out
null	Error: Malformed XML

**NOTE**

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.

17. Appendix E. Error Messages

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. A 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, either because they are offline or you are unable to connect to the internet. A 'NULL' can also be returned when a transaction message is improperly formatted.

Below are error messages that are returned in the Message field of the response.

Message: XML Parse Error in Request: <System specific detail>

Cause: For some reason an improper XML document was sent from the API to the servlet

Message: XML Parse Error in Response: <System specific detail>

Cause: For some reason an improper XML document was sent back from the servlet

Message: Transaction Not Completed Timed Out

Cause: Transaction times out before the host responds to the gateway

Message: Request was not allowed at this time

Cause: The host is disconnected

Message: Could not establish connection with the gateway:

<System specific detail>

Cause: Gateway is not accepting transactions or server does not have proper access to internet

Message: Input/Output Error: <System specific detail>

Cause: Servlet is not running

Message: The transaction was not sent to the host because of a duplicate order id

Cause: Tried to use an order id which was already in use

Message: The transaction was not sent to the host because of a duplicate order id

Cause: Expiry Date was sent in the wrong format

18. Appendix F. Card Validation Digits (CVD)

The Card Validation Digits (CVD) value refers to the numbers appearing on the back of the credit card which are not imprinted on the front. The exception to this is with American Express cards where this value is indeed printed on the front. The CvdInfo parameter is broken down into two elements. The first element is the CVD Value itself.

The second element is the CVD Indicator. This value indicates the possible scenarios when collecting CVD information. This is a 1 digit value which can have any of the following values:

CVD 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 Response:

The CVD response is an alphanumeric 2 byte variable. The first byte is the numeric CVD indicator sent in the request; the second byte would be the response code. The following is a list of all possible responses once a CVD value has been passed in.

CVD Response Code:

M = Match

Y = Match for AmEx/JCB

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

D = Invalid security code for AmEx/JCB



The CVD value supplied by the cardholder should simply be passed to the eSELECTplus payment gateway. Under no circumstances should it be stored for subsequent uses or displayed as part of the receipt information.

***For additional information on how to handle these responses, please refer to Appendix H. Additional Information for CVD and AVS**

19. Appendix G. Address Verification Service (AVS)

The Address Verification Service (AVS) value refers to the cardholder's street number, street name and zip/postal code as it would appear on their statement. AvsInfo is broken down into three elements:

Element	Type	Length
Street Number	Numeric	19 characters combined.
Street Name	Alphanumeric	
Zip/Postal Code	Alphanumeric	9 characters

The following table outlines the possible responses when passing in AVS information.

Table of possible Visa and MC AVS result codes			
VALUE	DESCRIPTION	Domestic	International
A	Street addresses match. The street addresses match but the postal/ZIP codes do not, or the request does not include the postal/ZIP code.	√	√
B	Street addresses match. Postal code not verified due to incompatible formats. (Acquirer sent both street address and postal code.)	√	√
C	Street address and postal code not verified due to incompatible formats. (Acquirer sent both street address and postal code.)	√	√
D	Street addresses and postal codes match.		√
G	Address information not verified for international transaction.		√
I	Address information not verified.		√
M	Street address and postal code match.		√
N	No match. Acquirer sent postal/ZIP code only, or street address only, or both postal code and street address.	√	√
P	Postal code match. Acquirer sent both postal code and street address, but street address not verified due to incompatible formats.	√	√
R	Retry: System unavailable or timed out. Issuer ordinarily performs its own AVS but was unavailable. Available for U.S. issuers only.	√	
S	Not applicable. If present, replaced with G (for international) or U (for domestic) by V.I.P. Available for U.S. Issuers only.	√	
U	Address not verified for domestic transaction. Visa tried to perform check on issuer's behalf but no AVS information was available on record, issuer is not an AVS participant, or AVS data was present in the request but issuer did not return an AVS result.	√	
W	Not applicable. If present, replaced with "Z" by V.I.P. Available for U.S. issuers only.	√	
X	Not applicable. If present, replaced with "Y" by V.I.P. Available for U.S. issuers only.	√	
Y	Street address and postal code match.	√	
Z	Postal/ZIP matches; street address does not match or street address not included in request.	√	√

Table of possible AVS response codes from Discover	
VALUE	DESCRIPTION
X	All digits match, nine-digit zip code.
A	All digits match, five-digit zip code.
Y	Address matches, zip code does not match.
T	Nine-digit zip code matches, address does not match.
Z	Five-digit zip codes matches, address does not match.
N	Nothing matches.
W	No data from issuer/authorization system.
U	Retry, system unable to process.
S	AVS not supported at this time.
Table of possible AVS response codes from American Express or JCB	
VALUE	DESCRIPTION
A	Billing address matches, postal code does not
D	Customer name incorrect, postal code matches
E	Customer name incorrect, billing address and postal code match
F	Customer name incorrect, billing address matches
K	Customer name matches
L	Customer name and postal code match
M	Customer name, billing address, and postal code match
N	Billing address and postal code do not match
O	Customer name and billing address match
R	System unavailable; retry
S	AVS not currently supported
U	Information is unavailable
W	Customer name, billing address, and postal code are all correct
Y	Billing address and postal code both match
Z	Postal code matches, billing address does not

***For additional information on how to handle these responses, please refer to Appendix H. Additional Information for CVD and AVS.**

20. Appendix H. Additional Information for CVD and AVS

The responses that are received from CVD and AVS verifications are intended to provide added security and fraud prevention, but the response itself will not affect the issuer's approval of a transaction. Upon receiving a response, the choice to proceed with a transaction is left entirely to the merchant.

Please note that all responses coming back from these verification methods are not direct indicators of whether a merchant should complete any particular transaction. The responses should not be used as a strict guideline of which transaction will approve or decline.

**NOTE**

Please note that CVD verification is only applicable towards Visa, MasterCard and American Express transactions.

Also, please note that AVS verification is only applicable towards Visa, MasterCard, Discover and American Express transactions. This verification method is not applicable towards any other card type.

21. Appendix I. CAVV Result Code

The Cardholder Authentication Verification Value (CAVV) is a value that allows VisaNet to validate the integrity of the VbV transaction data. These values are passed back from the issuer to the merchant after the VbV/SecureCode authentication has taken place. The merchant then integrates the CAVV value into the authorization request using the 'formCavvPurchaseArray' or 'formCavvPreauthArray' transaction type.

For more information on sending VbV/SecureCode transactions, please refer to our "Moneris MPI - Verified By Visa / MasterCard SecureCode ColdFusion API" document.

The following table describes the contents of the CAVV data response and what it means to the merchant.

Table of CAVV result codes		
Result Code	Message	What this means to you as a merchant...
0	CAVV authentication results invalid.	For this transaction you may not receive protection from chargebacks as a result of using VbV as the CAVV was considered invalid at the time the financial transaction was processed. Please 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)	Please check that you are following the VbV process correctly and passing the correct data in our transactions. Provided that you have implemented the VbV process correctly the liability for this transaction should be the same as an attempted transaction (ECI 6)
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 passing the correct data in our transactions. Provided that you have implemented the VbV process correctly the liability for this transaction should be the same as an attempted transaction (ECI 6)
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 qualify for the liability shift. Treat this transaction the same as an ECI 7.

22. Appendix I. Sample Receipt

Your order has been Approved

Print this receipt for your records

QA Merchant #1

3250 Bloor St West
Toronto Ontario
M8X2X9

1 800 987 1234

www.moneris.com

Transaction Type: Purchase

Order ID: mhp3495435587

Date/Time: 2002-10-18 11:27:48

Sequence Number: 660021630012090020

Amount: 12.00

Approval Code: 030012

Response / ISO Code: 028/04

APPROVED * =

Item	Description	Qty	Amount	Subtotal
cir-001	Med Circle	1	2.00	2.00
tri-002	Big triangle	1	1.00	1.00
squ-003	small square	2	1.00	3.00
			Shipping:	4.00
			GST :	1.00
			PST :	1.00
			Total:	12.00 CAD

Bill To:

Test Customer

123 Main St
Springfield
ON
Canada
M1M 1M1
tel: 416 555 1111
fax: 416 555 1111

Ship To:

Test

1 King St
Bakersville
ON
Canda
M1M 1M1
tel: 416 555 2222
fax: 416 555 2222

Special Instructions

Knock on Back door when delivering

E-Mail Address: eselectsupport@moneris.com

Refund Policy

30 Days - Must be unopened, 10% restocking charge.

eSELECTplus™

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