Merchant Service Corporation Integration Resources

**Direct Post API
Documentation**
June 2007
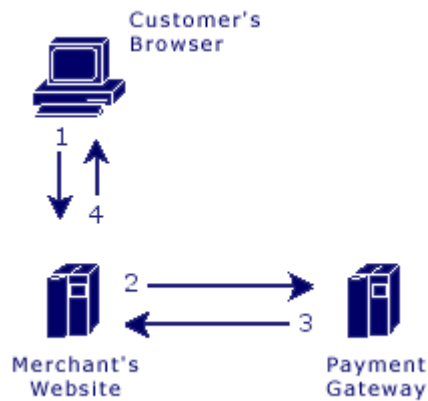
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Methodology

There are two primary options in which transactions can be submitted through the Payment Gateway API. The simplest, most direct, and transparent method is our Direct Post Method. This document describes the Direct Post Method.

Direct Post Method *(Server to Server) FIG. 1*

1. The customer sends their payment information to the merchant's web site.
2. The merchant's web site **posts** the payment data to the Payment Gateway.
3. The Payment Gateway **responds** immediately with the results of the transactions.
4. The merchant's web site displays the appropriate message to the customer.

The communication method used to send messages to the Payment Gateway's server is the standard HTTP protocol over an SSL connection.

In the Direct Post method, the communications with the cardholder (**Steps 1 and 4**) are developed completely by the merchant and therefore are not defined by the Payment Gateway. **Step 1** should simply collect the payment data from the cardholder and **Step 4** should display the appropriate transaction receipt or declined message.

In **Step 2**, transaction details should be delivered to the Payment Gateway using the POST method with the appropriate variables defined below posted along with the request.

In **Step 3**, the transaction responses are returned in the body of the HTTP response in a query string name/value format delimited by ampersands. For example: variable1=value1&variable2=value2&variable3=value3

Transaction Types

Sale (sale)

Transaction sales are submitted and **immediately flagged for settlement**. These transactions will automatically be settled.

Authorization (auth)

Transaction authorizations are authorized immediately but are **not flagged for settlement**. These transactions must be flagged for settlement using the *capture* transaction type. Authorizations typically remain activate for three to seven business days.

Capture (capture)

Transaction captures flag existing *authorizations* for settlement. Only *authorizations* can be captured. Captures can be submitted for an amount equal to or less than the original *authorization*.

Void (void)

Transaction voids will cancel an existing sale or captured authorization. In addition, non-captured authorizations can be voided to prevent any future capture. **Voids can only occur if the transaction has not been settled.**

Refund (refund)

Transaction refunds will reverse a previously settled transaction. If the transaction has not been settled, it must be *voided* instead of refunded.

Credit (credit)

Transaction credits apply a negative amount to the cardholder's card. In most situations credits are disabled as transaction refunds should be used instead.

Update (update)

Transaction updates can be used to update previous transactions with specific order information, such as a tracking number and shipping carrier.

Transaction Variables

Sale/Authorization/Credit

Variable Name	Required*	Format	Description
type	**Required**	sale / auth / credit	sale = Transaction Sale auth = Transaction Auth credit = Transaction Credit
username	**Required**		Username assigned to merchant account
password	**Required**		Password for the specified username
ccnumber	**Required****		Credit card number
ccexp	**Required****	MMYY	Credit card expiration (ie. 0711 = 7/2011)
checkname	**Required****		The name on the customer's ACH Account.
checkaba	**Required****		The customer's bank routing number
checkaccount	**Required****		The customer's bank account number
account_holder_type	**Required****	business / personal	The customer's type of ACH account
account_type	**Required****	checking / savings	The customer's ACH account entity
sec_code	*Optional***	PPD/WEB/TEL/CCD	ACH Standard Entry Class codes
amount	**Required**	x.xx	Total amount to be charged (i.e. 10.00)
cvv	Recommended		Card security code
payment	*Optional* **	creditcard / check	Set Payment Type to ACH or Credit Card
processor_id	*Optional*		If using Multiple MIDs, route to this processor. *processor_id is obtained under Options->Load Balancing in the Control Panel*
dup_seconds	*Optional*		Disable Duplicate checking (in seconds) *(On supported processors)*
descriptor	*Optional*		Set payment descriptor *(On supported processors)*
descriptor_phone	*Optional*		Set payment descriptor phone *(On supported processors)*
product_sku_#	*Optional*	product_sku_1	Associate API call with Recurring SKU
orderdescription	*Optional*		Order description
orderid	*Optional*		Order Id
ipaddress	Recommended	xxx.xxx.xxx.xxx	IP address of the cardholder
tax	*Level II*	x.xx	Total tax amount
shipping	*Level II*	x.xx	Total shipping amount
ponumber	*Level II*		Original Purchase Order
firstname	Recommended		Cardholder's first name
lastname	Recommended		Cardholder's last name
company	*Optional*		Cardholder's company
address1	Recommended		Card billing address
address2	*Optional*		Card billing address – line 2
city	Recommended		Card billing city
state	Recommended	CC	Card billing state (2 character abbrev.)
zip	Recommended		Card billing zip code
country	Recommended	CC (ISO-3166)	Card billing country (ie. US)
phone	Recommended		Billing phone number
fax	*Optional*		Billing fax number
email	Recommended		Billing email address
validation	*Optional*		Specify which Validation processors to use. *If variable is passed blank, use none.*
shipping_firstname	*Optional*		Shipping first name
shipping_lastname	*Optional*		Shipping last name

shipping_company	*Optional*		Shipping company
shipping_address1	*Optional*		Shipping address
shipping_address2	*Optional*		Shipping address – line 2
shipping_city	*Optional*		Shipping city
shipping_state	*Optional*		Shipping state
shipping_zip	*Optional*		Shipping zip code
shipping_country	*Optional*	CC (ISO-3166)	Shipping country (ie. US)
shipping_email	*Optional*		Shipping email address

*These fields are required by default. Level II fields are required for Level II processing. Recommended fields help provide additional address and cardholder verification. **Please Note, Certain banks may require some optional fields.**
***You can pass only Credit Card **or** E-Check transaction variables in a request – not both in the same request.*

Capture

Variable Name	Required	Format	Description
type	**Required**	capture	capture = Transaction Capture
username	**Required**		Username assigned to merchant account
password	**Required**		Password for the specified username
transactionid	**Required**		Original Payment Gateway transaction id
amount	**Required**	x.xx	Total amount to be settled (i.e. 10.00) *This amount must be equal to or less than the original authorized amount.*
tracking_number	*Optional*		Shipping Tracking Number
shipping_carrier	*Optional*	ups/fedex/dhl/usps	Shipping Carrier
orderid	*Optional*		Order Id

Void

Variable Name	Required	Format	Description
type	**Required**	void	void = Cancel unsettled Transaction
username	**Required**		Username assigned to merchant account
password	**Required**		Password for the specified username
transactionid	**Required**		Original Payment Gateway transaction id

Refund

Variable Name	Required	Format	Description
type	**Required**	refund	refund = Refund Transaction
username	**Required**		Username assigned to merchant account
password	**Required**		Password for the specified username
transactionid	**Required**		Original Payment Gateway transaction id
amount	*Optional*	x.xx	Total amount to be refunded (i.e. 10.00) *This amount may be equal to or less than the settled amount.*

Update

Variable Name	Required	Format	Description
type	**Required**	update	update = Update an *un-captured* Transaction
username	**Required**		Username assigned to merchant account
password	**Required**		Password for the specified username
transactionid	**Required**		Original Payment Gateway transaction id

tracking_number	*Optional*		Shipping Tracking Number
shipping_carrier	*Optional*	ups/fedex/dhl/usps	Shipping Carrier
orderid	*Optional*		Order Id

Transaction Response Variables

Standard Response

Variable Name	Format	Description
response	1 / 2 / 3	1 = Transaction Approved 2 = Transaction Declined 3 = Error in transaction data or system error
responsetext		Textual response
authcode		Transaction authorization code
transactionid		Payment Gateway transaction id
avsresponse	C	AVS Response Code (See Appendix 1)
cvvresponse	C	CVV Response Code (See Appendix 2)
orderid		The original order id passed in the transaction request.
response_code	C	Numeric mapping of processor responses (See Appendix 3)

Retail Data

Passing Retail Magnetic Stripe Data

The payment gateway supports passing of magnetic strip data collected from a card reader.

Variable Name	Format	Description
track_1	raw	Raw Magnetic Stripe Data
track_2	raw	Raw Magnetic Stripe Data
track_3	raw	Raw Magnetic Stripe Data

Testing Information

Transaction Testing Account

Transactions can be tested using one of two methods. First, transactions can be submitted to any merchant account that is in test mode. Keep in mind that if an account is in test mode, all valid credit cards will be approved but **no charges will actually be processed**.

The Payment Gateway demo account can also be used for testing at any time. Please use the following username and password for testing with this account:

Username:	**demo**
Password:	**password**

Transaction POST URL

All transactions should be submitted to the following URL:

https://secure.merchantservicecorp.net/api/transact.php

This URL is the same for both Live and Test Mode environments.

Test Transaction Information

Test transactions can be submitted with the following information:

Visa	**4111111111111111**
MasterCard	5431111111111111
DiscoverCard	6011601160116611
American Express	341111111111111
Credit Card Expiration:	**10/10**
Amount	**> 1.00**

Triggering Errors in Test Mode

- ✓ To cause a declined message, pass an amount less than 1.00.
- ✓ To trigger a fatal error message, pass an invalid card number.
- ✓ To simulate an AVS Match, pass 888 in the address1 field, 77777 for zip.
- ✓ To simulate a CVV Match, pass 999 in the cvv field.

Examples

Direct Post Format

Data posted by merchant's web site to Payment Gateway

username=demo&password=password&type=sale&ccnumber=4111111111
111111&ccexp=0711&cvv=999&amount=10.00

Response data returned to merchant's web site in HTML body

response=1&responsetext=SUCCESS&authcode=123456&transactionid=2
81719471&avsresponse=&cvvresponse=M&orderid=&type=sale&response_code=100

Changelog

June 2007	Documented product_sku_x Variable
January 2007	Documented processor_id Variable
July 2006	Added Transaction Type Update
April 2006	Added Response Code Appendix
February 2006	Documented Browser Redirect Capability

Appendix 1 – AVS Response Codes

X	Exact match, 9-character numeric ZIP
Y	Exact match, 5-character numeric ZIP
D	"
M	"
A	Address match only
B	"
W	9-character numeric ZIP match only
Z	5-character Zip match only
P	"
L	"
N	No address or ZIP match
C	"
U	Address unavailable
G	Non-U.S. Issuer does not participate
I	"
R	Issuer system unavailable
E	Not a mail/phone order
S	Service not supported
0	AVS Not Available
O	"
B	"

Appendix 2 – CVV Response Codes

M	CVV2/CVC2 Match
N	CVV2/CVC2 No Match
P	Not Processed
S	Merchant has indicated that CVV2/CVC2 is not present on card
U	Issuer is not certified and/or has not provided Visa encryption keys

Appendix 3 – response_code Lookup Table

Gateway Response Codes

Tier 1 Response Codes	All processing platforms will return this level of feedback
Tier 2 Response Codes	Many processing platforms will return this level of feedback
Tier 3 Response Codes	Some processing platforms will return this level of feedback

Recommended Best Pratice

Code	Description
100	Transaction was Approved
200	Transaction was Declined by Processor
201	Do Not Honor
202	Insufficient Funds
203	Over Limit
204	Transaction not allowed
220	Incorrect Payment Data
221	No Such Card Issuer
222	No Card Number on file with Issuer
223	Expired Card
224	Invalid Expiration Date
225	Invalid Card Security Code
240	Call Issuer for Further Information
250	Pick Up Card
251	Lost Card
252	Stolen Card
253	Fraudulant Card
260	Declined with further Instructions Available (see response text)
261	Declined - Stop All Recurring Payments
262	Declined - Stop this Recurring Program
263	Declined - Update Cardholder Data Available
264	Declined - Retry in a few days
300	Transaction was Rejected by Gateway
400	Transaction Error Returned by Processor
410	Invalid Merchant Configuration
411	Merchant Account is Inactive
420	Communication Error
421	Communication Error with Issuer
430	Duplicate Transaction at Processor
440	Processor Format Error
441	Invalid Transaction Information
460	Processor Feature not Available
461	Unsupported Card Type