

Network Merchants Integration Resources

**Direct Post API
Documentation**

June 2007

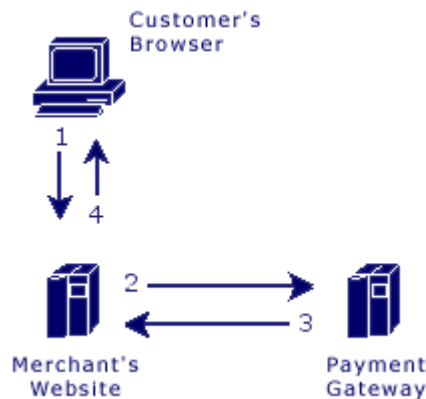
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Methodology

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 | <i>Optional**</i> | 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 | <i>Optional **</i> | creditcard / check | Set Payment Type to ACH or Credit Card |
| processor_id | <i>Optional</i> | | If using Multiple MIDs, route to this processor. <i>processor_id</i> is obtained under <i>Options->Load Balancing in the Control Panel</i> |
| dup_seconds | <i>Optional</i> | | Disable Duplicate checking (in seconds) <i>(On supported processors)</i> |
| descriptor | <i>Optional</i> | | Set payment descriptor <i>(On supported processors)</i> |
| descriptor_phone | <i>Optional</i> | | Set payment descriptor phone <i>(On supported processors)</i> |
| product_sku_# | <i>Optional</i> | product_sku_1 | Associate API call with Recurring SKU |
| orderdescription | <i>Optional</i> | | Order description |
| orderid | <i>Optional</i> | | Order Id |
| ipaddress | Recommended | xxx.xxx.xxx.xxx | IP address of the cardholder |
| tax | <i>Level II</i> | x.xx | Total tax amount |
| shipping | <i>Level II</i> | x.xx | Total shipping amount |
| ponumber | <i>Level II</i> | | Original Purchase Order |
| firstname | Recommended | | Cardholder's first name |
| lastname | Recommended | | Cardholder's last name |
| company | <i>Optional</i> | | Cardholder's company |
| address1 | Recommended | | Card billing address |
| address2 | <i>Optional</i> | | 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 | <i>Optional</i> | | Billing fax number |
| email | Recommended | | Billing email address |
| validation | <i>Optional</i> | | Specify which Validation processors to use. <i>If variable is passed blank, use none.</i> |
| shipping_firstname | <i>Optional</i> | | Shipping first name |
| shipping_lastname | <i>Optional</i> | | 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) <i>This amount must be equal to or less than the original authorized amount.</i> |
| 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) <i>This amount may be equal to or less than the settled amount.</i> |

Update

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

| | | | |
|------------------|-----------------|--------------------|--------------------------|
| tracking_number | <i>Optional</i> | | Shipping Tracking Number |
| shipping_carrier | <i>Optional</i> | ups/fedex/dhl/usps | Shipping Carrier |
| orderid | <i>Optional</i> | | 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.nmi.com/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 | 3411111111111111 |
| 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=4111111111111111&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=281719471&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 |
| Tier 2 Response Codes |
| Tier 3 Response Codes |

All processing platforms will return this level of feedback
 Many processing platforms will return this level of feedback
 Some processing platforms will return this level of feedback

Recommended Best Practice

| | |
|-----|--|
| 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 | Fraudulent 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 |