ProPay® API Appendix
Version 6

Appendix A: ProPay® Response Values

A.1 Status Response Code

The ProPay API will return with every request a response code. These codes are described below with each meaning. A developer should map the following response codes when determining the result of a transaction.

ProPay API Request Response Values

Code	Value	Notes
00	Success	The API request was successful
20	Invalid username	The value `<userid />` is already in use in ProPay's system
21	Invalid transType	Requested `<transType />` method is not permitted for account
22	Invalid Currency Code	Verify that the value for `<currencyCode />` is a valid ISO 3 character currency code
23	Invalid accountType	Verify the value for `<accountType />` element is valid
24	Invalid sourceEmail	Verify that the value for `<sourceEmail />` is valid email format. Value `<sourceEmail />` must be unique in ProPay system.
25	Invalid firstName	The value `<firstName />` cannot exceed 20 characters
26	Invalid mInitial	The value `<mInitial />` cannot exceed 2 characters
27	Invalid lastName	The value `<lastName />` cannot exceed 25 characters
28	Invalid billAddr	Verify the value `<billAddr />` is valid. Value cannot exceed 100 characters. P.O. Boxes are not allowed.
29	Invalid aptNum	Verify the value `<aptNum />` is valid. Value cannot exceed 100 characters.
30	Invalid city	The value `<city />` cannot exceed 30 characters
31	Invalid state	The value `<state />` cannot exceed 3 characters. U.S. state abbreviation values should contain only 2 characters.
32	Invalid billZip	Verify the value for `<billZip />` is valid
33	Invalid mailAddr	Verify the value `<mailAddr />` is valid. Value cannot exceed 100 characters.
34	Invalid mailApt	Verify the value `<mailApt />` is valid. Value cannot exceed 100 characters
35	Invalid mailCity	The value `<mailCity />` cannot exceed 30 characters
36	Invalid mailState	The value `<state />` cannot exceed 3 characters. Note: U.S. state abbreviation values should contain only 2 characters.
37	Invalid mailZip	Verify the value for `<mailZip />` is valid
38	Invalid dayPhone	Verify the value `<DayPhone />` is valid. For USA and CAN, value must be 10 characters with no dashes.
39	Invalid evenPhone	Verify the value `<EveningPhone />` is valid. For USA and CAN, value must be 10 characters with no dashes
40	Invalid ssn	Verify that the value for `<ssn />` is valid. Must be 9 numerical characters without dashes.
41	Invalid dob	Verify that value `<dob />` is valid and follows 'mm-dd-yyyy' format
42	Invalid recEmail	Verify that the value for `<recEmail />` is valid email format
43	Invalid knownAccount	Value for `<knownAccount />` should be "Yes" or "No"
44	Invalid amount	Verify the value `<amount />` is being passed without decimals or other non-numerical characters

45	Invalid invNum	The value `<invNum />` cannot exceed 50 characters
46	Invalid rtNum	Verify that the value `<RoutingNumber />` is valid. Cannot exceed 9 characters.
47	Invalid accntNum	
48	Invalid ccNum	Verify that the value for `<ccNum />` element is valid. Card numbers must pass Luhn check.
49	Invalid expDate	Verify that the value for `<expDate />` element is valid and follows 'mmdd' format.
50	Invalid cvv2	Verify the value `<CVV2 />` is valid. Value should be 3 or 4 characters in length.
51	Invalid transNum AND/OR Unable to act perform actions on transNum due to funding	Verify that the value `<transNum />` is a valid numerical value, OR the requested action cannot be performed on the transaction.
52	Invalid splitNum	
53	A ProPay account with this email address already exists AND/OR User has no account number	
54	A ProPay account with this social security number already exists	
55	The email address provided does not correspond to a ProPay account.	
56	Recipient's email address shouldn't have a ProPay account and does	
57	Cannot settle transaction because it already expired	
58	Credit card declined	The value of the responseCode element will provide info on the decline reason
59	Invalid Credential or IP address not allowed	Verify that the IP address that you are using has been whitelisted by ProPay. Verify that `<certStr />` value is valid
60	Credit card authorization timed out; retry at a later time	Try again later
61	Amount exceeds single transaction limit	Value `<amount />` exceeds the amount allowed for a single transaction. Contact your relationship manager if you need this increased
62	Amount exceeds monthly volume limit	The ProPay account has processed the maximum amount allowed in a single month. Contact your relationship manager if you need this limit increased.
63	Insufficient funds in account	There are not enough funds
64	Over credit card use limit	
65	Miscellaneous error	General error; report the issue to ProPay
66	Denied a ProPay account	Developer should display a descriptive message that guides a new user to fill out ProPay exceptions form and submit it. See notes below.
67	Unauthorized service requested	The acting entity or account is not configured to perform the requested action.
68	Account not affiliated	The action requested requires that the account share the same affiliation as the requesting credential
69	Duplicate invoice number (The same card was charged for the same amount with the same invoice number (including blank invoices) in a 1 minute period. Details about the original transaction are included whenever a 69 response is returned. These details include a repeat of the auth code, the original AVS response, and the original CVV response.)	Duplicate `<invNum />` element value. (The same card was charged for the same amount with the same invoice number (including blank invoices) in a defined period. Details about the original transaction are included whenever a 69 response is returned. These details include a repeat of the auth code, the original AVS response, and the original CVV response.)
70	Duplicate external ID	`<ExternalId />` values must be unique per affiliation
71	Account previously set up, but problem affiliating it with partner	
72	The ProPay Account has already been upgraded to a Premium Account	

73	Invalid Destination Account	Verify that the value `<RecAccntNum />` is a valid ProPay account.
74	Account or Trans Error	
75	Money already pulled	The funds have already been pulled
76	Not Premium (used only for push/pull transactions)	
77	Empty results	
78	Invalid Authentication	Authentication credentials are not valid
79	Generic account status error	Contact ProPay Customer Service
80	Invalid Password	Password is not valid
81	Account Expired	The ProPay account has expired. Contact your relationship manager
82	InvalidUserID	The value `<userId />` is not a valid ProPay userId
83	BatchTransCountError	
84	InvalidBeginDate	Verify the value `<beginDate />`. Must follow format 'mm-dd-yyyy'. BeginDate cannot be greater than EndDate.
85	InvalidEndDate	Verify the value `<endDate />`. Must follow format 'mm-dd-yyyy'. EndDate cannot be greater than BeginDate.
86	InvalidExternalID	
87	DuplicateUserID	Developer should display descriptive response that the email is already in use. See notes below.
88	Invalid track 1	
89	Invalid track 2	
90	Transaction already refunded	The transaction has already been refunded and cannot be refunded again
91	Duplicate Batch ID	
92	Duplicate Batch Transaction	
93	Batch Transaction amount error	
94	Unavailable Tier	The value `<tier />` is not available for signup. Verify the previously assigned tiers.
95	Invalid Country Code	The value `<country />` is not valid. Value should be ISO 3166 standard 3 character country codes.
96	Invalid PIN	
97	Account created in documentary status	The account must be validated to be activated
98	Account created in documentary status, and must be paid for	The account must be validated and paid for to be activated
99	Account created successfully, but must be paid for.	The account must be paid for to be activated
100	Transaction Already Refunded	The transaction has already been refunded and cannot be refunded again
101	Refund Exceeds Original Transaction	The refund amount is greater than the original transaction amount.
102	Invalid Payer Name	The value `<payerName />` is not valid.
103	Transaction does not meet date criteria	
104	Transaction could not be refunded due to current transaction state.	
105	Direct deposit account not specified	
106	Invalid SEC code	Verify that the value `<StandardEntryClassCode />` is valid. Cannot exceed 3 characters. Valid values are: CCD, PPD.
107	Invalid Account Name (ACH account)	Verify that the value `<accountName />` is valid. Cannot exceed 32 characters.
108	Invalid x509 certificate	
109	Invalid value for require CC refund	The value for `<requireCCRefund />` is not valid. Value should be Y or N
110	Required field is missing	Returned for edit ProPay account.

		See Response element for field name Returned if account edit was attempted on an account not belonging to the affiliation.
111	Invalid EIN	Verify the `<EIN />` element value is valid
112	Invalid business legal name (DBA)	`<BusinessLegalName />` is required for business account type signups.
113	One of the business legal address fields is invalid	
114	Business (legal) city is invalid	The value `<BusinessCity />` cannot exceed 30 characters
115	Business (legal) state is invalid	The value `<BusinessState />` cannot exceed 3 characters. For a U.S. state, follow standard 2 character abbreviation.
116	Business (legal) zip is invalid	Verify that the value `<BusinessZip />` is valid. Cannot exceed 9 characters.
117	Business (legal) country is invalid	The value `<BusinessCountry />` cannot exceed 3 characters. Should follow standard 3 character country code format.
118	Mailing address invalid	
119	Business (legal) address is invalid	
120	Incomplete business address	
121	Amount Encumbered by enhanced Spendback	
122	Invalid encrypting device type	Verify that the value `<encryptingDeviceType />` is valid
123	Invalid key serial number	Verify that the value `<keySerialNumber />` is valid. Value is obtained from the hardware device.
124	Invalid encrypted track data	Verify that the value `<encryptedTrackData />` is valid
125	You may not transfer money between these two accounts.	
126	Currency code not allowed for this transaction	Value `<currencyCode />` must be an allowed currency for the merchant account
127	Currency code not permitted for this account	Value `<currencyCode />` must be an allowed currency for the merchant account
128	Requires Additional Validation	
129	Multicurrency processing is not allowed for the account	This account cannot process additional currencies
130	Multicurrency processing is not supported for this bank processor	
131	Capture amount exceeds allowed amount	Capture `<amount />` value cannot be more than the initial authorization amount
132	Account setup does not allow capture for amount greater than authorization	Capture `<amount />` value cannot be more than the initial authorization amount
133	Threat Metrix risk denied (no responseCode is returned)	
134	Threat Metrix Invalid SessionId	
135	Threat Metrix Invalid Account configuration	Contact ProPay Risk Department
136	External Payment Method Not Provided	
137	External Payment Provider not provided	
138	External Payment Identifier not provided	
139	External Payment Provider not valid	
140	External Payment Method Provided	
141	Inactive or blocked MCC Code	Unable to use passed value `<MCCCode />` due to the MCC Code being blocked or inactive with the card brands
142	Invalid MCC Code Non-numeric or not in ProPay® database	Verify that the value `<MCCCode />` is valid. Value cannot exceed 4 characters. Value must be numerical.
143	Gross settle: invalid credit card information	Verify the value `<GrossSettleCreditCardNumber />` is valid. Cannot exceed 16 characters and must pass Luhn check.
144	Gross settle: invalid billing information	
145	Gross settle: no billing information was included with the payment info	

146	Gross settle: error setting up billing information	
147	Gross settle: Tier does not support gross settlement	The tier provided as `<tier />` element has not been configured to support gross settlement
148	ExternalPaymentMethodIdentifier Invalid	Verify that the value `<externalPaymentMethodIdentifier />` is valid. Must be a valid Visa Checkout payment identifier.
149	InvalidDoingBusinessAs	Verify `<DoingBusinessAs />` element value is valid.
150	Invalid Service Setting	One or more request tags contain invalid data.
151	Amex Enhanced Account Not Configured	

Notes

Response 00 indicates a successful request.

Many response codes for <status> indicate a failure that should be corrected through additional development. Responses 66, 87, 97, 98, and 99 all indicate that a request was successful but that additional handling of the customer experience is needed.

66 – This response indicates that a request has been sent successfully and an account was created but the identity of the applicant was not verified. The developer should direct a new user to complete and submit ProPay's exception form for manual identity validation to activate the account.

87 – This response indicates that the username being assigned to the new account is already taken. Unless a userID is explicitly defined in the request, usernames default to the email address submitted. For this response, a developer should allow the user to resubmit using a different value for username. If the user is certain that the existing account belongs to them, and wishes to make use of the already established account instead of creating a new one, the solution should provide them with a mechanism to do so. Using 'Get ProPay Account Details' (4.5.1 in the ProPay API Manual) the solution can obtain an account number of an already established account and compare data values to what is already stored in the client system in order to be certain that the user is correct in stating that the account is theirs.

97-100 – These responses are all traditional success types. Additional status codes simply tell you important information about the user experience to follow the initial signup.

A.2 Transaction Response Code

This section details the responses from the card issuer on a payment transaction request. Other than 00 Success, these responseCodes detail the reason provided by a card issuer when a transaction is declined (<status> 58).

Transaction Response Codes

Code	Value	Notes
00	Success	The transaction was successful
1	Transaction blocked by issuer	The transaction was blocked by the card holder's credit card company. The card holder will need to call the number on the back of the card to find out why.
4	Pick up card and deny transaction	There is a problem with the card. Merchant should keep the card and call the number on the back of the card to determine the issue.
5	Problem with the account	Do Not Honor. There is a problem with the customer's account or the card company doesn't recognize the billing address on file. Try adding the cardholder's correct billing address information and try the card one more time.
6	Customer requested stop to recurring payment	
7	Customer requested stop to all recurring payments	There is a problem with the card. The card has been marked for fraud. Merchant should keep the card and call the number on the back of the card to determine the issue.
8	Honor with ID only	Only honor the card with verification of card holder's ID
9	Unpaid items on customer account	
12	Invalid transaction	Verify that the credit card information is input correctly and run the transaction again
13	Amount Error	
14	Invalid card number	The card number that was entered is not valid. Verify the card number and re-enter
15	No such issuer. Could not route transaction	
16	Refund error	
17	Over limit	The credit card is over its allowed limit
19	Reenter transaction or the merchant account may be boarded incorrectly	
25	Invalid terminal	
41	Lost card	Card has been marked as lost. Fraud has been reported on the account. Merchant should keep the card and call the number on the back of the card to determine the issue.
43	Stolen card	Card has been marked as stolen. Fraud has been reported on the account. Merchant should keep the card and call the number on the back of the card to determine the issue.
51	Insufficient funds	There are not enough available funds on the card to complete the transaction
52	No such account	
54	Expired card	The card has expired
55	Incorrect PIN	
57	Bank does not allow this type of purchase	The card-issuing bank does not allow this type of purchase on the card. The card holder will need to call the number on the back of the card for more information.
58	Credit card network does not allow this type of purchase for your merchant account.	
61	Exceeds issuer withdrawal limit	The card cannot be used until the withdrawal limit has been increased
62	Issuer does not allow this card to be charged for your business.	The card cannot be used to purchase from your business. The credit card company does not allow purchases from your business type for this card.
63	Security Violation	

65	Activity limit exceeded	
75	PIN tries exceeded	
76	Unable to locate account	
78	Account not recognized	
80	Invalid Date	
82	Invalid CVV2	
83	Cannot verify the PIN	
85	Service not supported for this card	
93	Cannot complete transaction. Customer should call 800 number.	The transaction cannot be completed. The customer will need to call the number on the back of the card to determine the issue.
95	Misc Error Transaction failure	May be due to input data. See details of \<Response\> tag.
96	Issuer system malfunction or timeout.	
97	Approved for a lesser amount. ProPay will not settle and consider this a decline.	
98	Failure HV	
99	Generic decline or unable to parse issuer response code.	Additional data may be returned in the \<Response\> tag for International merchants

A.4 CVV2

The following response codes are returned only if a CVV2 is passed in the transaction request and a response returned from the card issuer. These codes do not indicate whether a transaction request was successful. They indicate whether or not the CVV2 submitted matches what the issuing institution has on file.

Financial institutions may decline transactions submitted with invalid CVV2 values. In cases where the issuer allows the transaction, the client may use these responses to choose to void the transaction if they so choose.

Code	Message
M	CVV2 Match
N	CVV2 No Match
P	Not Processed
S	Merchant indicates CVV2 not present on card
U	Issuer is not certified and/or has not provided appropriate encryption keys

A.5 AVS

The following response codes are returned by the card issuer. They do not indicate whether a transaction request was successful. They indicate the conformity of the address values passed in the request to those stored by the card issuer.

Domestic AVS Response Codes

Code	Message
A	Street address matches 5-digit and 9-digit postal code do not match
D	Exact Match
E	AVS Data is invalid, AVS is not allowed for this card type
N	Zip Code and Street Do Not Match
R	Issuer system unavailable
S	Service Not supported
U	Verification Unavailable*
W	Street Address does not match, 9 digit postal code does
X	Street Address and 9 digit postal code match
Y	Street Address and 5 digit postal code match
Z	Street Address does not match, 5 digit postal code does
O	No data provided to perform AVS check

*Returned if the U.S. bank does not support non-U.S. AVS or if the AVS in a U.S. bank is not functioning properly.

International AVS Response Codes

Code	Message
B	Address Match, postal code not verified
C	Street address and postal code do not match
G	Non-U.S. issuing bank does not support AVS
I	Address not verified
M	Exact Match
P	Zip Match

American Express Only AVS Response Codes

Code	Message
F	Name does not match, postal code matches
H	Name does not match, full AVS matches
J	Name does not match, full AVS does not match
K	Name matches, full AVS does not match
L	Name matches, postal code matches
O	Name match, Address Match, Postal Code no match
Q	Exact match
T	Name does not match, Street Address Match
V	Exact Match

Testing Environment AVS Response Codes

Code	Message
T	The AVS response code will always return: **T**

A.6 Account Status Values

The following Account status values are returned with ProPay API Method 4.5.1 Get ProPay Account Details. The status indicates the ability for a ProPay account to either Process (for Merchant Accounts) or to receive commission payments (for Card-Only Accounts).

Account Status Values

Status	Description
Ready	User has been approved.
ClosedCustomer	User's account has been cancelled.
ClosedRisk	User's account has been cancelled because of a review by the Risk department.
Denied	User's account has been denied.
Pending	User is pending a review from the Risk department
PendingAgreement	User must log into ProPay website and accept terms and agreements
PendingDoc	User must provide documentation to ProPay *Elingable to receive commissions payments
PendingDocsPaid	User must provide documentation to ProPay *Eligible to receive commissions payments
PendingUnpaid	User is pending a review from the Risk department and has not paid yet. *Ineligible for commissions payments
Unpaid	User has been approved but must still pay before account can be accessed.

A.7 Transaction Type

The following table reflects the transaction types that can be returned by the 'Get ProPay Merchant Account Transaction Detail' method in the <txnType> tag.

Transaction Type

Transaction Type	Description
ACHDebit	Transaction that brings money to the specified ProPay account from a Bank Account
ACHCredit	Transaction that sends money from the specified ProPay account to a Bank Account
CCDebit	Transaction that brings money to the specified ProPay account from a Credit Card
CCCredit	Transaction that sends money from the specified ProPay account to a Credit Card for refunds
ProPayDebit	Transaction that transfers money to the specified ProPay account from another ProPay account
ProPayCredit	Transaction that transfers money from the specified ProPay account to another ProPay account
ConcealedDebit	Transaction that brings money to the specified ProPay account from an email recipient
ConcealedCredit	Concealed Credit - Transaction that sends money to an email recipient from the specified ProPay account
IssueCardDebit	Transaction that sends money from the specified ProPay account to a Merchant through a ProPay MasterCard
IssueCardCredit	Transaction that brings money from a Merchant to the specified ProPay account through a ProPay MasterCard
WireDebit	Transaction that sends money from the specified ProPay account to an individual through a wire transfer
WireCredit	Transaction that brings money to the specified ProPay account from an individual through a wire transfer
PaymentechCCDebit	Transaction that brings money to the merchant account from a credit card
PaymentechCCCredit	Transaction that bring money to a credit card from a merchant account
ACH PaymentDebit	Transaction that takes money from a payers bank account and moves it into the billers ProPay account
CCCredit	Transaction that sends money from the specified ProPay account to a Credit Card
ACHDisbursementCredit	Transaction that pushes money to a payee's bank account from payer's ProPay account.
ClearingAdjustmentCredit	Transaction that gives money to a merchant. The transaction qualified for a lower rate than charged
ClearingAdjustmentDebit	Transaction that takes money from a merchant. The transaction qualified for a higher rate than charged
CrossBorderFeeCredit	Transaction that refunds a Cross Border Fee to a merchant
CrossBorderFeeDebit	Transaction that takes money from a merchant. The transaction qualified for an international Change Rate and/or Cross Border Fees
CCDebit (Non-Funding)	Transaction that is not funded by ProPay Transaction that brings money to the specified ProPay account from a Credit Card
CCCredit (Non-Funding)	Transaction that is not funded by ProPay Transaction that sends money from the specified ProPay account to a Credit Card for refunds
PPMCFees	Transaction that takes money from a merchant. Meta Bank requires transactions for fees
PPMCForeignFees	Transaction that takes money from a merchant. Meta Bank requires transactions for fees
NetSpendCredit	Transaction that bring money to a credit card from a merchant account
NetSpendDebit	Transaction that brings money to the specified ProPay account from a Credit Card

A.8 Initial Transaction Result Status

The following response codes are returned by the 'Get ProPay Merchant Account Transaction Details' method. The value of the <initialTransactionResult> tag reflects the initial transaction request status. They do not reflect the current state of the transaction.

Status	Description
Success	The transaction request was successful and completed by the issuer when initially submitted
Failure	The transaction request was declined by the issuer when initially submitted
Not_Found	A transaction could not be found with the specified search criteria

A.9 Transaction Status

The following table reflects the transaction status that can be returned by the 'Get ProPay Merchant Account Transactions Detail' method in the <txnStatus> tag. This should not be confused with <initialTransactionResult> nor the <txnType> elements.

Transaction Status

Transaction Status	Description
InvalidTransaction	The transaction is an invalid transaction
ACHInPending	An ACH payment is still pending
ACHinComplete	An ACH payment is complete and processed
ACHInReturned	An ACH payment is complete and was returned to the financial institution
ACHInRejected	An ACH payment is complete and was rejected by the financial institution
ACHInVoided	An ACH payment is complete and was voided by the ProPay Merchant Account
CCDebitAuthorized	A Credit Card Payment is pending in an Authorized state
CCDebitPending	A Credit Card Payment is pending in a Capture state
CCDebitSettled	A Credit Card Payment is completed and processed
CCDebitFunded	A Credit Card Payment that is completed and processed has been funded to the ProPay Merchant Account.
CCDebitDeclined	A Credit Card Payment that is completed and was declined
CCDebitVoided	A Credit Card Payment that is completed and was voided
CCDebitChargedBack	A Credit Card Payment that has been charged back by the cardholder.
CCDebitRepresented	A Credit Card Payment that has been charged back and the merchant has re-presented the transaction with additional supporting evidence of legitimacy.
CCCreditAuth	A Credit Card Credit is pending in an Authorized state.
CCCreditSettled	A Credit Card Credit is completed and the funds credited to the Credit Card payment method.
PPCreditSimple	A ProPay network disbursement of funds that is completed
PPCreditTimedPullPending	A ProPay network SpendBack reversal transaction that is currently in a pending state
PPCreditTimedPullFunded	A ProPay network SpendBack reversal transaction that is complete and processed and has been funded into the ProPay Merchant Account
PPCreditSpendBack	A ProPay network SpendBack reversal transaction that is complete and processed
PPDebitSimple	A ProPay network
PPDebitTimedPullPending	A ProPay network SpendBack transaction that is currently in a pending state
PPDebitTimedPullFunded	A ProPay network SpendBack transaction that is complete and processed and has been funded into the ProPay SpendBack Account
PPDebitSpendBack	A ProPay network SpendBack transaction that is complete and processed
Other	

A.10 Fraud Solutions Response Codes

The following response codes are returned in transactions where a fraud solution provider was used. They are generated by a response from the provider and returned as the <status> of the API Request. They are unique to each provider.

Threat Metrix

Possible status codes when ThreatMetrix elements are included in the transaction request

Code	Message	Transaction Status
00	Success	Processed
133	Threat Metrix Score Threshold Met	Declined
134	Session Id is an invalid it should only contain upper and lowercase characters, digits, underscores and hyphens.	Failure
135	Nonexistent account configured for threat metrix on ProPay system.	Failure

Amex Enhanced Auth

Possible status codes when Amex Enhanced Auth elements are included in the transaction request

Code	Message	Transaction Status
00	Success	Processed
151	Amex fraud solution invalid account configuration	Failure

Appendix B: Test Environment Simulated Processing

The ProPay® integration and Sand Box environments can provide simulated responses for real time credit card processing by passing the following reserved values in their respective fields. This allows clients to test their solutions and provoke specific response behaviors to handle successful and declined transactions.

B.1 Reserved Card Numbers, Amounts and CVV Values

The following Card numbers are reserved for testing purposes.

Reserved Card Numbers

Card Number	Card Brand	Simulated Response
4747474747474747	Visa	Success
4111111111111111	Visa	Success
5454545454545454	MasterCard	Success
371449635398431	American Express	Success
6011000000000012	Discover	Success
3553553355533553	JCB	Success
4404040404040404	Visa	Invalid credit card number as reported by issuing bank.
4909090909090909	Visa	Credit card issuer's bank timed out; Please attempt this transaction again.
4828282828282828	Visa	Card limit exceeded.
4616161616161616	Visa	Insufficient funds.
4535353535353535	Visa	Invalid credit card number; Credit card networks cannot locate this card's issuing bank.

Reserved Card Number Processing Amounts

Amount	Result Status	Response Code	Simulated Response
110	58	14	Invalid credit card number as reported by issuing bank.
111	58	19	Credit card issuer's bank timed out. Please attempt this transaction again.
112	58	17	Card limit exceeded.
113	58	51	Insufficient funds. ** Will produce a decline for Multi-Currency transactions
114	58	58	Card issuing bank will not allow this type of transaction. Some cards such as gasoline cards or HSA can only be used for specific types of transactions
115	58	15	Invalid credit card number. Credit card networks cannot locate this card's issuing bank.

When these card numbers are used in conjunction with the following CVV codes additional simulated responses will be generated

Reserved Card Number CVV Codes

Card Brand	CVV	Result Status	Response Code	Simulated Response
Visa	999	00	00	Success
MasterCard	999	00	00	Success
Discover	999	00	00	Success
American Express	3714	00	00	Success
All	All Others	82	82	CVV Data is not correct; CVV Mismatch

B.2 AVS Reserved Postal Codes

The following table provides reserved postal codes that will generate specific AVS response codes.

AVS Simulated Response Codes

Postal Code	AVS Code	AVS Response Text
83204 **832044716**	A	Address Match
85284 **852843541**	Z	Zip Match
99994 **840435768**	U	Verification Unavailable
99998 **840435769**	G	Verification Unavailable
84321 **840435770**	Y	Exact Match
999970001 **840435771**	B	Address Match
999970002 **840435772**	C	Server Unavailable or Offline
999970003 **840435773**	D	Exact Match
999970004 **840435774**	I	Verification Unavailable
999970005 **840435775**	M	Exact Match
999970006 **840435776**	P	Zip Match
999970009 **840435777**	S	Service Not supported
999970010 **840435778**	R	Issuer system unavailable
	N	Zip Code and Street Do Not Match
All Others	T	Returned in the test environment

B.3 Reserved ACH Routing Numbers

ACH transactions do not provide for real-time authorization.

In order to perform test ACH transactions, the submitted routing number must be a legitimate ABA routing number. The account number does not need to be a real account number, since it will not be checked at a bank in the test system.

It should, however, be 20 digits or less.

For a current list of valid ABA routing numbers please see:
https://www.frbservices.org/EPaymentsDirectory/fpddir.txt

B.3 Reserved Account Creation Values

The following values for each element will result in the specified response

Reserved Values

Element	Value	Response
dob	01-01-1981	The value 01-01-1981 for dob element for account sign up will result in a successful test sign up. All other value will result in a response code 66.

Appendix C: Fraud Detection

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Processing Fraud Prevention

ProPay offers integration opportunities to various fraud prevention solutions to help prevent Merchants from accepting fraudulent credit cards and/or known fraudulent bank accounts. A special FraudDetectors object is used to pass along credentials and additional provider-specific information to the fraud prevention provider. Please note that improperly configured credentials or invalidly-formatted request objects can result in transactions not being completed at all. It is important to have properly tested the solution and confirmed your credentials or account have been enabled for a specific provider before attempting live transactions.

FraudDetector Compatible Methods

The following API Methods are compatible with the FraudDetectors object

- 4.3.2 Credit Card Authorization Transaction
- 4.3.4 Process a Credit Card Transaction
- 4.3.5 Process anACH Transaction
- 4.3.7 Refund an ACH Transaction
- 4.4.3 ProPay SplitPay Transaction

FraudDetectors Base Object:

Request Object	Inherited Elements
FraudDetectors	FraudDetectorProviderName
	InputIpAddress
	ShippingPhoneNumber
	ShippingAddress1
	ShippingAddress2
	ShippingCity
	ShippingState
	ShippingZip
	ShippingCountry
	* Specific Attributes for Fraud System Provider

Using multiple fraud detection providers

When using multiple providers, a FraudDetector array must be created with each element of the array being a FraudDetector object of the specific namespace used to reference the correct elements for the provider.

- ❖ If submitting multiple Fraud Providers the order of precedence is
    1. Threat Metrix
    2. Amex Enhanced Auth

Interface: Legacy XML

The FraudDetectors object is passed as the namespace of a new `<ArrayOfFraudDetector>` child element of the `<FraudDetector>` Element of the `<XMLTrans>` object of a ProPay Legacy XML Request. Each provider has its own required namespace as seen below.

Sample XML Request Structure:

```
<XMLTrans>
        <-- Specific Elements for the ProPay API Request -->
        <FraudDetector>
                <ArrayOfFraudDetector xmlns="FraudDetectors">
                        <FraudDetector xsi:type="ThreatMetrixFraudDetection">
                                <FraudDetectorProviderName>ThreatMetrix</FraudDetectorProviderName>
                                <-- Specific Elements for the Fraud System Provider -->
                        </FraudDetector>
                        <FraudDetector xsi:type="AmexEnhancedAuth">
                                <FraudDetectorProviderName>AmexEnhancedAuth</FraudDetectorProviderName>
                                <-- Specific Elements for the Fraud System Provider -->
                        </FraudDetector>
                </ArrayOfFraudDetector>
        </FraudDetector>
</XMLTrans>
```
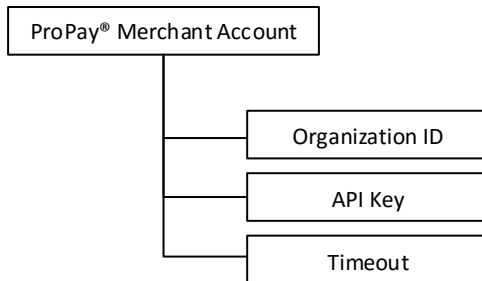
Threat Metrix

Threat Metrix Account Setup

ProPay must set up a ProPay merchant account to use Threat Metrix. This cannot be done through the Application Programming Interface. The Threat Metrix credentials are tied directly to the account. Please refer requests to obtain Threat Metrix account information to: riskescalation@propay.com

If a client has access to multiple accounts, they will have multiple Threat Metrix Credentials

```
ProPay® Merchant Account
    ├── Organization ID
    ├── API Key
    └── Timeout
```

The Organization ID is the value assigned by Threat Metrix to represent the client. It must be used to create a Threat Metrix Session ID.

The API Key is the client's Threat Metrix API credential that ProPay will use when sending a request to Threat Metrix.

The Timeout value (in milliseconds) is the value the ProPay system will wait for a response from Threat Metrix before automatically passing the transaction along to the processor. The default value set by ProPay at 2000ms, and can be adjusted by the client by request to a ProPay relationship manager. If the timeout period elapses, the transaction is passed to the processor which can create a case where a transaction was actually determined to be fraudulent, but the Threat Metrix API responded after the timeout period elapsed.

Please work with the ProPay risk department to mitigate such occurrences and develop an appropriate resolution.

Clients will receive a Threat Metrix username and password. The client must then sign into the Threat Metrix Portal and set up their risk profiles that are used to determine whether or not a transaction will be considered fraudulent. The ProPay risk department can assist a client in determining which attributes should be set in a risk profile however it is the responsibility of the client to determine what will be considered a fraudulent transaction and what will not.

Threat Metrix Portal URI: https://portal2.threatmetrix.com
For additional information on setting up risk profiles please see:
https://kb.threatmetrix.com/index.php?View=login&Msg=_index

Threat Metrix SessionId Creation
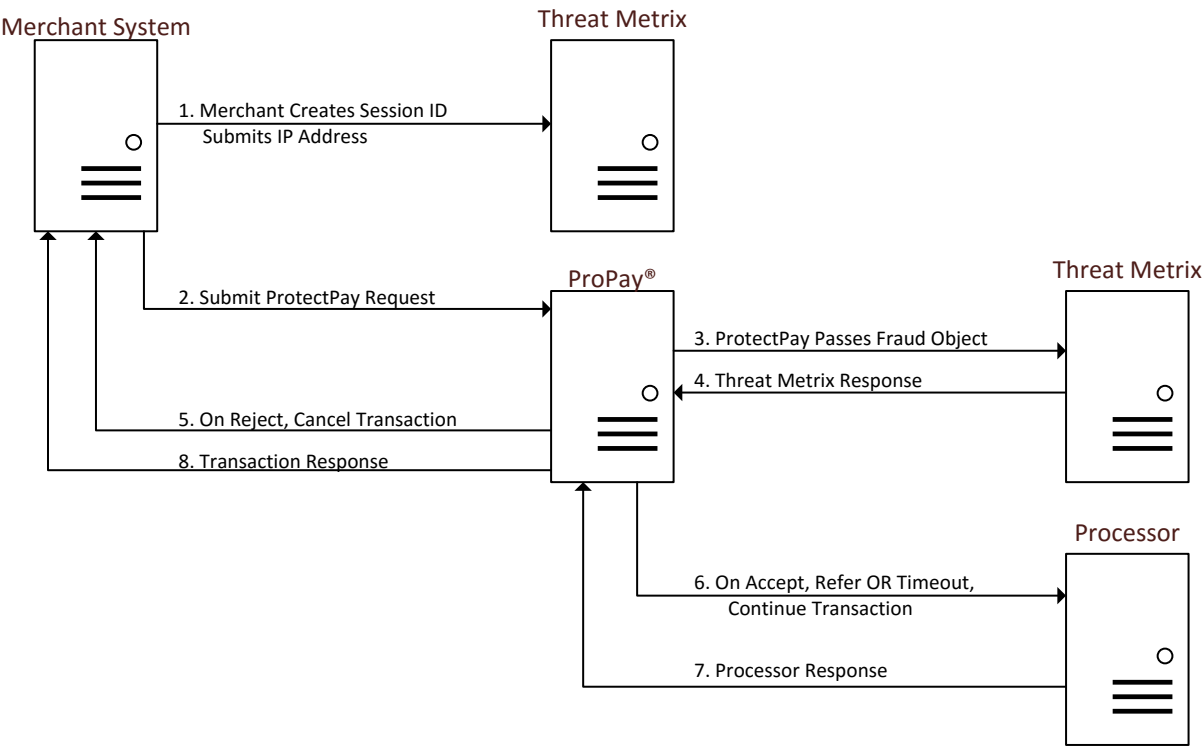
Prior to sending a transaction request to the ProPay API the merchant must create and send to Threat Metrix a unique SessionId. Threat Metrix hosts a download of an invisible iFrame that must be placed on the merchant's website prior to the checkout page. ProPay recommends the use of an order confirmation page to accomplish this prior to navigation to the final checkout page.

The Threat Metrix iFrame requires that the appropriate organization ID be sent. The Threat Metrix iFrame gathers information from the payer's browser and associates with the SessionId that must be passed to Threat Metrix. It is important that this SessionId is persisted in the browser session to the final checkout page as it must be passed to ProPay in the API call.

Threat Metrix Processing flow

1. Merchant system creates Threat Metrix Session ID and submits the Input IP Address of a payer's web browser.
2. Merchant system submits a ProPay API request including the related Fraud Detector tags.
   a. See Object attributes below
   b. 60 second ProPay timeout timer begins
3. ProPay submits user details to Threat Metrix including Session ID, Input IP Address and Filter Requirements.
4. Threat Metrix responds with score and the following messages
   a. Accept
   b. Refer
   c. Reject
   d. Error
5. On Reject or Error the transaction is cancelled and reported back to the Merchant with appropriate response code.
   a. See Appendix A.10 Fraud Solutions Response Codes: Threat Metrix.
   b. The Actual Score is not returned. Please log into the Threat Metrix Portal to view scores.
6. On Accept, Refer or at timeout the Transaction is passed to the Processor.
   a. The Threat Metrix timeout period is part of the ProtectPay 60 second timeout and does not extend it.
   b. If Threat Metrix responds with a "Refer" and the transaction request is successful the transaction response will be 00 with a <Response> text of "Risk Review" to indicate that the client may want to review it.
7. The Processor responds to the transaction request.
8. ProPay responds to the merchant with the transaction response.

❖ Both the SessionId and IP Address must be passed in the method, otherwise the Threat Metrix process is ignored

Threat Metrix Process flow diagram

Merchant System

Threat Metrix

1. Merchant Creates Session ID
   Submits IP Address

ProPay®

Threat Metrix

2. Submit ProtectPay Request

3. ProtectPay Passes Fraud Object

4. Threat Metrix Response

5. On Reject, Cancel Transaction

8. Transaction Response

Processor

6. On Accept, Refer OR Timeout,
   Continue Transaction

7. Processor Response

Threat Metrix Specific Elements

Element	Type	Max	Required	Notes
FraudDetectorProvider	String		Required	Set to: ThreatMetrix
SessionId	String		Required	Created by merchant and sent to Threat Metrix prior to transaction
InputIpAddress	String		Required	Sent by merchant to Threat Metrix prior to transaction
ShippingAddress1	String		Optional	
ShippingAddress2	String		Optional	
ShippingCity	String		Optional	
ShippingState	String		Optional	
ShippingZip	String		Optional	
ShippingCountry	String		Optional	
CustomAttribute1	String		Optional	Must exist as part of the Organization Id prior to being passed
CustomAttribute2	String		Optional	Must exist as part of the Organization Id prior to being passed
CustomAttribute3	String		Optional	Must exist as part of the Organization Id prior to being passed
CustomAttribute4	String		Optional	Must exist as part of the Organization Id prior to being passed
CustomAttribute5	String		Optional	Must exist as part of the Organization Id prior to being passed
CustomAttribute6	String		Optional	Must exist as part of the Organization Id prior to being passed
CustomAttribute7	String		Optional	Must exist as part of the Organization Id prior to being passed
CustomAttribute8	String		Optional	Must exist as part of the Organization Id prior to being passed
CustomAttribute9	String		Optional	Must exist as part of the Organization Id prior to being passed
CustomAttribute10	String		Optional	Must exist as part of the Organization Id prior to being passed
ConditionalAttribute1	String		Optional	Must exist as part of the Organization Id prior to being passed
ConditionalAttribute2	String		Optional	Must exist as part of the Organization Id prior to being passed
ConditionalAttribute3	String		Optional	Must exist as part of the Organization Id prior to being passed
ConditionalAttribute4	String		Optional	Must exist as part of the Organization Id prior to being passed
ConditionalAttribute5	String		Optional	Must exist as part of the Organization Id prior to being passed
ConditionalAttribute6	String		Optional	Must exist as part of the Organization Id prior to being passed
ConditionalAttribute7	String		Optional	Must exist as part of the Organization Id prior to being passed
ConditionalAttribute8	String		Optional	Must exist as part of the Organization Id prior to being passed
ConditionalAttribute9	String		Optional	Must exist as part of the Organization Id prior to being passed
ConditionalAttribute10	String		Optional	Must exist as part of the Organization Id prior to being passed
ConditionalAttribute11	String		Optional	Must exist as part of the Organization Id prior to being passed
ConditionalAttribute12	String		Optional	Must exist as part of the Organization Id prior to being passed
ConditionalAttribute13	String		Optional	Must exist as part of the Organization Id prior to being passed
ConditionalAttribute14	String		Optional	Must exist as part of the Organization Id prior to being passed
ConditionalAttribute15	String		Optional	Must exist as part of the Organization Id prior to being passed
ConditionalAttribute16	String		Optional	Must exist as part of the Organization Id prior to being passed
ConditionalAttribute17	String		Optional	Must exist as part of the Organization Id prior to being passed
ConditionalAttribute18	String		Optional	Must exist as part of the Organization Id prior to being passed
ConditionalAttribute19	String		Optional	Must exist as part of the Organization Id prior to being passed
ConditionalAttribute20	String		Optional	Must exist as part of the Organization Id prior to being passed
ACHAccountHash	String		Optional	Do not use at this time

CreditCardNumberHash	String		Optional	Do not use at this time
DriversLicenseHash	String		Optional	Do not use at this time
SocialSecurityNumberHash	String		Optional	Do not use at this time

Interface: Legacy XML

```xml
<ArrayOfFraudDetector xmlns="FraudDetectors">
        <FraudDetector xsi:type="ThreatMetrixFraudDetection">
                <FraudDetectorProviderName>ThreatMetrix</FraudDetectorProviderName>
                <InputIpAddress>8.8.8.8</InputIpAddress>
                <ShippingAddress1>123 Main Street</ShippingAddress1>
                <ShippingAddress2> </ShippingAddress2>
                <ShippingCity></ShippingCity>
                <ShippingState></ShippingState>
                <ShippingZip></ShippingZip>
                <ShippingCountry></ShippingCountry>
                <ShippingFirstName></ShippingFirstName>
                <ShippingLastName></ShippingLastName>
                <ShippingPhoneNumber></ShippingPhoneNumber>
                <ACHAccountHash></ACHAccountHash>
                <ConditionalAttribute1></ConditionalAttribute1>
                <ConditionalAttribute10></ConditionalAttribute10>
                <ConditionalAttribute11></ConditionalAttribute11>
                <ConditionalAttribute12></ConditionalAttribute12>
                <ConditionalAttribute13></ConditionalAttribute13>
                <ConditionalAttribute14></ConditionalAttribute14>
                <ConditionalAttribute15></ConditionalAttribute15>
                <ConditionalAttribute16></ConditionalAttribute16>
                <ConditionalAttribute17></ConditionalAttribute17>
                <ConditionalAttribute18></ConditionalAttribute18>
                <ConditionalAttribute19></ConditionalAttribute19>
                <ConditionalAttribute2></ConditionalAttribute2>
                <ConditionalAttribute20></ConditionalAttribute20>
                <ConditionalAttribute3></ConditionalAttribute3>
                <ConditionalAttribute4></ConditionalAttribute4>
                <ConditionalAttribute5></ConditionalAttribute5>
                <ConditionalAttribute6></ConditionalAttribute6>
                <ConditionalAttribute7></ConditionalAttribute7>
                <ConditionalAttribute8></ConditionalAttribute8>
                <ConditionalAttribute9></ConditionalAttribute9>
                <CreditCardNumberHash></CreditCardNumberHash>
                <CustomAttribute1></CustomAttribute1>
                <CustomAttribute10></CustomAttribute10>
                <CustomAttribute2></CustomAttribute2>
                <CustomAttribute3></CustomAttribute3>
                <CustomAttribute4></CustomAttribute4>
                <CustomAttribute5></CustomAttribute5>
                <CustomAttribute6></CustomAttribute6>
                <CustomAttribute7></CustomAttribute7>
                <CustomAttribute8></CustomAttribute8>
                <CustomAttribute9></CustomAttribute9>
                <DriversLicenseHash></DriversLicenseHash>
                <SessionId>08a3958c-f2f5-43ad-b171-9de35633ff68e</SessionId>
                <SocialSecurityNumberHash></SocialSecurityNumberHash>
        </FraudDetector>
</ArrayOfFraudDetector>
```

Amex Enhanced Auth

American Express Enhanced Authorization Setup

A client must provide to ProPay their Amex SE Number. ProPay will then setup the ProPay Merchant Account to use Amex Enhanced Auth. If a client does not have a relationship with Amex, it may use the ProPay Amex Aggregated SE number with approval from the ProPay Risk Department.

Please refer requests to setup a ProPay Merchant Account for Amex Enhanced Auth to:
riskescalation@propay.com

Amex Enhanced Auth Processing flow

1. Merchant System Submits ProPay API Request including Fraud Object.
   a. See Object attributes below
   b. 60 second ProtectPay timeout timer begins
2. ProPay Submits Fraud Object Data asynchronously to American Express and continues transaction process
3. Transaction is submitted along the American Express network and declined by American Express if submitted data matches criteria for fraud
4. On a decline from American Express or Error the transaction is completed and reported back to the Merchant with appropriate response code.
   a. See Appendix A.7 Fraud System Response Codes: Amex Enhanced Auth
   b. On an approval from American Express the transaction is completed and reported back to the Merchant with the appropriate response code and transaction response.
5. ProPay responds to the merchant with the transaction response.

Amex Enhanced Auth Process flow diagram
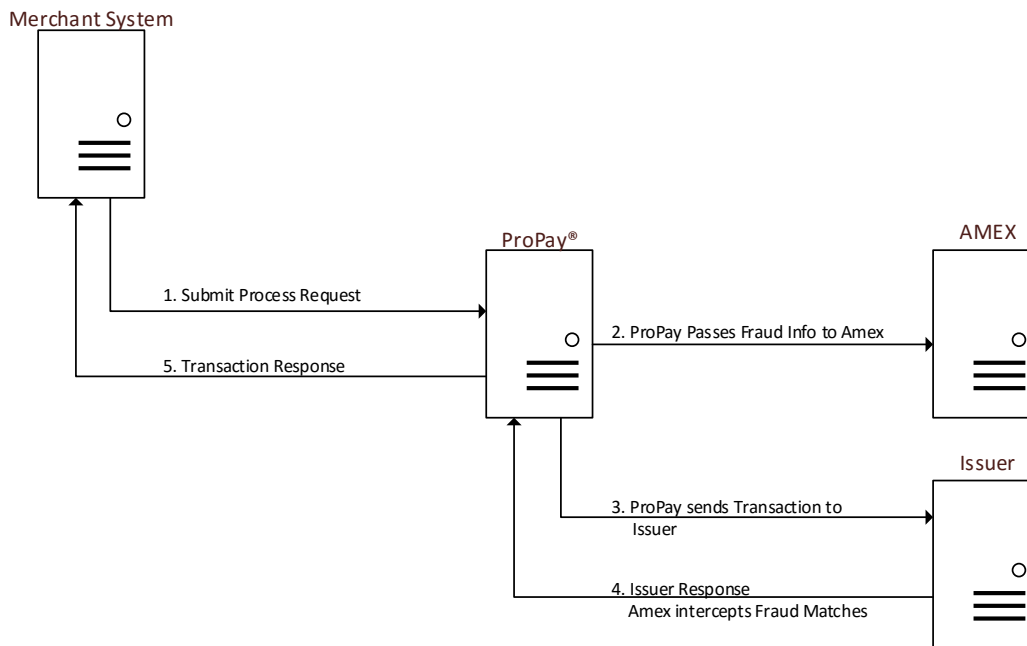
Amex Enhanced Auth Specific Attributes

Attribute	Type	Max	Required	Notes
FraudDetectorProviderName	String		Required	Set to: AmexEnhancedAuth
InputIpAddress	String		Optional	
ShippingMethod	String		Optional	
ShippingPhoneNumber	String		Optional	

ShippingAddress1	String		Optional	
ShippingAddress2	String		Optional	
ShippingCity	String		Optional	
ShippingState	String		Optional	
ShippingZip	String		Optional	
ShippingCountry	String		Optional	

Interface: Legacy XML

```xml
<ArrayOfFraudDetector xmlns="FraudDetectors">
        <FraudDetector xsi:type="AmexEnhancedAuth">
                <FraudDetectorProviderName>AmexEnhancedAuth</FraudDetectorProviderName>
                <InputIpAddress>8.8.8.8</InputIpAddress>
                <ShippingAddress1>123 Main Street</ShippingAddress1>
                <ShippingAddress2> </ShippingAddress2>
                <ShippingCity></ShippingCity>
                <ShippingState></ShippingState>
                <ShippingZip></ShippingZip>
                <ShippingCountry></ShippingCountry>
                <ShippingFirstName></ShippingFirstName>
                <ShippingLastName></ShippingLastName>
                <ShippingPhoneNumber></ShippingPhoneNumber>
                <ShippingMethod>02</ShippingMethod>
        </FraudDetector>
</ArrayOfFraudDetector>
```

Appendix D: ProPay Supported Swipe Devices

ProPay approved swipe devices encrypt credit card track data at the head as the card is swiped. The encrypted data is then transmitted to the connected device as an encrypted block. Elements of the encrypted block can be submitted to various methods of the ProPay API.

Supported ProPay Swipe Devices

Make	Model	Part Number	
Dynamag	MagTek Dynamag	21073075	
FLASH Card Reader 1.0	MagTek MagneSafe m20	21073034 (Rev–F)	
FLASH Card Reader 2.0	MagTek flash	21073081 (Rev–C)	
JAK 3.0	Magtek aDynamo	21073111	
JAK 4.0	Roam	G5X	

A list of compatible Phones for JAK 3.0/4.0 can be found at:
http://www.propay.com/products-services/accept-payments/jak-card-reader/androiddevices/

D.1 Supported ProPay API Methods

The following ProtectPay API methods accept encrypted track data:

- 4.3.2 Credit Card Authorization Transaction
- 4.3.4 Credit Card Authorization Transaction
- 4.4.3 ProPay SplitPay Transaction

D.2 Swipe Device Required Parameters

On supported transaction types, encrypted swipe device data may be submitted, which may vary slightly based on the device type.

Swipe Device Elements

Element	Type
encryptingDeviceType	Character String
keySerialNumber	Base64 Encoded Hexadecimal String
encryptedTrackData	Base64 Encoded Hexadecimal String
encryptedTrack2Data	Base64 Encoded Hexadecimal String

- ❖ Not all devices return 2 Encrypted Tracks
- ❖ The second track should only be submitted if the device supplies it.

Device Type Enumerative List

The following lists the enumeration list that is used when identifying a swipe device in an API method. The name of the device must be passed including the required information.

Device Types Supported

Device Type	Sample Type
MagTekFlash	Use MAGTEK Sample
MagTekADynamo	Use MAGTEK Sample
MagTekDynamag	Use MAGTEK Sample
MagTekDynamag	Use MAGTEK KBE Sample
RoamData	Use ROAM Sample
RoamEMV	Use ProPay SDK

Submitting Encrypted Data to the API

The raw data from each swipe device is returned as a hexadecimal value. Both the Key Serial Number `<ksn>` and `<EncryptedTrackData>` and/or `<EncryptedTrack2Data>` values should be submitted as Base64 encoded hexadecimal value string and not a Base64 character string.

MAGTEK Sample
Sample Device Data Dump

```
EncryptionStatus=0206
SDK.Version=101.21
Reader.Type=1
Track.Status=000002
KSN=9010240B154C5400059F
Track1.Masked=%B5102650005008881^TEST/INTEGRATION^1905101000000000000000000000000000000000000?
Track2.Masked=;5102650005008881=19051010000000000000?
Track1.Encrypted=B3AC05A0D8B595F21C5BBCCEB382601279ED67D46A2FEB5AFBB26493C309BF5A050CA68BB30712977D8857C080A7F41
251CAC18740EB3072
Track2.Encrypted=A718FFDBE97F343F792336D15BE6934EF5D17659796FCAB87A5768509C56B6DB23C3A2905CA2FD97
MagnePrint.Encrypted=
MagnePrint.Status=
Card.IIN=510265
Card.Name=TEST/INTEGRATION
Card.Last4=8881
Card.ExpDate=1905
Card.SvcCode=101
Card.PANLength=16
Device.Serial=B846B70420002500
```

Sample API Submission

```
<encryptingDeviceType>MagTekDynamag</encryptingDeviceType>
<keySerialNumber>kBAkCxVMVAAFnw==</keySerialNumber>
<encryptedTrackData>s6wFoNi1lfIcW7zOs4JgEnntZ9RqL+ta+7Jkk8MJv1oFDKaLswcSl32IV8CAp/QSUcrBh0DrMHI=</encryptedTrack
Data>
<encryptedTrack2Data>pxj/2+l/ND95IzbRW+aTTvXRdll5b8q4eldoUJxWttsjw6KQXKL9lw==</encryptedTrack2Data>
```

MAGTEK KBE Sample (Keyboard Emulator)
Sample Device Data Dump

```
%B5102000000001574^TEST/INTEGRATION^19110000000000000?;5102000000001574=19110000000000000000?|0600|FD3ECD4B76B86
DA3355CC4A2E3F94FD8BFF2DB6251F6EAED2E6D41538042EA1258BC3E08F3CCA3718CDC16F41A59115BBAAE4F51934396DB|7BB2E8106D6F
C66E5947EAAE78B92E67C08753AD6B827CBF5FE2A8CF361671087E4B5807E162477A||61401000|14006546F2792145D8893590361CABDA2
88BA8D7763B0A27006596B93A3E9B2800E06D7973A6FA93A2C317F572C353247F531706946EDF32|B39740E022817AA|A5F307595C0E0280
|9010240B39740E00000E|F125||0000
```

Pipe '|' Delimited Array Elements From Swipe:

```
[0]%B5102000000001574^TEST/INTEGRATION^19110000000000000?;5102000000001574=19110000000000000000?
[1]0600
[2]FD3ECD4B76B86DA3355CC4A2E3F94FD8BFF2DB6251F6EAED2E6D41538042EA1258BC3E08F3CCA3718CDC16F41A59115BBAAE4F51934396DB
[3]7BB2E8106D6FC66E5947EAAE78B92E67C08753AD6B827CBF5FE2A8CF361671087E4B5807E162477A
[4]
[5]61401000
[6]14006546F2792145D8893590361CABDA288BA8D7763B0A27006596B93A3E9B2800E06D7973A6FA93A2C317F572C353247F531706946EDF32
[7]B39740E022817AA
[8]A5F307595C0E0280
[9]9010240B39740E00000E
[10]F125
[11]
[12]0000
```

```
Element [2] – Encrypted Track 1
Element [3] – Encrypted Track 2
Element [9] – Key Serial Number
```

Sample API Submission

```
<encryptingDeviceType>MagTekDynamag</encryptingDeviceType>
<keySerialNumber>kBAkCzl0DgAADg==</keySerialNumber>
<encryptedTrackData>/T7NS3a4baM1XMSi4/lP2L/y22JR9urtLm1BU4BC6hJYvD4I88yjcYzcFvQaWRFbuq5PUZNDlts=</encryptedTrackData>
<encryptedTrack2Data>e7LoEG1vxm5ZR+queLkuZ8CHU61rgny/X+KozzYWcQh+S1gH4WJHeg==</encryptedTrack2Data>
```

ROAM Sample

Sample Device Data Dump

cardholderName: TEST/INTEGRATION
track1Status: 0
expiryDate: 1905
track2Status: 0
formatID: 32
ksn: 77764121300128E00190
maskedPAN: 5102XXXXXXXX8881
encTrack:
0d01464640ef4a10bf7b46571e49bad81d744e49ad726e1a9f6e1ea7058057c47066166eddd92fc3aa9e390d3102d133af114de2580602cf
00000000000000000000000000000000000000000000000004c761247347ea14734aff8e34f39900b1408a0515672e00c378a7ed8ba8a6f67
d13f406051b880b7
packEncTrackData:
32DQFGRkDvShC/e0ZXHkm62B10Tkmtcm4an24epwWAV8RwZhZu3dkvw6qeOQ0xAtEzrxFN4lGAs8AAAAAAAAAAAAAAAAAAAAAAAAAAAAAABM
dhJHNH6hRzSv+ONPOZALFAigUVZy4Aw3in7YuopvZ9E/QGBRuIC3

Sample API Submission

<encryptingDeviceType>RoamData</encryptingDeviceType>
<keySerialNumber>d3ZBITABKOABkA==</keySerialNumber>
<encryptedTrackData>DQFGRkDvShC/e0ZXHkm62B10Tkmtcm4an24epwWAV8RwZhZu3dkvw6qeOQ0xAtEzrxFN4lGAs8AAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAABMdhJHNH6hRzSv+ONPOZALFAigUVZy4Aw3in7YuopvZ9E/QGBRuIC3</encryptedTrackData>

D.3 Software Development Kit

ProPay offers a .NET Software Development Kit for the Dynamag to assist developers in incorporating a swipe device into their developed or developing software solution. Please request additional information from techincalsupport@propay.com

Appendix E: Notification System

Affiliation Change Notifications

The ProPay system can be configured to send notifications every time a new user signs up for a ProPay account or when ProPay's internal tools are used to update the status of an account.

This is accomplished via https POST and follows the formatting rules described in the following tables. In order to use the Affiliate Notification System, an organization should establish a web page that can collect POST-ed information and store or update values in its database.

Query String Parameters

Parameter	When do I receive this?	Description
NotificationEvent	On all notifications	The specific event that has occurred. See table 1.1 for possible values.
Status	UserSignup , UserStatusChange	The new status that this user's account has entered. See table 1.2 for possible values.
UserEmail	UserSignup , UserStatusChange	The user's email address
ExternalId	UserSignup , UserStatusChange	The user's ID number that should link to the client system
AccountNumber	UserSignup , UserStatusChange	The user's account number
AccountType	UserSignup	The type of account which the user has
SignupDateTime	UserSignup	The date/time that the user signed up, in mmddyyyy format.
ExpirationDateTime	UserSignup	The date/time that the user's account will expire, in mmddyyyyhhmm format.

1.1 - Notification Events

NotificationEvent	Description
UserStatusChange	The user's account status has been modified.
UserSignup	The user has attempted to sign up for an account.

1.2 - Status

Status	Description
Ready	User has been approved.
ClosedCustomer	User's account has been cancelled.
ClosedRisk	User's account has been cancelled because of a review by the Risk department.
Denied	User's account has been denied.
Pending	User is pending a review from the Risk department
PendingAgreement	User must log into ProPay website and accept terms and agreements
PendingDoc	User must provide documentation to ProPay *Elingable to receive commissions payments
PendingDocsPaid	User must provide documentation to ProPay *Eligible to receive commissions payments
PendingUnpaid	User is pending a review from the Risk department and has not paid yet. *Ineligible for commissions payments
Unpaid	User has been approved but must still pay before account can be accessed.

Example UserStatusChange POST Query String

https://www.someurl.com/receivepage.aspx?NotificationEvent=UserStatusChange&Status=ClosedCustomer&UserEmail=bob@someurl.com&externalid=1234&AccountNumber=9876

Example UserSignup POST Query String

https://www.someurl.com/receivepage.aspx?NotificationEvent=UserSignup&Status=Ready&UserEmail=bob@someurl.com&externalid=1234&AccountNumber=9876&AccountType=Premium&SignupDateTime=040220090415&ExpirationDateTime=040220100415

Enhanced Spendback Notifications

The ProPay system can be configured to send a client organization a message whenever an enhanced Spendback transaction either funds or is cancelled due to its TTL expiring. In order to use the Affiliate Notification System, the client system should establish a web page that can collect POST-ed information and store or update values in its database.

Query String Parameters

Parameter	Description
NotificationEvent	Always 'EnhancedSpendbackCompletion'
sourceAccountNumber	The source account number.
sourceAccountTransNum	The transaction number on the source account
destinationAccountNumber	The destination account number.
destinationAccountTransNum	The transaction number on the destination account
result	The result either Success (funded) or Expired (reversed)

Results

Result	Description
Success	The transaction has funded to the destination account's available balance.
Expired	The transaction's TTL has expired and the transaction has been reversed.

Example of a SpendbackTransaction POST Query String

https://www.someurl.com/receivepage.aspx?NotificationEvent=EnhancedSpendbackCompletion&sourceAccountNumber=123456&sourceAccountTransNum=345&destinationAccountNumber=455665&destinationAccountTransNum=2333&result=Expired

Appendix F: ProPay File Specifications

F.1 Merchant Boarding File Specification

A ProPay Merchant Boarding file is used to create ProPay merchant accounts. This file-based creation is primarily for use by new clients enrolling large numbers of accounts in ProPay's system. Accounts created using the boarding file system are not completed in real time. For real time ProPay account creation, please see the ProPay API manual section 4.1 Account Creation methods. The merchant boarding file is a comma quote delimited file saved with a .csv extension. The file is comprised of a Header which is separated by new lines, field values which are separate by commas and a new line and the values of the fields, one line per merchant account.

- ❖ Files that are incorrectly formatted will be rejected
- ❖ Files must be submitted to the client relationship manager for boarding and appropriate agreements must be in place prior to file processing.
- ❖ Files must be submitted in a comma quote delimited .csv format

Header

Affiliate identification values must be submitted one value per line before column headers. Each value must be enclosed in quotation marks and separated by commas.

Merchant boarding file header values:

Parameter	Description
Affiliate Password	This is the affiliate certStr provided by ProPay
IP Address	Always set to: **"0.0.0.0"**
Affiliate Identifier	This is the affiliate termid provided by ProPay

Example Header

```
"MyCertStr",
"0.0.0.0",
"MyTermId",
```

Data Fields

Data should include one merchant per line in the file. Account data should be preceded by a line of column headers as shown in the following table. Headers and data should be enclosed by quotation marks and separated by commas.

Once the header fields have been created for this particular batch file each new line of data underneath it represents one merchant account to be created.

Merchant Boarding Data Field Values (1 Request Per Line)

Data Field	Max	Required	Description/Rules
External ID	20	Required	Your own unique identifier. This value might be used, for example, by a payer to search for your merchant on ProPay's invoicing system. This value MUST contain a dash.
First Name	20	Required	First Name and Last Name are concatenated to form what appears on a cardholder's statement.
Last Name	25	Required	First Name and Last Name are concatenated to form what appears on a cardholder's statement.
Email Address	55	Required	Contact email for merchant. Also used to specify a login for the ProPay website.
Password	100	Required	Temporary password which will allow a one-time login to ProPay's website. Must be at least eight characters. Must not contain part or all of the first or last name. Must contain at least one capital letter, one lower case letter, and either one symbol or one number.

Address 1	100	Required	Street Address
Address 2	100	Required	Apartment or Suite
City	30	Required	Address value
State	2	Required	State value must be expressed using correct abbreviation.
Zip	9	Required	Please include only numbers in either five or nine digit format. Do not include a dash.
Country	3	Required	ISO standard 3 character country code. USA or CAN
Phone	10	Required	Please include only numbers without dashes or any other punctuation.
Tax ID	9	Required	9 digit tax id or social security number
Tier ID	20	Required	A selection of possible tier will be provided to you by ProPay. This value is used to specify the type of merchant account being created, and defines both rates and limits for each new account.
Bank Account Name	32		A descriptive name for a checking or savings account to which this merchant will be tied. Setting up an associated account allows ProPay to 'sweep' funds from your merchant account to the one specified.
Bank Account Number	17		A checking or savings account number to which this merchant will be tied. Setting up an associated account allows ProPay to 'sweep' funds from your merchant account to the one specified.
Routing Number	9		The routing number associated with your on file checking or savings account. This value MUST be 9 characters long. Make sure that whatever system you use to produce boarding files does not chop off leading zeroes when saving this value.
Bank Name	50		The bank name associated with your on file checking account.
Bank Country Code	3		ISO standard 3 character country code. USA or CAN
Bank Account Type	1		Valid values are either C (for checking) or S (for savings) or G (for General Ledger)
Account Ownership Type			Valid values are either "Personal" or "Business". This value is optional, if not specified the value will default to "Personal".
Secondary Bank Account Name	32	Optional	A descriptive name for a checking or savings account to which this merchant will be tied. Setting up an associated account allows ProPay to 'sweep' funds from your merchant account to the one specified.
Secondary Bank Account Number	17	Optional	A checking or savings account number to which this merchant will be tied. Setting up an associated account allows ProPay to 'sweep' funds from your merchant account to the one specified.
Secondary Routing Number	9	Optional	The routing number associated with your on file checking or savings account. This value MUST be 9 characters long. Make sure that whatever system you use to produce boarding files does not chop off leading zeroes when saving this value.
Secondary Bank Name	50	Optional	The bank name associated with your on file checking account.
Secondary Bank Country Code	3	Optional	ISO standard 3 character country code. USA or CAN
Secondary Bank Account Type	1	Optional	Valid values are either C (for checking) or S (for savings) or G (for General Ledger)
Secondary Account Ownership Type		Optional	Valid values are either "Personal" or "Business". This value is optional, if not specified the value will default to "Personal".

❖ If including secondary bank account information, all optional fields are required

Example:

```
"MyCertStr","","","","","","","","","","","","","","","","","","","",""
"0.0.0.0","","","","","","","","","","","","","","","","","","",""
"MyTermId","","","","","","","","","","","","","","","","","",""
"External ID","First Name","Last Name","Email Address",Password","Address 1","Address 2","City","State","Zip","Country","Phone","Tier ID","Bank Account Name","Bank Account Number","Routing Number","Bank Name","Bank Country Code","Bank Account Type","Tax ID"
"My ExternalId","John","Smith","unqinue@email.com","My Password","123 ABC St.","","Someplace","UT","84123","USA","5556667777","My Tier","My Checking","0123456789","123456789","My Bank","USA","C","55-1122333"
"My ExternalId2","Jane","Smith","unqinue2@email.com","My Password","123 ABC St.","","Someplace","UT","84123","USA","5556667777","My Tier","My Checking","0123456789","123456789","My Bank","USA","C","55-2233444"
"My ExternalId3","Spot","Smith","unqinue3@email.com","My Password","123 ABC St.","","Someplace","UT","84123","USA","5556667777","My Tier","My Checking","0123456789","123456789","My Bank","USA","C","55-3344555"
```

Response File

ProPay will return a response file that indicates the success or failure for each boarding attempt. The file will be returned as a comma quote delimited .csv file.

Merchant boarding response values

Data Field	Description
ExternalId	Echo of the ExternalId Submitted
ConsumerId	ProPay ConsumerId

Example:
```
"External ID","Consumer ID"
"MyExternalId","123456"
"MyExternalId1","234567"
"MyExternalId2,"345678"
```

Notes

Be aware of any modification of batch files within desktop spreadsheet programs such as Excel, as they may strip off leading zeroes when it interprets a field as containing numbers only. Then, when you save the field as a CSV file, you will not include that zero. Some values, when submitted to the ProPay API actually NEED that zero. (Think bank account routing number for example.)

In similar fashion, Excel will attempt to convert date fields to a standardized date format such as mm/dd/yyyy. ProPay's API requires that dates be submitted as mm-dd-yyyy.

Amounts must all still be submitted in the format described within this document. One hundred dollars must be submitted as 10000 (the number of pennies.)

F.2 Customer Boarding File Specification

The ProPay Customer Boarding file is used to board (create) customer records tied to an existing merchant account onto the ProPay system.   This is done with a comma quote delimited .csv file. The fields defined below should be in the proper order and format in order for the file to be processed successfully.

Header

Affiliate identification values must be submitted one value per line before column headers. Each value must be enclosed in quotation marks and separated by commas.

Customer boarding file header values:

Parameter	Description
Affiliate Password	This is the affiliate certStr provided by ProPay
IP Address	Always set to: **"0.0.0.0"**
Affiliate Identifier	This is the affiliate termid provided by ProPay

Example Header

```
"MyCertStr",
"0.0.0.0",
"MyTermId",
```

Data Fields

Data should include one merchant per line in your file. Account data should be preceded by a line that consists of column headers as shown in the following table. Headers and account data should be enclosed by quotation marks and separated by commas.

Once the header fields have been created for this particular batch file each new line of data represents one merchant account to be created.

Customer boarding file field values:

Parameter	Header	Length	Description/Rules
External ID	External ID	20	The identifier of the MERCHANT. This will have been set when you created merchants using the Merchant account. This value is used to tie a customer to a merchant so that when users enter their customer ID on ProPay's invoicing platform, they end up paying the correct merchant.
Customer ID	Customer ID	50	This is the client sytem customer ID. This value will be used by the customers (cardholders) on ProPay's invoicing platform so that they can pay their bills.
Status	Status	1	A = Activate, I = Deactivate. Use this flag to either set up a new customer or disable one from whom you no longer wish to accept payments.

```
"MyCertStr","","",""
"0.0.0.0","","",""
"MyTermId","","",""
"External ID","Customer ID","Status"
"TEST123","123456","A"
"TEST321","654321","I"
```

Response File

ProPay will return a response file that indicates the success or failure for each boarding attempt. The file will be returned as a comma quote delimited .csv file.

F.3 ProPay XML Transaction Batch File Specifications

The ProPay XML Batch file solution allows a client to submit multiple transaction requests at once with a file. It is most frequently used for funds disbursement (transType 02) and account renewal (transType 39) requests. Examples of each of those is provided below. Please see the ProPay API manual for details on other transaction types.

ProPay API transactions that do not involve credit card or banking account numbers should be submitted to ProPay as a properly formatted XML file to paymentssupport@proapy.com for processing. The payments support team will process the batch file and reply with a response file and any exceptions of transactions that could not be completed, with the related reasons. While ProPay does generally process the files quickly, expect that a response file may not be returned for up to 5 business hours. The client solution should import the response file into its system to update its records with the success or failure status of the payment attempt, or the business should manually review the exceptions to determine how to address them.

- ❖ For funds disbursement, the client should use a certStr directly tied to the source account of funds to be disbursed. It will be different than the certStr normally used for other API transaction requests.
- ❖ A batch file should only contain transactions of the same transType

The following rules must be followed in order to run a batch:

- A client must be approved for production processing prior to submitting batch files.
- Batch files are processed Monday-Friday during ProPay's normal business hours of 8am MST to 5pm MST.
- To ensure a file is processed the same day, it should be submitted no later than 2pm MST.
- A separate batch file must be created for each transaction type you wish to perform.
- Data elements must conform to the standards described in this document and the ProPay API Manual.
- Batch files are to be submitted in valid XML format with an .xml or .txt extension.
- The source account should be properly funded prior to submitting a disbursement batch file.
- TransTypes that involve credit card or ACH data are not allowed.

Batch File Elements Defined

XML Batch files should contain the DOCTYPE declaration at the beginning of the file

```
<?xml version="1.0" encoding="utf-8"?>
<!DOCTYPE Request.dtd>
```

Header Elements Defined:
These should be included regardless of the transaction type

Parameter	Type	Required	Description
XMLRequest	Object	Required	The opening element of the XML file; starts the batch request.
certStr	String	Required	The specific certStr value assigned to and identifying the source account with the funds for disbursement
batchid	Int(32)	Required	The unique batch ID for the disbursement file.
totalcount	Int(32)	Required	The total number of transactions requested. If it does not match the actual count in the file, the batch will not be processed.
totalamnt	Int(32)	Required when amounts are involved	The sum total of the amounts to be paid in the file. If it does not match the sum of the transactions in the file, the batch fill not be processed.
class	String	Required	always set to 'partner'

Disbusement Transaction Elements Defined:

Element	Type	Max	Required	Notes
XMLTrans	Object		Required	The element that defines a transaction request
transType	String	3	Required	Defines the type of transaction requested. Batch files should consist of only 1 type. For disbursements, the value is '02'. See the ProPay API Manual for transaction Types
amount	Int(64)	Signed Int(64)	Required	The value representing the number of pennies in USD, or the number of [currency] without decimals.
recAccntNum	Int(32)	Signed Int(32)	Required	ProPay assigned account identifier. The receiving account.
knownAccount	String	3	Required	Always set this value to 'yes'
invNum	String	50	Optional*	Client transaction request ID. *Recommended for linking transactions.

Disbursement Response Elements Defined:

Element	Type	Notes
XMLResponse	Object	The opening tag of the response file
XMLTrans	Object	Identifies a response for a transaction
transType	String	Indicates the transType attempted
status	string	Result of the transaction request. See Appendix A for status values and meanings
invNum	String	Echo of the Passed Invoice Number
recAccntNum	Int(32)	The receiving ProPay account number
country	String	Always returns 'Unsupported'
DebtRepayment	Boolean	Always returns 'N'

Disbursement Batch File Sample

```
<?xml version="1.0" encoding="utf-8"?>
<!DOCTYPE Request.dtd>
```

```
<XMLRequest>
  <batchid>133</batchid>
  <totalcount>2</totalcount>
  <totalamnt>4000</totalamnt>
  <certStr>MySourceAccountCertStr</certStr>
  <class>partner</class>
  <XMLTrans>
    <transType>02</transType>
    <recAccntNum>31101101</recAccntNum>
    <amount>1500</amount>
    <knownAccount>Yes</knownAccount>
    <invNum>111</invNum>
  </XMLTrans>
  <XMLTrans>
    <transType>02</transType>
    <recAccntNum>31101102</recAccntNum>
    <amount>2500</amount>
    <knownAccount>Yes</knownAccount>
    <invNum>112</invNum>
  </XMLTrans>
</XMLRequest>
```

Disbursement Sample Response File:

```
<?xml version="1.0" encoding="utf-8" standalone="no"?>
<XMLResponse xmlns:xsi="http://www.w3.org/2000/10/XMLSchema-instance"
xsi:noNamespaceSchemaLocation="http://www.propay.com/schema/PPResponse.xsd">
  <XMLTrans>
    <transType>02</transType>
    <status>00</status>
    <recAccntNum>31101101</recAccntNum>
    <country>Unsupported</country>
    <DebtRepayment>N</DebtRepayment>
  </XMLTrans>
  <XMLTrans>
    <transType>02</transType>
    <status>81</status>
    <recAccntNum>31101102</recAccntNum>
    <country>Unsupported</country>
    <DebtRepayment>N</DebtRepayment>
  </XMLTrans>
</XMLResponse>
```

Special notes about common failures of disbursement files:

Three of the most common reasons for a failed batch or transaction are as follows:

- Missing account numbers – before the client solution generates a batch file, it should check to ensure that a proper ProPay account number is on file for the transaction attempt. If no valid ProPay account number is available, it should not be included in the batch. Please see 4.5.1 in the ProPay API Manual (transType 13) for instructions on obtaining the ProPay account number via the API if you do not have it.
- Re-using a batchid – This is especially prevalent when you are trying to send a 'repair' file that fixes other problems. Remember, batchids may only be used once and are used to protect you from accidentally sending paying the same commissions twice. Re-using a batchid will cause the entire batch to fail so you can just correct the problem and resubmit your file.
- Not having enough money in your source account before sending your file – make sure that you transfer enough money into your master commission account to cover your commissions, or the batch will not be processed.

Renewal Transaction Elements Defined:

Element	Type	Max	Required	Notes
XMLTrans	Object		Required	The element that defines a transaction request
transType	String	3	Required	Defines the type of transaction requested. Batch files should consist of only 1 type. For renewals, the value is '39' See the ProPay API Manual for transaction Types
accountNum	Int(32)	Signed Int(32)	Required	The account number that should be renewed

Renewal Response Elements Defined:

Element	Type	Notes
XMLResponse	Object	The opening tag of the response file
XMLTrans	Object	Identifies a response for a transaction
transType	String	Indicates the transType attempted
status	string	Result of the transaction request. See Appendix A for status values and meanings
accountNum	Int(32)	The accountNum that was attempted for renewal
country	String	Always returns 'Unsupported'
DebtRepayment	Boolean	Always returns 'N'

Renewal Sample Batch File

```xml
<?xml version="1.0" encoding="utf-8"?>
<!DOCTYPE Request.dtd>
<XMLRequest>
  <certStr>MyTestCertStr</certStr>
  <totalCount>2</totalCount>
  <batchid>3232</batchid>
  <class>partner</class>
  <totalamnt>0</totalamnt>
  <XMLTrans>
    <transType>39</transType>
    <accountNum>3164999</accountNum>
  </XMLTrans>
  <XMLTrans>
    <transType>39</transType>
    <accountNum>31389989</accountNum>
  </XMLTrans>
</XMLRequest>
```

Renewal Sample Response File:

```xml
<?xml version="1.0" encoding="utf-8" standalone="no"?>
<XMLResponse xmlns:xsi="http://www.w3.org/2000/10/XMLSchema-instance"
xsi:noNamespaceSchemaLocation="http://www.propay.com/schema/PPResponse.xsd">
<XMLTrans>
<transType>39</transType>
<accountNum>31389989</accountNum>
<status>00</status>
<country>Unsupported</country>
<DebtRepayment>N</DebtRepayment>
</XMLTrans>
</XMLResponse>
```

F.4 ProPay Electronic Remittance Advice Report File Specification

ERA Reporting Support

ProPay supports the generation of Electronic Remittance Advice reports. The ProPay generated ERA report is a flat file with a batch header, detail records and a trailer record.

The following elements, when supplied as part of a transaction request, will map to the following ERA report elements.

❖ Empty or Null values are written to the report as '0'
❖ If using an interface that does not support Comment1 or Comment2 the specified report fields will be written as '0'

ERA Batch Header Map

Detail Record Element	API Request Element	Special Notes
Start Element (1)	-	Always Set to 'B'
Batch Number (2-4)	-	Batch Number
Bank Deposit Date (5-10)	-	Deposit Date MMDDYY format
Filler (11-79)	-	Set to 0

Sample Batch Header Line (Start of File)
B138091216000000000000000000000000000000000000000000000000000000000000000000

ERA Detail Record Map

Detail Record Element	API Request Element	Special Notes
Start Element (1)	-	Always Set to 'S'
Practice ID (2-5)	comment1	4 character Restriction; Truncated. Recommend an Integer be used. If not supplied the ProPay Merchant Account **ExternalId** is used
Patient ID (6-17)	cardholderName accountName (ProPay Account Name)	12 character restriction; Truncated. For CC Transactions: ▪ cardholderName must be valid. Recommend an Integer be used. For ACH Transactions: ▪ accountName must be valid. Recommend an Integer be used. For ProPay Account : ▪ Name automatically populates
Transaction Date (25-30)	-	This is automatically populated at the time of the transaction
Amount Owed (31-39)	comment2	8 character restriction; Truncated Recommend an Integer be used.
Transaction Amount (40-48)	-	This is automatically populated at the time of the transaction
Patient Payment Method (58-72)	-	Obfuscated Account number; Automatically populated at time of the transaction; Types Supported: ▪ Credit Card ▪ ACH ▪ ProPay Account
Filler (73-79)	-	Set to 0

Sample Detail Records (1 Per Line)

```
S0000m1Settle00000000000090916000000000000000050000000000001111000000000000000000
Scom1m1achpay0000000000000091216com2000000000080000000000000019..1111000000000000
Scom1m1achpay0000000000000091216com2000000000-80000000000000019..1111000000000000
Scom1m1achpay0000000000000091216com2000000000000000000000000019..1111000000000000
S0000a1m1achIn a100000000091216000000000000000050000000000000019..1111000000000000
S0000a1m1achOut a0000000091216000000000000000-470000000000000019..1111000000000000
S0000a3m1ppInBad 0000000091216000000000000000-3099000000000323859310000000000000000
S0000spRequest00000000000090916000000000000000960000000000009009000000000000000000
S0000a1m2SPRec a10000000009091600000000000000-400000000000032385932000000000000000
S0000a1m1SPGive a0000000009091600000000000000040000000000032385930000000000000000
S0000ProPay Fee000000000091216000000000000000350000000000015973100000000000000000
S0000ccCredit0000000000000912160000000000000-1500000000000001111000000000000000000
S0000a2m2ccsettle0000000091016ccToRefun00000099000000000001111000000000000000000
S0000a2m2ccsettle0000000090916ccToRefun0000-99000000000001111000000000000000000
S0000a1m1sweep a100000000091216000000000000000-60470000000000019..1111000000000000
S0000a2m2sweep a20000000091216000000000000000-14880000000000019..1111000000000000
S0000a1m2sweep a100000000091216000000000000000-39700000000000019..1111000000000000
```

ERA Trailer Record Map

Detail Record Element	API Request Element	Special Notes
Start Element (1)	-	Always Set to 'D'
Filler (2-27)		Set to 0
Transaction Count (28-31)	-	Sum total of transactions in the file
Batch Total (32-41)	-	Sum total of gross amount in the file
Filler (42-79)	-	Set to 0

Sample Trailer Record Line (End of File)

```
D0000000000000000000000000000001700000020260000000000000000000000000000000000000000
```

Sample ERA Report File

```
B138091216000000000000000000000000000000000000000000000000000000000000000000000000
S0000m1Settle00000000000090916000000000000000050000000000001111000000000000000000
Scom1m1achpay0000000000000091216com2000000000080000000000000019..1111000000000000
Scom1m1achpay0000000000000091216com2000000000-80000000000000019..1111000000000000
Scom1m1achpay0000000000000091216com2000000000000000000000000019..1111000000000000
S0000a1m1achIn a100000000091216000000000000000050000000000000019..1111000000000000
S0000a1m1achOut a0000000091216000000000000000-470000000000000019..1111000000000000
S0000a3m1ppInBad 0000000091216000000000000000-3099000000000323859310000000000000000
S0000spRequest00000000000090916000000000000000960000000000009009000000000000000000
S0000a1m2SPRec a10000000009091600000000000000-400000000000032385932000000000000000
S0000a1m1SPGive a0000000009091600000000000000040000000000032385930000000000000000
S0000ProPay Fee000000000091216000000000000000350000000000015973100000000000000000
S0000ccCredit0000000000000912160000000000000-1500000000000001111000000000000000000
S0000a2m2ccsettle0000000091016ccToRefun00000099000000000001111000000000000000000
S0000a2m2ccsettle0000000090916ccToRefun0000-99000000000001111000000000000000000
S0000a1m1sweep a100000000091216000000000000000-60470000000000019..1111000000000000
S0000a2m2sweep a20000000091216000000000000000-14880000000000019..1111000000000000
S0000a1m2sweep a100000000091216000000000000000-39700000000000019..1111000000000000
D0000000000000000000000000000001700000020260000000000000000000000000000000000000000
```

Appendix G: EnsureBill File-Based Updates

EnsureBill is a service by which card numbers and expiration dates can be updated as new information is available from the issuing banks. Clients must request enrollment in EnsureBill through their relationship manager.

Once enrolled and cards are submitted, clients will receive a report via email or sFTP indicating which cards have been updated and the related new details (new obfuscated card number or expiration date). The client system may need to be enhanced to read in the response files in order to update and reflect the most current card details.

Request files must be encrypted with the ProPay Public PGP key and signed by the client's private key. Then files should be uploaded as .CSV format via ProPay's hosted SFTP service, https://xfer.propay.com.

For clients submitting on their own, the following directories should be used:
Submitting request files: [username]\EnsureBill\Inbound
Retrieving response files: [username]\EnsureBill\Outbound

For software partners submitting on behalf of a client, the following directories should be used:
Submitting request files: [partnerUserName]\[ClientName]\EnsureBill\Inbound
Retrieving response files: [partnerUserName]\[ClientName]\EnsureBill\Outbound

Clients will need to provide their PGP public key in order for ProPay's solution to encrypt the response files prior to making them available via the SFTP server. Clients will then need to decrypt the file upon receipt in order to obtain the updated account number and expiration date information.

❖ **American Express cards are not eligible for automatic updates**
❖ **Not all card issuers provide updates due to several factors such as:**
  o The card issuer may not be integrated with the card brand networks to provide updates
  o Several Credit Unions are provided special BINs and do not update card brand networks
  o Some card types have special regulatory requirements prohibiting automatic updates

Request File Elements Defined:

Parameter	Type	Max	Description
UniqueIdentifier	String	50	A client's unique identifier for the update request. (Alphanumeric. Dashes and underscores are allowed)
PAN	String	18	The Primary Account Number (card number) for the request. The client must be enrolled for the card type to receive a successful update response.
expDate	String	4	The expiration date of the card requested for update. MMYY format.

Response File Elements Defined:

Parameter	Type	Max	Description
UniqueIdentifier	String	50	The client's unique identifier for the update request.
OldCardCardNumber	String	18	The obfuscated value of the card number prior to the update
OldCardExpDate	String	4	The value of the expiration date prior to the update
NewCardCardNumber	String	18	The obfuscated value of the card number after the update
NewCardExpDate	String	4	The value of the expiration date after the update
ResponseCode	String	2	The numerical response code indicating what kind of update/event occurred
ResponseCodeDescription	String		The description of the update or other response

Response Codes and Meanings

ResponseCode	Status	Description	Billable Response
1	Submitted	No Update/Successful submission	No
2	Update	Updated Expiration Date	Yes
3	Update	Updated Account Number, check exp date	Yes
4	Update	Account Closed	Yes
5	Update	Contact Cardholder	Yes
6	Error	Merchant is not registered with Card Brand	No
7	Error	Expiration Date Format Error	No
8	Error	Card Format Error	No
30	Removal	Removed Successfully	No
31	Error	Card Already Removed	No
32	Error	No Record Found to Remove	No

Appendix H: Global Processing

Australia

ProPay has partnered with the National Australian Bank to provide processing in Australia. Below are specific features specific to Australia

ProPay Account Creation

In addition to the elements required in ProPay API Manual 4.1 Account Creation Methods the following elements are required for the creation of accounts for Australian Processing.

❖ Bank Account Information Cannot be added or edited via the API and must be added online at www.propay.com or www.propaypayments.com for Card-Only Accounts

Account Identification and Validation Information

Element	Type	Max	Required	Notes
intlID	String		Required	The ID number of the document
documentType	String		Required	Valid Values are: ▪ DriversLicense ▪ Passport ▪ AustralianMedCard
documentExpDate	String		Required	Submitted as mmyy
documentIssuingState	String		Required*	*Required only for Driver's License Identification
medicareReferenceNumber	String		Required*	*Required only for Medical Card Identification
medicareCardColor	String		Required*	*Required only for Medical Card Identification

ProPay Account Bank Account Information

When adding Bank Account information to a ProPay account the "Routing" Number is the BSB Number submitted in xxx-xxx format and must be 7 characters including the '-' character long. The Account number is submitted in the following format: xxxxxxxx or xxxxxxxxx and must be 8 or 9 digits long

Processing Restrictions

The following restriction apply to AUD processing accounts:

▪ Tiers created to process AUD will be locked and only allowed to process AUD.
▪ Multi-Currency processing is not enabled.
▪ The only allowed card types for processing are MasterCard and Visa Branded card types.
▪ Bank Account processing is not available for AUD processing

Canada

ProPay has partnered with First Data Corporation to provide processing in Canada. Below are specific features specific to Canada.

Processing Restrictions

The following restriction apply to CAD processing accounts:

▪ Bank Account processing is not available for CAD processing

New Zealand

ProPay has partnered with the National Australian Bank to provide processing in New Zealand. Below are specific features specific to New Zealand.

ProPay Account Creation

In addition to the elements required in ProPay API Manual 4.1 Account Creation Methods the following elements are required for the creation of accounts for New Zealand Processing.

❖ Bank Account Information Cannot be added or edited via the API and must be added online at www.propay.com or www.propaypayments.com for Card-Only Accounts

Account Identification and Validation Information

Element	Type	Max	Required	Notes
intlID	String		Required	The ID number of the document
documentType	String		Required	Valid Values are: ▪ DriversLicense
documentExpDate	String		Required	Submitted as mmyy
driversLicenseVersion	String		Required*	The Version of the Driver's License

ProPay Account Bank Account Information

When adding Bank Account information to a ProPay account the "Routing" Number is the Bank Branch Number submitted in xxxxxx format and must be 6 digits long.

The Account number is submitted in the following format: xxxxxxxxx and be 9 digits long with the last two digits indicated the account type

00 – Checking
30 – Savings

Processing Restrictions

The following restriction apply to NZD processing accounts:

▪ Tiers created to process NZD will be locked and only allowed to process NZD.
▪ Multi-Currency processing is not enabled.
▪ The only allowed card types for processing are MasterCard and Visa Branded card types.
▪ Bank Account processing is not available for NZD processing

United States of America

ProPay has partnered with Wells Fargo, The Northern Bank of California and Meta Bank to provide processing in the United States. Below are specific features available for United States of America processing.

[To Be Added]