

ST Xpay PayPal Specification

Version 3.51

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1 Introduction

This guide covers the information required to process a PayPal transaction using SecureTrading Xpay. It should be read in conjunction with the ST Xpay API specification document. To obtain a copy of the ST Xpay API specification document please refer to section “Further reading” in this document.

This document pays specific attention to the fields used to create Xpay PayPalOrder and PayPalAuth requests and the fields returned in the responses.

The following sections detail the XML required to process a PayPal transaction. Before PayPal can be enabled on your account you must have signed up for a PayPal Business account. You can do this at www.PayPal.co.uk. Your SecureTrading account must also have been setup to accept PayPal transactions and SecureTrading must have set up API access with your PayPal Signature on your account. You must also have the relevant contracts in place with PayPal.

A PayPal request involves debiting a customer’s personal PayPal account and the merchant receiving the funds in their PayPal business account.

1.1 Configuring your PayPal account

In order to allow your PayPal business account to be accessed by SecureTrading for payment processing you will need to configure the account as follows. Before starting make sure that you have a PayPal business account and have completed the verification process (you can do this from the “Get Verified” link in your PayPal Business account).

The first step is to generate an API Username and Password:

1. Log in to your PayPal Business account.



2. Click “My Account”.
3. Click “Profile”.



- Under Account Information, click "API Access".



- Click "Request API Credentials".



- Check the "Request API signature" selection and click "Agree and submit".
- Your API Credentials will be displayed, make a note of these, then click "Done".

You will be taken back to the API Access page. Having now created an API Username and Password you can add API access to the account:

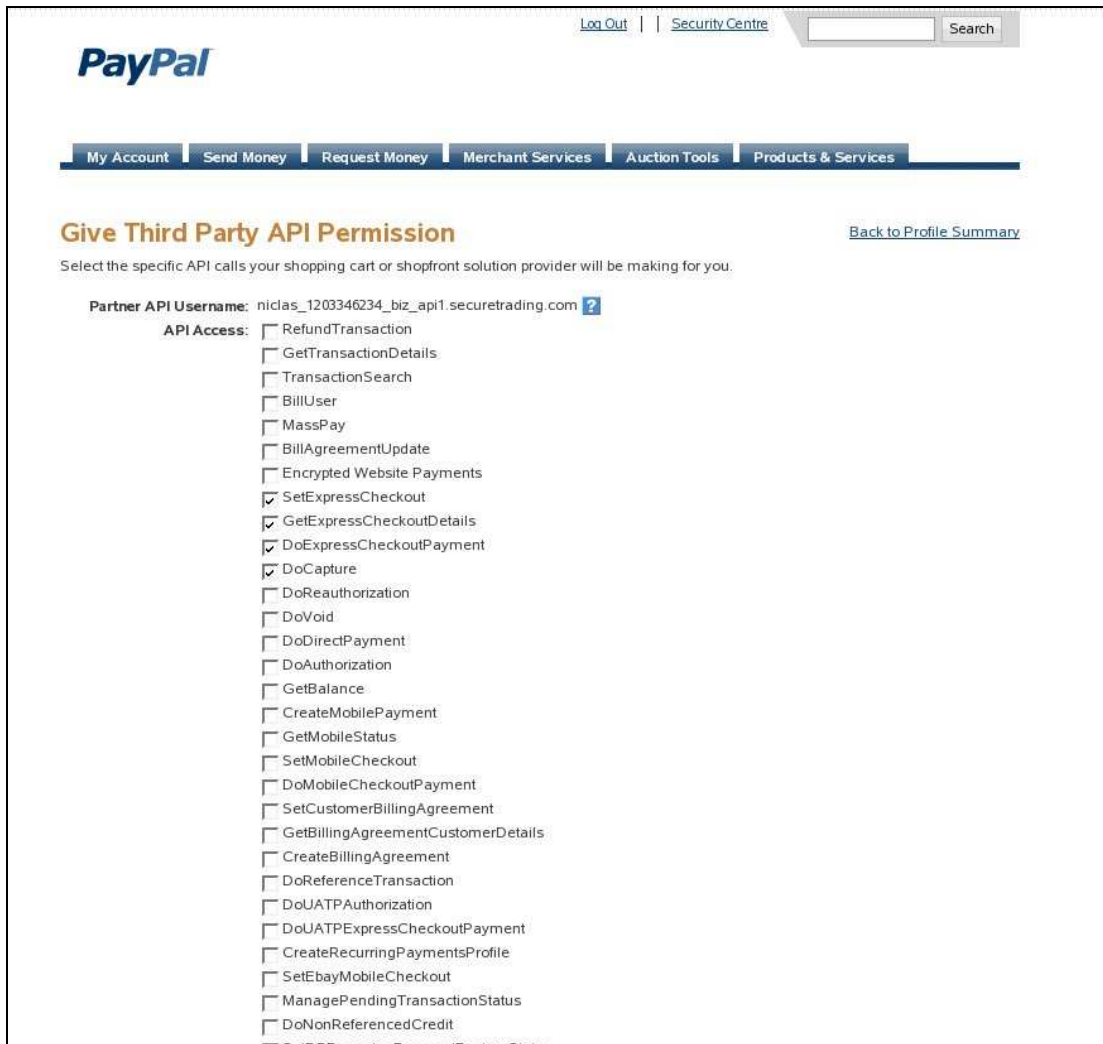
- Click "Grant API Credentials".



9. Click "Configure a custom API authorisation."
10. Enter the API Username you noted from the credentials page.
11. Check the "SetExpressCheckout", "GetExpressCheckoutDetails", "DoExpressCheckoutPayment" and "DoCapture" boxes. (See the image below).
12. Click "Submit".
13. Click "Give permission"

You have now configured the API access on your PayPal business account.

The following image shows which API permissions should be selected:



PayPal

Log Out | Security Centre

My Account | Send Money | Request Money | Merchant Services | Auction Tools | Products & Services

Give Third Party API Permission

[Back to Profile Summary](#)

Select the specific API calls your shopping cart or shopfront solution provider will be making for you.

Partner API Username: niclas_1203346234_biz_api1.securetrading.com

API Access:

- RefundTransaction
- GetTransactionDetails
- TransactionSearch
- BillUser
- MassPay
- BillAgreementUpdate
- Encrypted Website Payments
- SetExpressCheckout
- GetExpressCheckoutDetails
- DoExpressCheckoutPayment
- DoCapture
- DoReauthorization
- DoVoid
- DoDirectPayment
- DoAuthorization
- GetBalance
- CreateMobilePayment
- GetMobileStatus
- SetMobileCheckout
- DoMobileCheckoutPayment
- SetCustomerBillingAgreement
- GetBillingAgreementCustomerDetails
- CreateBillingAgreement
- DoReferenceTransaction
- DoUATPAuthorization
- DoUATPExpressCheckoutPayment
- CreateRecurringPaymentsProfile
- SetEbayMobileCheckout
- ManagePendingTransactionStatus
- DoNonReferencedCredit
- DoExpressCheckoutPayment

1.2 Requirements for PayPal transactions

Before you can submit PayPal transactions through SecureTrading you will need to sign up with PayPal and SecureTrading for a merchant account.

Once you have your PayPal account you will need to have your SecureTrading account updated with your PayPal API details (see 1.1). If you are still unsure how to obtain these details you can contact SecureTrading support department and they can assist you with these details.

The PayPal API details that SecureTrading require are as follows:

- API Username
- API Password
- API Signature (only signatures are allowed, API certificates are not supported by SecureTrading)

Performing a PayPal payment is split up into two distinct request types:

- "PAYPALORDER"
- "PAYPALAUTH"

Firstly a PAYPALORDER request will inform PayPal that a transaction is about to be processed and allow SecureTrading to return a redirect URL to which the Merchant will send the customer's browser to PayPal for authentication. The customer will then be able to enter their authentication details i.e. username and password on PayPal's secure servers.

A "PAYPALORDER" request must include a Return URL and a Cancel URL so that PayPal can redirect the customer back to the merchant's site after authentication.

Having authenticated the customer, PayPal will return them to the merchant's website using the Return URL. The second part of the process involves the merchant submitting a PAYPALAUTH request to complete the authorization.

The required fields for submitting a PAYPALAUTH request are explained within section 3 of this document.

2 PayPal Order

2.1 PayPal Order request

A "PAYPALORDER" request will setup an order on the PayPal system ready for authorization at a later time (when an order is requested and PayPal has issued a token that token is only valid for a maximum of 3 hours).

This request must include a Return URL to which PayPal will return the Customer after the authentication has been completed. A Cancel URL also needs to be included so that PayPal can return the customer to the Merchant's website if the Customer cancels the order once they have been authenticated, if the customer does not authenticate themselves with PayPal the Cancel URL or the Return URL is never called.

2.1.1 XML specification

PayPalOrder requests must have a <Request> tag in which the "Type" must be set to "PAYPALORDER":

```
<RequestBlock Version="3.51">
  <Request Type="PAYPALORDER">
```

The fields that are required to perform a PayPalOrder request are explained below and have to be set within the <Operation> tag:

```
<Operation>
  <Amount>1397</Amount>
  <Currency>GBP</Currency>
  <SiteReference>mystore1234</SiteReference>
  <ReturnURL>URL-encoded String</ReturnURL>
  <CancelURL>URL-encoded String</CancelURL>
  ...
</Operation>
```

- **<Amount>**
The Amount tag should contain the amount in base units (£10.00 would be 1000 in base units), this amount also relates to the currency for the transaction.
- **<Currency>**
The Currency tag should contain the currency in which you would like the transaction to be processed in.
- **<SiteReference>**
The SiteReference tag should contain the reference in which you will have been issued by SecureTrading once your signup process was complete.
- **<ReturnURL>**
The ReturnURL tag should contain the location on the Merchant's website where PayPal should redirect the customer to after PayPal have authenticated the customer credentials. Example: <ReturnURL>http://www.examplestore.com/pay.cgi</ReturnURL>
- **<CancelURL>**
The CancelURL tag should contain the location of the Merchant's website where PayPal should redirect the customer to if the customer cancels the payment process during the PayPal authentication process. Example: <CancelURL>http://www.examplestore.com/cancel.cgi</CancelURL>

The nature of a PAYPALORDER request is that the required tags are kept to a minimal and the customer contact/billing information is not submitted to PayPal as PayPal takes the billing details from the customer and will give the billing details back later on in the transaction, this will be explained within the PAYPALAUTH request type.

With this in mind the tags with the CustomerInfo container tag are not needed, they can be sent over but they will not be used and will not be stored.

```
<CustomerInfo>
  <Postal>
    <Name>
      <NamePrefix>Mr.</NamePrefix>
      <FirstName>Joe</FirstName>
      <MiddleName>A.</MiddleName>
      <LastName>Bloggs</LastName>
      <NameSuffix>CEng.</NameSuffix>
    </Name>
    <Company>Test Company</Company>
    <Street>A Street</Street>
    <City>A City</City>
    <StateProv>A State</StateProv>
    <PostalCode>A Postcode</PostalCode>
    <CountryCode>GB</CountryCode>
  </Postal>
  <Telecom>
    <Phone>0000111111</Phone>
  </Telecom>
  <Online>
    <Email>customer@testaddress.com</Email>
  </Online>
</CustomerInfo>
```

Unlike a standard Xpay “AUTH” request, for “PAYPALORDER” requests the <PaymentMethod> tags can be left empty. Since there are no card numbers, issue numbers and expiry dates required for PayPal transactions as this is all performed on the PayPal side, these tags should not contain any data.

For example, for a PayPal transaction the <PaymentMethod> tags would be sent as follows.

```
<PaymentMethod>
</PaymentMethod>
```

2.1.2 XML example

The following is an example of the XML request string sent to ST Xpay.

```
<RequestBlock Version="3.51">
  <Request Type="PAYPALORDER">
    <Operation>
      <Amount>1397</Amount>
      <Currency>GBP</Currency>
      <SiteReference>mystore1234</SiteReference>
      <SettlementDay>1</SettlementDay>
      <ReturnURL>http://www.examplestore.com/pay.cgi</ReturnURL>
      <CancelURL>http://www.examplestore.com/cancel.cgi</CancelURL>
    </Operation>

    <CustomerInfo>
      <Online>
        <Email>customer@testaddress.com</Email>
      </Online>
    </CustomerInfo>

    <PaymentMethod>
    </PaymentMethod>

    <Order>
      <OrderReference>Order0001</OrderReference>
      <OrderInformation>This is a test order</OrderInformation>
    </Order>
  </Request>

  <Certificate></Certificate>
</RequestBlock>
```

2.2 PayPal Order response

The PayPalOrder response is explained in the xml specification below.

2.2.1 XML specification

PayPalOrder responses will have a <Response> tag in which the "Type" must be set to "PAYPALORDER":

```
<ResponseBlock Live="TRUE" Version="3.51">
  <Response Type="PAYPALORDER">
```

Within the <Response> tags there will be <OperationResponse> and <Order> tags. The <OperationResponse> tag will contain the following:

```
<OperationResponse>
  <PayPalRedirectURL>https://www.paypal.com/cgi-bin/webscr?token=EC-
6VN239825L195552J&email=customer@testaddress.com&useraction=commit&cmd=
_express-checkout</PayPalRedirectURL>
  <TransactionReference>222-32-1</TransactionReference>
  <TransactionCompletedTimestamp>2008-03-19
15:18:22</TransactionCompletedTimestamp>
  <Result>1</Result>
  <PayPalToken>EC-6VN239825L195552J</PayPalToken>
</OperationResponse>
```

- **<PayPalRedirectURL>**
The PayPalRedirectURL tag will contain the URL that you need to redirect the customer to, to be authenticated by PayPal as long as the result is a 1.
As you can see from the example above the URL includes fields separated by a “&”; these have been used as a single & may cause problems for some mechants as this is a sensitive character, before redirecting the customer to this URL you are required to convert the “&”; back to its single original character “&” then redirect the customer to PayPal.
- **<TransactionReference>**
The TransactionReference tag will contain the SecureTrading transaction reference for the request.
- **<Result>**
The Result tag will contain the result of the PAYPALORDER request.

Result	Description
0	There was an error with the PayPal order
1	The PayPal order was successful (at this stage that is only the order not the payment)

- **<PayPalToken>**
The PayPalToken tag will contain a token which must be stored/available for the PayPalAuth request.
- **<Order>**
The <Order> container tag block will contain any order information sent to SecureTrading in the request. The <OrderInformation> and <OrderReference> tags contain this data.

2.2.2 XML example

The following is an example of the XML response string received from ST Xpay:

```
<ResponseBlock Live="TRUE" Version="3.51">
  <Response Type="PAYPALORDER">
    <OperationResponse>
      <PayPalRedirectURL>https://www.paypal.com/cgi-bin/webscr?TOKEN=EC-6VN239825L195552J&EMAIL=customer@testaddress.com&useraction=commit&cmd=_express-checkout</PayPalRedirectURL>
      <TransactionReference>222-32-1</TransactionReference>
      <TransactionCompletedTimestamp>2008-03-19
15:18:22</TransactionCompletedTimestamp>
      <Result>1</Result>
      <PayPalToken>EC-6VN239825L195552J</PayPalToken>
    </OperationResponse>
    <Order>
      <OrderInformation>This is a test order</OrderInformation>
      <OrderReference>Order0001</OrderReference>
    </Order>
  </Response>
</ResponseBlock>
```

3 PayPal Auth

3.1 PayPalAuth request

When the Customer has completed the authentication process on PayPal's secure server, they will be returned to the Merchant's website. PayPal will return the Customer to the URL set in the `<ReturnURL>` or `<CancelURL>` tags of the PayPal Order request.

If the Customer has been authenticated successfully but chooses to cancel the transaction then PayPal will return their browser to the CancelURL. The transaction process will terminate here.

If the Customer has been authenticated successfully and continues with choosing the payment details with PayPal then PayPal will return their browser to the ReturnURL. The post to the Return URL will contain name-value pair fields which need to be submitted in the PayPalAuth stage of the transaction.

The fields that will be returned to the merchant's website once PayPal have redirected the customer back are listed below.

Field	Description
token	The PayPal token
payerid	The ID that PayPal has assigned to the Payer

To complete the authorization stage of the transaction a "PAYPALAUTH" request must be sent to ST Xpay with the required tags, this will instruct PayPal to complete the payment.

3.1.1 XML specification

PayPalAuth requests must have a `<Request>` tag in which the "Type" must be set to "PAYPALAUTH":

```
<RequestBlock Version="3.51">
  <Request Type="PAYPALORDER">
```

The fields that are required to perform a "PAYPALAUTH" request are explained below and have to be set within the `<Operation>` tag:

```
<Operation>
  <Amount>1397</Amount>
  <Currency>GBP</Currency>
  <SiteReference>mystore1234</SiteReference>
  <PayPalToken>EC-6VN239825L195552J</PayPalToken>
  <PayerID>BW44PGJHSLDT1</PayerID>
  ...
</Operation>
```

- **<Amount>**
The Amount tag should contain the amount in base units (£10.00 would be 1000 in base units), this amount also relates to the currency for the transaction, this amount should also match the original amount in the PAYPALORDER request, SecureTrading will not stop any PAYPALAUTH which has a different amount than the PAYPALORDER request as this is the responsibility of the merchant.
- **<Currency>**
The Currency tag should contain the currency in which you would like the transaction to be processed in, this currency should match the currency that was processed in the PAYPALORDER request, SecureTrading will not stop any PAYPALAUTH which has a different currency than the PAYPALORDER request as this is the responsibility of the merchant.

- **<SiteReference>**
The SiteReference tag should contain the reference in which you will have been issued by SecureTrading once your signup process was complete.
- **<PayPalToken>**
The PayPal tag should contain the token that PayPal returned to the merchant when the customer was redirected back to the merchant's website.
This token will also be the same token that the merchant received when a PAYPALORDER request was processed.
- **<PayerID>**
The PayerID tag should contain the payerid value that the merchant would have received when the customer was redirected back to the merchant's website.

Just like the PAYPALORDER request the CustomerInfo tags are not needed as SecureTrading will retrieve the customer billing information and return this within the PAYPALAUTH response.

```
<CustomerInfo>
  <Postal>
    <Name>
      <NamePrefix>Mr.</NamePrefix>
      <FirstName>Joe</FirstName>
      <MiddleName>A.</MiddleName>
      <LastName>Bloggs</LastName>
      <NameSuffix>CEng.</NameSuffix>
    </Name>
    <Company>Test Company</Company>
    <Street>A Street</Street>
    <City>A City</City>
    <StateProv>A State</StateProv>
    <PostalCode>A Postcode</PostalCode>
    <CountryCode>GB</CountryCode>
  </Postal>
  <Telecom>
    <Phone>0000111111</Phone>
  </Telecom>
  <Online>
    <Email>customer@testaddress.com</Email>
  </Online>
</CustomerInfo>
```

These fields should not be submitted. Since PayPal will take the billing and shipping addresses from the Customer, there is no need for SecureTrading to store these fields.

Unlike a standard Xpay "AUTH" request, for "PAYPALAUTH" requests the <PaymentMethod> tags can be left empty. Since there are no card numbers, issue numbers and expiry dates required for PayPal transactions these tags should not contain any data.

For example, for a PayPal transaction the <PaymentMethod> tags would be sent as follows.

```
<PaymentMethod>
</PaymentMethod>
```

3.1.2 XML example

The following is an example of the XML string sent to ST Xpay.

```
<RequestBlock Version="3.51">
  <Request Type="PAYPALAUTH">
    <Operation>
      <Amount>1397</Amount>
      <Currency>GBP</Currency>
      <SiteReference>mystore1234</SiteReference>
      <PayPalToken>EC-6VN239825L195552J</PayPalToken>
      <PayerID>BWX4PGJHSLDT1</PayerID>
    </Operation>

    <CustomerInfo>
      <Online>
        <Email>customer@testaddress.com</Email>
      </Online>
    </CustomerInfo>

    <PaymentMethod>
      </PaymentMethod>

    <Order>
      <OrderReference>Order0001</OrderReference>
      <OrderInformation>This is a test order</OrderInformation>
    </Order>

  </Request>

  <Certificate></Certificate>
</RequestBlock>
```

3.2 PayPal Auth response

The PayPalAuth response is explained in the xml specification below.

3.2.1 XML specification

PayPalAuth responses will have a <Response> tag in which the "Type" must be set to "PAYPALAUTH":

```
<ResponseBlock Live="TRUE" Version="3.51">
  <Response Type="PAYPALAUTH">
```

Within the <Response> tags there will be <OperationResponse>, <Order> and <CustomerInfo> tags. The <OperationResponse> tag will contain the following:

```
<OperationResponse>
  <TransactionReference>222-32-2</TransactionReference>
  <TransactionCompletedTimestamp>2008-03-19
15:19:47</TransactionCompletedTimestamp>
  <AuthCode>Success</AuthCode>
  <Result>1</Result>
  <PayPalAddressStatus>Confirmed</PayPalAddressStatus>
  <PayPalTransactionID>PAYPALTRAN001</PayPalTransactionID>
  <PayPalToken>EC-6VN239825L195552J</PayPalToken>
  <SettleStatus>0</SettleStatus>
</OperationResponse>
```

- **<TransactionReference>**
The `TransactionReference` tag will contain the SecureTrading transaction reference for the request, this can be used to identify the transaction when searching the merchant Services area.
- **<TransactionCompletedTimestamp>**
The `TransactionCompletedTimestamp` tag will contain the time that the request was completed.
- **<AuthCode>**
The `AuthCode` tag will contain the auth code returned by PayPal for the transaction.
- **<Result>**
The `Result` tag will contain the result of the PYPALORDER request.

Result	Description
0	There was an error with the PayPal order
1	The PayPal order was successful (at this stage that is only the order not the payment)
2	PayPal declined the transaction

- **<PayPalToken>**
The `PayPalToken` tag will contain the token sent to SecureTrading by the Merchant for the `PayPalAuth` request.
- **<PayPalAddressStatus>**
The `PayPalAddressStatus` tag contains whether or not the address used for the PayPal transaction has been confirmed or not.
- **<PayPalTransactionID>**
The `PayPalTransactionID` tag contains PayPal's transaction reference.
- **<SettleStatus>**
The `SettleStatus` tag will return "0" for a transaction as the transaction will not be settled until the SecureTrading PayPal settlement has run.
- **<Order>**
The `Order` block will contain any order information sent to SecureTrading in the request. The `<OrderInformation>` and `<OrderReference>` tags contain this data.
- **<CustomerInfo>**
The `CustomerInfo` block will contain the Customer information fields that PayPal have returned to SecureTrading.
The tags that will be returned are as shown below, the tag may be there but could possibly be blank as PayPal may not have returned any data for that field.
Example `CustomerInfo` tags:

```

<CustomerInfo>
  <Postal>
    <Name>
      <FirstName>Joe</FirstName>
      <LastName>Bloggs</LastName>
    </Name>
    <Street>A Street</Street>
    <City>A City</City>
    <StateProv>A State</StateProv>
    <PostalCode>A Postcode</PostalCode>
    <CountryCode>GB</CountryCode>
  </Postal>
  <Online>
    <Email>customer@testaddress.com</Email>
  </Online>
</CustomerInfo>

```

3.2.2 XML example

The following is an example of the XML response string received from ST Xpay.

```
<ResponseBlock Live="TRUE" Version="3.51">

  <Response Type="PAYPALAUTH">

    <OperationResponse>
      <TransactionReference>222-32-2</TransactionReference>
      <TransactionCompletedTimestamp>2008-03-19
15:19:47</TransactionCompletedTimestamp>
      <AuthCode>Success</AuthCode>
      <Result>1</Result>
      <PayPalAddressStatus>Confirmed</PayPalAddressStatus>
      <PayPalTransactionID>PAYPALTRAN001</PayPalTransactionID>
      <PayPalToken>EC-6VN239825L195552J</PayPalToken>
      <SettleStatus>0</SettleStatus>
    </OperationResponse>
    <Order>
      <OrderInformation>This is a test order</OrderInformation>
      <OrderReference>Order0001</OrderReference>
    </Order>
    <CustomerInfo>
      <Postal>
        <Name>
          <FirstName>Joe</FirstName>
          <LastName>Bloggs</LastName>
        </Name>
        <Street>A Street</Street>
        <City>A City</City>
        <StateProv>A State</StateProv>
        <PostalCode>A Postcode</PostalCode>
        <CountryCode>GB</CountryCode>
      </Postal>
      <Online>
        <Email>customer@testaddress.com</Email>
      </Online>
    </CustomerInfo>
  </Response>
</ResponseBlock>
```

4 PayPal Error Messages

In the event that a transaction is declined or an error occurs during the PayPal transaction process an error message code will be generated by PayPal. A full reference of the error messages provided by PayPal can be found on PayPal's website. The error messages that may be returned by PayPal are listed under the "Express Checkout API Errors" section of the following address:

https://www.paypal.com/IntegrationCenter/ic_api-errors.html#GetTransactionDetailsAPIErrors

If you have any difficulty in debugging transactions with an error response, please contact SecureTrading Support for assistance with the transaction details.

5 Settlement

Settlement is where we SecureTrading send the authorized transactions to PayPal as an instruction for PayPal to transfer the moneys from the Customer account/card to the Merchants account.

Normally all authorized transactions would be accepted for settlement but PayPal perform secondary checks on all transactions requested to be settled.

Due to these secondary checks if PayPal finds an error with a transaction that has been submitted for settlement then PayPal will not allow the settlement of the transaction in question, and this transaction will be suspended on the SecureTrading payment system.

If a transaction has been suspended and you wish to find out why this transaction was suspended then you will need to contact our support department.

If we receive an error from PayPal that is in relation to their system and not specific to a transaction then this transaction will be re-scheduled for the next settlement run (this is usually the next day).

6 Further reading

This section contains contact information and further reading relevant to ST Xpay and PayPal transactions.

For further information please refer to the following documents:

In the general setup guides (<http://www.securetrading.com/general-setup-guides.html>) section of the SecureTrading website:

- Going live document:
- SecureTrading testing document:

In the Xpay documents (<http://www.securetrading.com/xpay.html>) section of the SecureTrading website:

- SecureTrading Xpay user guide
- SecureTrading Xpay API specification
- SecureTrading Xpay Query and Update

Bundled with the ST Xpay distribution:

- ST Xpay read me: readme.txt

New features and request types will be added to SecureTrading Xpay. Information on these features will be included in newer versions of this document or separate documentation will be provided.

The Xpay section can be found on the SecureTrading web site:

<http://www.securetrading.com/xpay.html>