



STPP Payment Pages

Setup Guide

The SecureTrading STPP Payment Pages system is where the Merchant is able to process e-commerce transactions safely and securely through SecureTrading's servers. There is no need for the Merchant to store or capture card details on their servers, as SecureTrading will handle this. The same holds for processing 3D Secure Transactions or transactions with 3rd parties, such as PayPal.

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About this Document

This document has been designed to provide the reader with a clear understanding of the STPP Payment Pages system. This includes a quick start section which provides simple and clear instructions for the Merchant to be able to go live as quickly as possible.

Conventions

Terminology conventions on “merchant” and “customer”

The supplier-customer chain within SecureTrading’s systems has two levels of customer, SecureTrading therefore make a clear definition between the two:

- Merchant relates to a customer of SecureTrading that uses the system to process requests, such as those for online payments.
- Customer relates to a customer of the merchant.

Note on bulleting conventions

There are two forms of bulleting conventions included within this document.

- Notes with useful but not Mandatory information for your consideration, these are displayed using the SecureTrading cog.



Please note

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- Notes that are requirements and need to be followed in order to prevent future issues with your code are indicated with an exclamation mark and are outlined in italics.



It is imperative that

System Time



SecureTrading’s System Time is in Greenwich Mean Time (GMT).

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1 Introduction

The purpose of this document is to provide the reader with an understanding of the STPP Payment Pages. There is a Quick Start section for Merchants who wish to go live as soon as possible as well as more detailed sections which describe the configuration available in greater detail.

1.1 What are Payment Pages?

The SecureTrading Payment Pages are where the customer is transferred from the Merchant's Website to SecureTrading's servers in order to make their payment.

Once on SecureTrading's servers, there are different types of payments that can be processed. For example, if a Merchant has PayPal enabled on their account, then SecureTrading will handle the redirect to PayPal's servers in order for the customer to make the payment through their PayPal account.

For standard authorisations, the customer will input their credit/debit card details on SecureTrading's servers, including the three-digit security code (4 if AMEX) and expiry date. SecureTrading will connect securely with the Merchant's Acquiring Bank that will authorise the transaction along with the customer's card issuer. To complete the payment a success/failure page is displayed to the customer depending on the result of the transaction.

1.2 Who Will Use Payment Pages?

Merchants using the Payment Pages are ones who do not wish to process any payment details on their own servers. Using the Payment Pages removes the need for the Merchant to have their own secure server as the customer's card details are handled by SecureTrading.

Merchants who do not have a great amount of technical knowledge would be able to use the Payment Pages. All the Merchant needs to do is transfer the customer to SecureTrading's servers to perform the payment. The rest of the process will then be handled by SecureTrading's systems.

As a Payment Service Provider (PSP), SecureTrading are required to undergo Payment Card Industry Data Security Standards (PCI DSS) accreditation. If a Merchant was to process the customer's payment details on their own server, they would also be required to undergo this accreditation process. Merchants who do not wish to undergo full PCI accreditation use Payment Pages. Please note that this does NOT apply to Mail Order/Telephone Order payments as this type of payment would still require a Merchant to undergo their own accreditation.

1.3 Parties Participating

There are a number of different parties that are included when performing transactions through the SecureTrading Payment Pages system. These parties are detailed below.

- **The Customer** - The purchaser of goods or services. They will log-on to the Merchant's website and process an order. They will then process a payment using their own details, usually by supplying their credit or debit card.
- **The Merchant** – Seller of goods or services. They require their own website and will transfer the customer to SecureTrading's servers in order to complete payment. The Merchant will be exchanging goods or services online for the Customer to purchase using Payment Pages.

- **SecureTrading** – Facilitate the transaction. The Customer will be transferred to SecureTrading's secure servers where they will input their payment details. SecureTrading validate what was submitted then connect securely to the acquiring bank in order to perform authorisation.
- **The Acquiring Bank** – Sends the transaction to the customer's card issuer for authorisation. They also send the address information to a separate supplier to check they match the address registered for the card.
- **The Customer's Card Issuer** – As mentioned above, the Card Issuer performs the authorisation by running checks such as if the card inputted by the customer has not been reported stolen and that card has available funds. It is at this stage that the Security Code and Address (**page 21**) checks are also performed based on what was submitted.

If the transaction is performed using 3D Secure, then the customer is transferred to their card issuer's server where they will enter their password for online transactions.

- **Additional 3rd Parties** – If enabled on the Merchant's account, the process can include additional 3rd parties, such as PayPal. For transactions of this nature, SecureTrading perform all the integration with the 3rd Party. The Merchant's part in the process will not alter. All they need to do is transfer the Customer to SecureTrading's secure servers. The remainder of the transaction will be handled between SecureTrading and the 3rd Party.

1.4 Pre-requisites

The pre-requisites that the Merchant will need to have completed in order to begin processing payments through SecureTrading's STPP Payment pages are outlined below.

1.4.1 Internet Merchant Account

An Internet Merchant Account is required if the Merchant wishes to process online e-commerce transactions. SecureTrading have relationships in place with certain Acquirers and will therefore be able to assist the Merchant. For contact details of our sales team, please refer to section **13.2 SecureTrading Sales** on **page 39**.

1.4.2 SecureTrading Account

In order to process transactions through SecureTrading's servers, the Merchant will need to have a SecureTrading account and have a SecureTrading site reference. A SecureTrading site reference is supplied to the Merchant on sign up and is a way of uniquely identifying their account when they send any data to SecureTrading. It should also be quoted with any correspondence with SecureTrading.

For more information on becoming a SecureTrading merchant, please contact our Sales team (see **13.2 SecureTrading Sales** on **page 39**). If you believe you already have a SecureTrading account, but do not know your Site Reference, please contact our Support Team (see **13.1 SecureTrading Support** on **page 39**).

The Merchant will have both a "live" and a "test" account. For the remainder of this document, we will assume that the Merchant's test site reference is **test_site1234** and their live account is **site1235**.

1.4.3 Merchant's website

The Merchant will require their own website or web page in order to transfer the customer to SecureTrading's servers.

1.4.4 IP Ranges

The Merchant may need to open their firewall for SecureTrading's IP Ranges.

Current IP Ranges can be viewed at <http://webapp.securetrading.net/ips.html>

2 Quick Start Guide

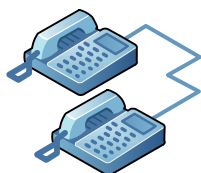
Although some Merchants wish to implement the SecureTrading Payment Pages by customizing the look and feel, along with the data submitted, others wish to go live as soon as possible. This section provides the reader with a Quick Start overview of enabling payments through SecureTrading Payment Pages.



Please note that this section provides a brief overview of the process of setting up the STPP Payment Pages system. The stages described are detailed further within this document.

This Quick Start guide assumes that the Merchant wishes to go live as soon as possible, and therefore no customization of their payment page is required and they will be using the default Payment Pages.

2.1 Contact SecureTrading and Sign-Up!



The first step of the process is to obtain a merchant account with an acquiring bank and then sign up with SecureTrading. SecureTrading can help with obtaining a merchant id as they have relationships in place with certain acquirers.

The Merchant will need to contact SecureTrading's sales team in order to sign-up, contact details are in section **13.2 SecureTrading Sales** on page 39, or you can find them on our website (<http://www.securetrading.com/contact.html>).

2.2 Setup Website



Once the Merchant has successfully setup an account with SecureTrading, they will be provided with two Site References. One for testing and one for live transactions. The Site Reference is used to uniquely identify the Merchant's account in SecureTrading's system.

In order to do this successfully, the Merchant needs to include a link to a URL such as the following on their page:

```
https://payments.securetrading.net/process/payments/choice?site  
reference=test_site1234&currencyiso3a=USD&mainamount=100.00&ver  
sion=1
```

The fields that can be configured by the Merchant are highlighted in **bold**. SecureTrading recommend to test setup prior to going live, so the Site Reference field will be for the test site reference supplied during sign-up (in our example, it is test_site1234). The **currencyiso3a** indicates the currency (for a list of currencies, please refer to <http://www.securetrading.com/support/currency-codes.html>). The **mainamount** field contains the amount the Merchant wishes the transaction to be in main units (for example \$100 would be 100.00) and the **version** will always be 1.



Please note The Merchant can download **orderpage.html** from SecureTrading's website (<http://www.securetrading.com/support/downloads-stpp.html>), which is a form page they can use to perform a post to SecureTrading.

For more information on configuring your website, please refer to section **5 Posting Information** on **page 17**. The Merchant can perform a test transaction using the test details in section **12 Testing** on **page 38**.

2.3 Go Live!



Now that the Merchant has successfully setup their site to perform a test transaction, they can now begin processing live transactions.

The Merchant does not need to notify SecureTrading if they wish to go live. All that is required is that the Merchant changes the site reference they are using to their live one. For the example in section 2.2 above, the link would need to be updated to something resembling the one below.

```
https://payments.securetrading.net/process/payments/choice?site  
reference=site1235&currencyiso3a=USD&mainamount=100.00&version=  
1
```

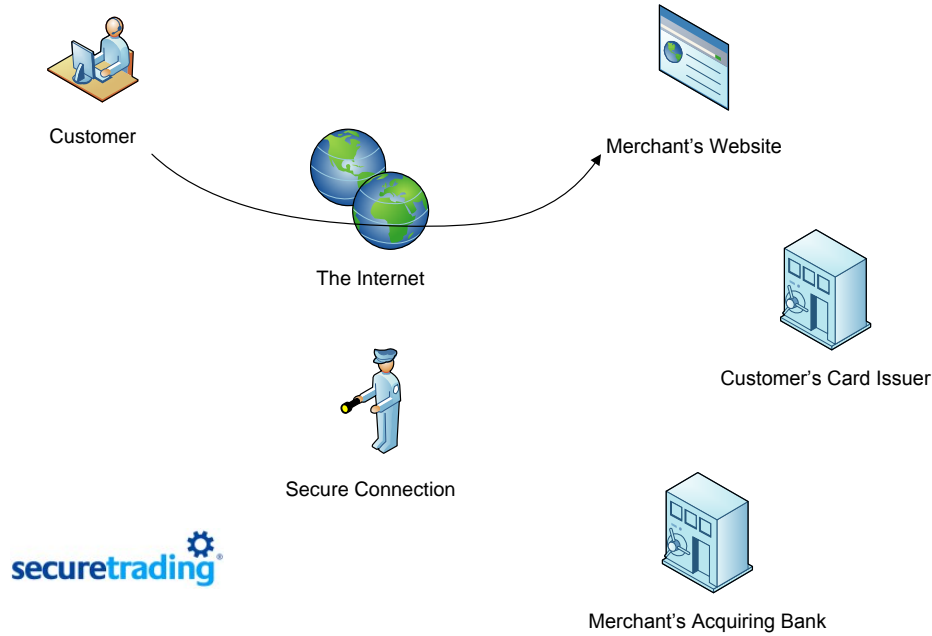
The data changed is marked in **bold**. For our example, the live site reference is **site1235**. For more information on switching to the Merchant's live account, please refer to section **11 Going Live** on **page 36**.

If the Merchant is then unsure of anything, then they can contact SecureTrading support (please see **13.1 SecureTrading Support** on **page 39**).

3 Payment Pages Standard Authorisation

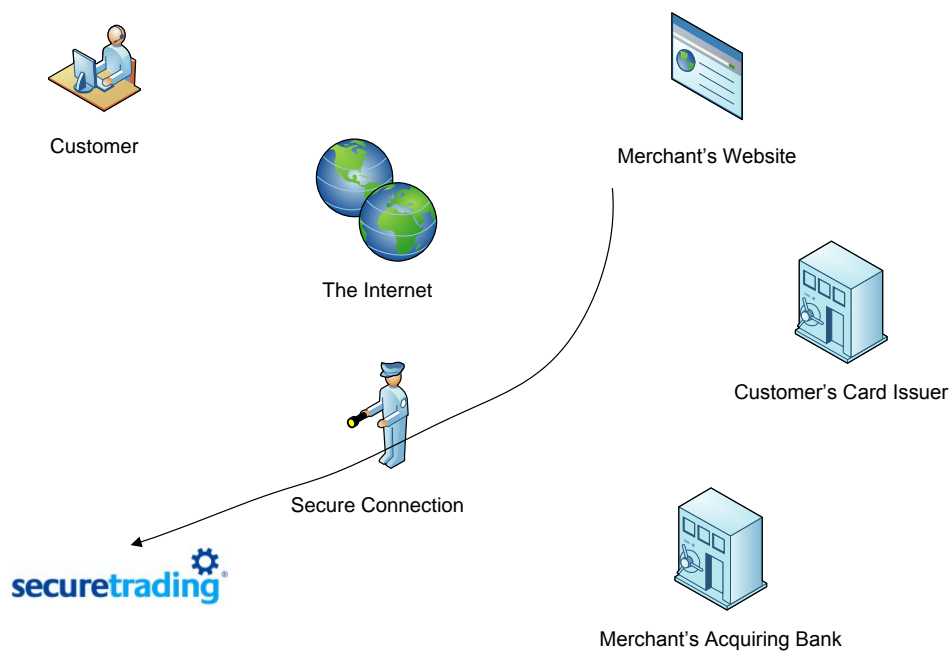
The purpose of the Payment Pages system is to accept a payment from a customer securely and to process it on behalf of the Merchant. This section provides the reader with a detailed breakdown of the stages within a standard e-commerce authorisation using STPP Payment Pages.

3.1 Customer Logs on to Merchant's Website



The first step of the process involves the customer logging on to the Merchant's website. The Merchant's website will be designed to capture the customer's order, and have an option to pay via SecureTrading.

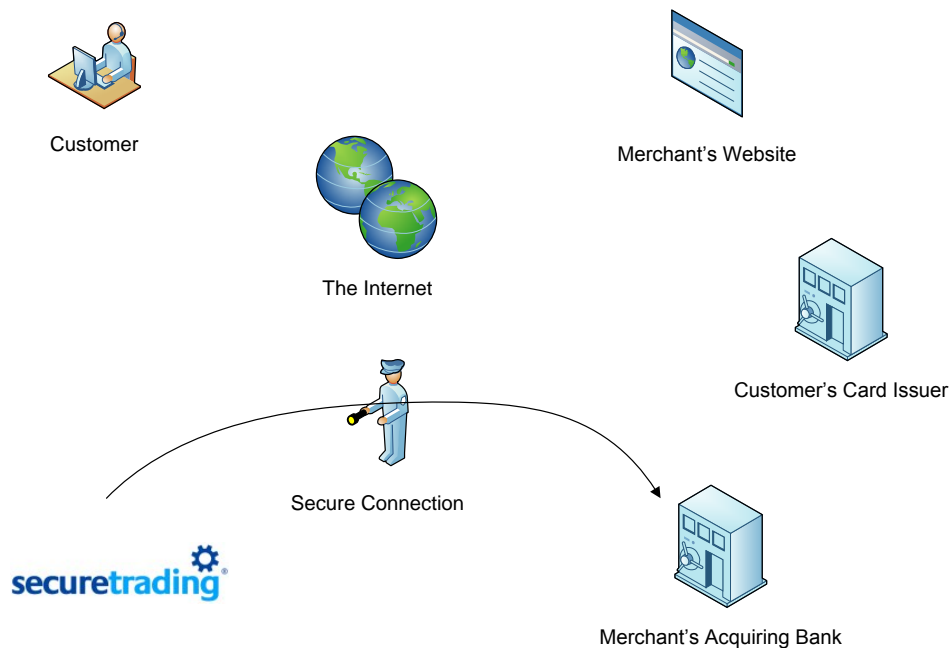
3.2 Transfer to SecureTrading's Secure Servers



The next step is the redirection which takes place via a HTTP/HTTPS post to SecureTrading's payment gateways. A payment page will be displayed allowing the Customer to enter their payment details: credit/debit card, PayPal, UKASH or any one of the supported payment options supported.

At this point the Merchant's website will need to be setup to submit details to SecureTrading's servers. This can include details regarding the Customer's order, such as their address details. The minimum fields required to process a payment are amount, currency and the Merchant's site reference. For more information on the fields allowed, please refer to **6 Allowed Fields** on **page 21**.

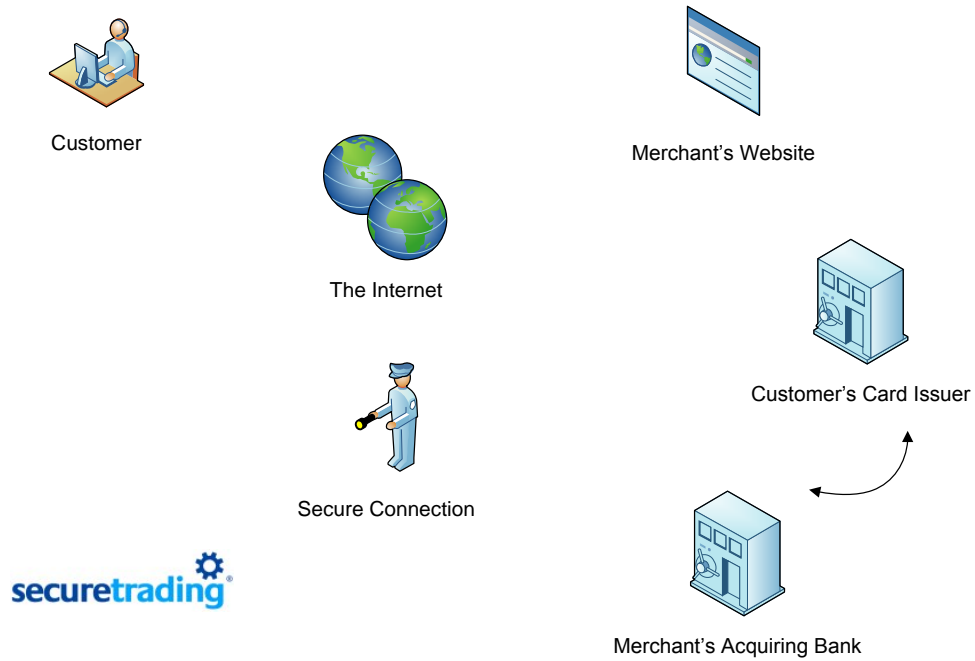
3.3 SecureTrading connects to Acquiring Bank



Once the Customer has entered their payment details, SecureTrading will perform validation checks on the details supplied.

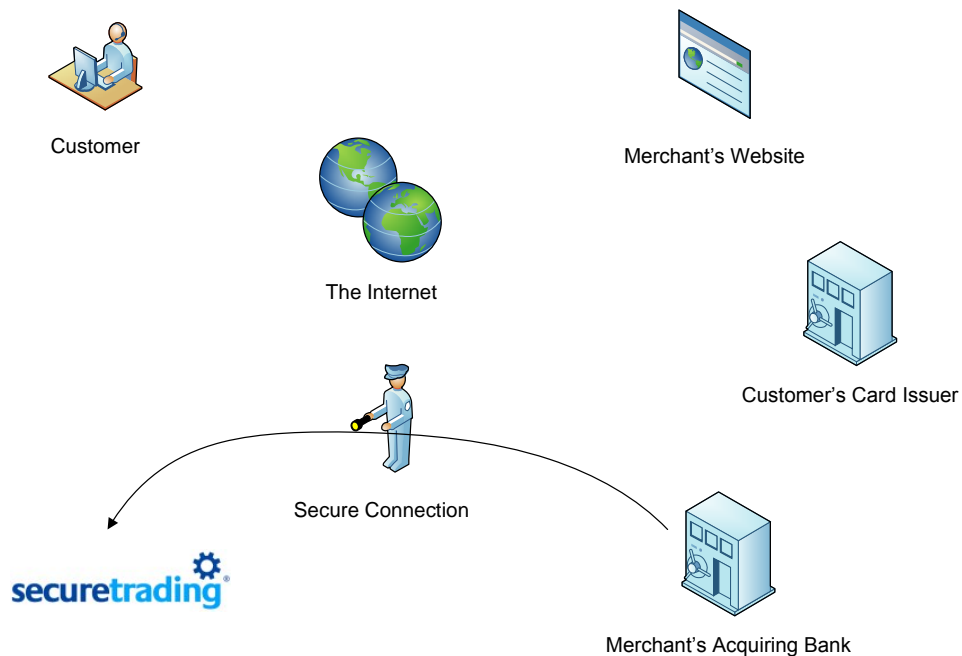
If all validation checks pass, SecureTrading will connect securely to the Merchant's Acquiring Bank for authorisation. If the validation checks fail, the Customer is redisplayed the Payment Page along with an error message stating that their attempt failed.

3.4 Authorisation performed by Acquiring Bank and Card Issuer



The authorisation process is performed between the Merchant's Acquiring Bank and the Customer's Card Issuer. It is at this point that the Address Checks, CVV2 checks and availability of funds are done.

3.5 Result Sent from Acquirer to SecureTrading

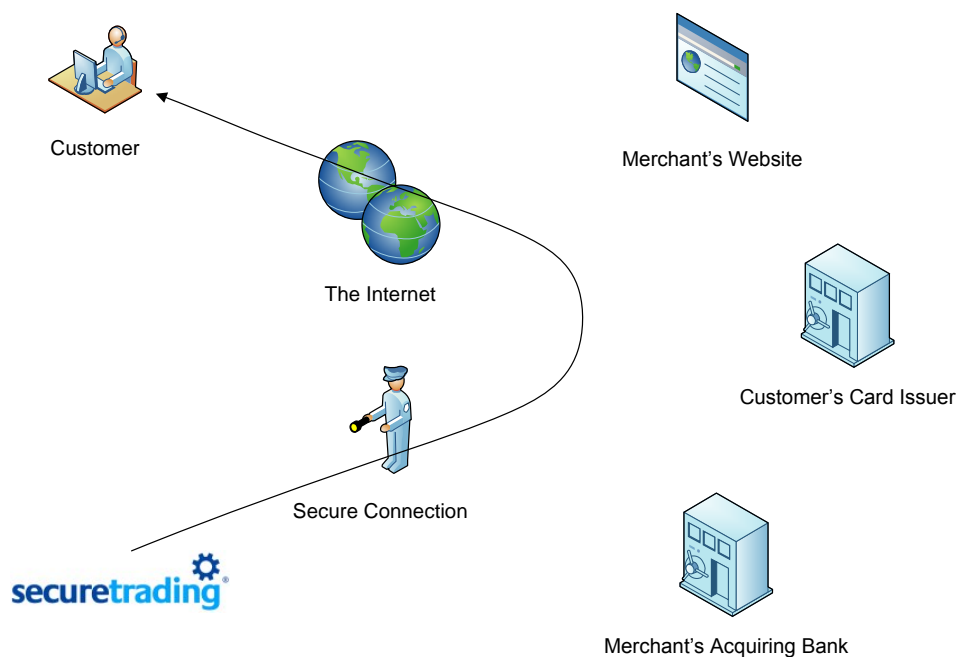


If the customer's details are approved by the Card Issuer and the Acquiring Bank, then an authorisation code is returned to SecureTrading, along with the results of the Address and Security Code checks.



Please note that although a transaction has been Authorised, it does not mean that the monies will have been transferred to the Merchant's bank account. It is simply that the money is reserved against the customer's account until Settlement is run. For more information on the Settlement process, please refer to **4 Settlement** on **page 15**.

3.6 SecureTrading interpret response and display result to Customer



The response page that is displayed to the customer is dependent on whether the transaction was authorised or not. If the transaction is authorised, then a success page will be displayed, and if the transaction has failed, then a failure page will be displayed.

3.7 Redirect to Merchant's Website

As an alternative to displaying the success/failure pages on SecureTrading's servers, the Merchant has the ability to perform 302 redirects back to their site upon completion of a Customer's order.

The Customer's browser is redirected to a URL on the Merchant's server, and can include fields submitted in a HTTP GET request.



Please note that by using the Redirect, if the URL the Customer is being returned to is not on https, the Customer will receive a "You are about to leave a secure connection" after inputting their card details.

In order to setup the redirects, the Merchant will need to contact SecureTrading support (see **13.1 SecureTrading Support** on **page 39**).

The redirect can be setup for the following cases:

- SUCCESS – Payment is successfully authorised (**errorcode** = 0).
- DECLINE – Payment is declined (**errorcode** = 70000).
- ERROR –Error when payment is attempted (**errorcode** that is not 0 or 70000).

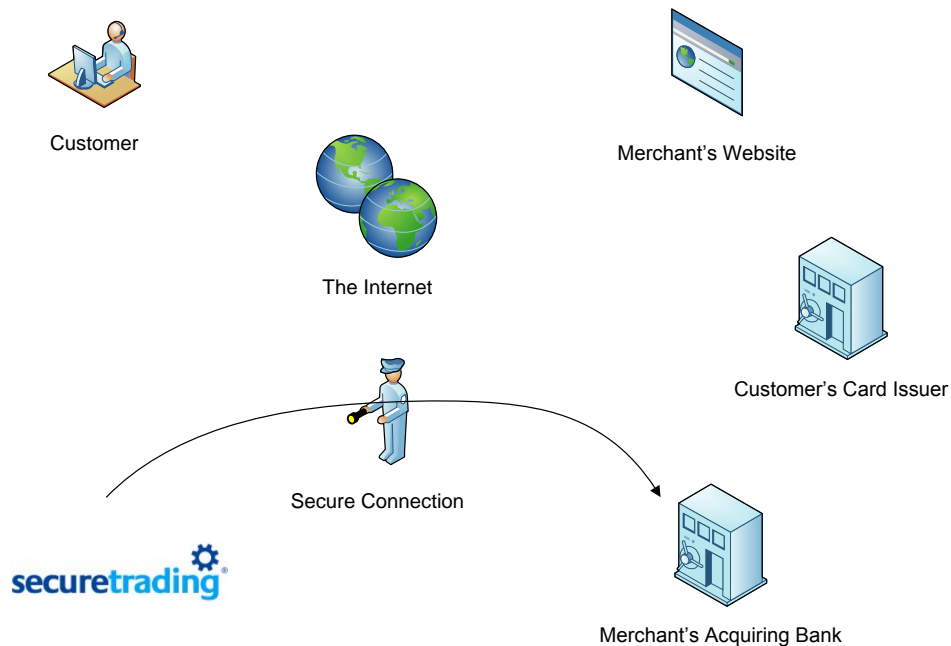
4 Settlement

Once a transaction has been authorised, the monies are then reserved against the customer's account for up to seven days awaiting settlement. The instruction to transfer the monies happens daily when SecureTrading send a batch of all transactions that are pending settlement to the Merchant's acquiring bank. This process is called Settlement and is outlined below.



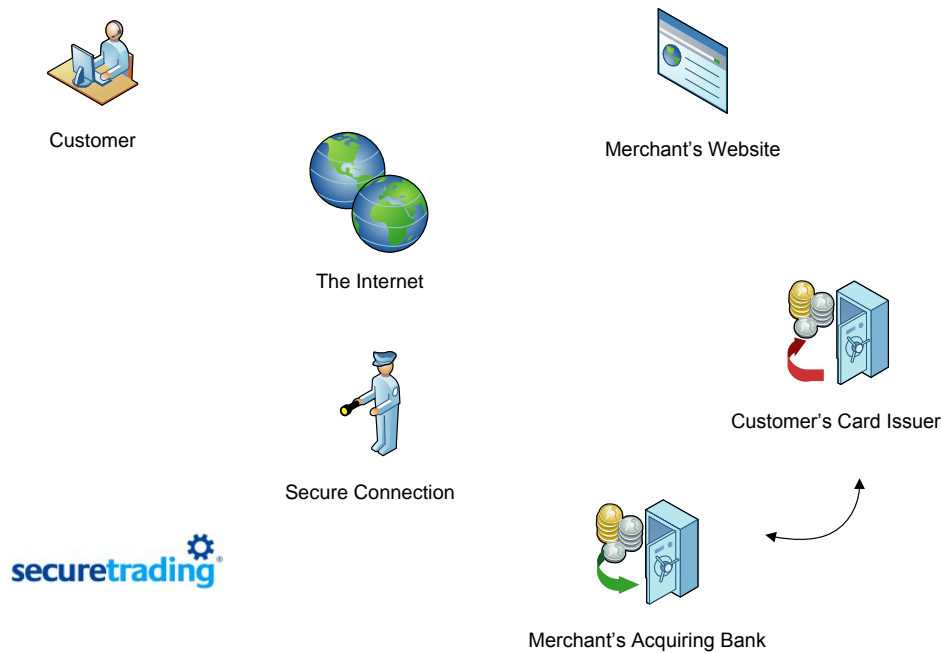
Please note Settlement can be deferred for certain transactions. This can be requested by the Merchant (**6.5 Settlement Deferral** on **page 23**), or transactions may be deferred by SecureTrading's internal fraud checker system. The Merchant should therefore check their My-ST screens daily to check the status of their transactions. There is a document available on SecureTrading's website which details using the My-ST area. (<http://www.securetrading.com/support/downloads-stpp.html>)

4.1 SecureTrading submit settlement file to the Acquiring Bank



The initial phase of the settlement process happens when SecureTrading submit a file to the Acquiring Bank. The file contains all the transactions pending settlement and this occurs daily.

4.2 The monies are transferred to Merchant's bank account



When the Acquiring bank has received the Settlement File from SecureTrading, the Acquirer then commences the process of physically settling the money into the Merchant's nominated Bank Account. The time frame of this payment differs from Acquirer to Acquirer and is beyond SecureTrading's control. It usually takes no longer than a maximum of 3 days excluding weekends and Bank Holidays.



The authorised funds are only reserved for up to seven days, after which, if not claimed in the settlement process, they are released back onto the customer's card. So, just because a transaction is authorised, the Merchant should not assume that they will receive the funds and it is important that the transaction My-ST screens are checked so that the status of their payments on the SecureTrading System can be seen at a glance.

5 Posting Information

In order to transfer their customer to SecureTrading's payment gateways, the Merchant will need to perform a HTTP or HTTPS Post to the Payment Pages system. Based on the information posted, the system will then interpret this information and display the appropriate page to the customer.

5.1 Configuring the HTTP Post

Once the Merchant has their own account setup and are ready to begin testing, they will need to setup a way of transferring their customer from their site to SecureTrading. Two examples are outlined within this section.



Please note that for both examples, they will be for the test site reference, **test_site1234**.



Please note for both examples, only the required fields are included, more information on these fields can be found in **6.1 Required Fields** on page **21**.



Please note the system does not support multiple fields with the same name, unless explicitly stated.

5.1.1 Option 1: Link to SecureTrading

The Merchant is able to link directly to their payment page. All that is required is that from the Merchant's side is they can place a link which resembles the following (the fields that the Merchant can configure are marked in **bold**):

```
https://payments.securetrading.net/process/payments/choice?site  
reference=test_site1234&currencyiso3a=USD&mainamount=100.00&ver  
sion=1
```

The above example includes the minimum required fields the Merchant needs to for their link. For more information on these fields or the additional fields the Merchant can include, please refer to **Allowed Fields** on page **21**.

As an example of including additional fields, if the Merchant wishes to also submit the **billingpostcode** within their post, then they would include the following additional data (marked in **bold**) in their URL:

```
https://payments.securetrading.net/process/payments/choice?site  
reference=test_site1234&currencyiso3a=USD&mainamount=100.00&ver  
sion=1&billingpostcode=EX123PL
```

The **billingpostcode** field is added to the end of the link with an ampersand, the field name and then the value, in this case EX123PL. This is how the Merchant would add any additional fields, as long as they are allowed ones.

5.1.2 Option 2: Perform a post

Another option as opposed to simply including a link to the Merchant's Payment Page, is to setup a post to the Payment Page. This can be achieved by creating a form on the Merchant's webserver that will submit the information. If you copy the below to a html file, and open that page in your web browser, you will be displayed a button that will post the information to SecureTrading's servers.

```
<html>
<head>
</head>
<body>
<form method="post"
action="https://payments.securetrading.net/process/payments/cho
ice">
<input type="hidden" name="sitereference"
value="test_site1234">
<input type="hidden" name="currencyiso3a" value="USD">
<input type="hidden" name="mainamount" value="100.00">
<input type="hidden" name="version" value="1">
<input type="submit" value="Pay">
</form>
</body>
</html>
```

The above example includes the minimum required fields the Merchant needs to for their link. For more information on these fields or the additional fields the Merchant can include, please refer to **Allowed Fields** on page 21.

As an example of including additional fields, if the Merchant wishes to also submit the **billingpostcode** within their post, then they would include the following additional line of code (marked in **bold**) in their html:

```
<html>
<head>
</head>
<body>
<form method="post"
action="https://payments.securetrading.net/process/payments/cho
ice">
<input type="hidden" name="sitereference"
value="test_site1234">
<input type="hidden" name="currencyiso3a" value="USD">
<input type="hidden" name="mainamount" value="100.00">
<input type="hidden" name="version" value="1">
<input type="hidden" name="billingpostcode" value="EX123PL">
<input type="submit" value="Pay">
</form>
</body>
</html>
```

Adding the **billingpostcode** to the Merchant's form requires adding a line similar to the one marked in **bold** above. This line can be repeated by the merchant for additional field names, as long as they are allowed ones.



Please note The Merchant can download **orderpage.html** from SecureTrading's website (<http://www.securetrading.com/support/downloads-stpp.html>), which is a form page they can use to perform a post to SecureTrading.

5.2 The result of the post

If the Merchant has successfully completed the setup of the post, then either the link or the button when pressed should return a page similar to the one below:

The above is a copy of the default page with default styling. On this page, the customer will then select which payment type they wish to perform. If the Customer wishes to process a credit/debit card transaction, they will be redirected to page similar the one below:

5.3 Testing

The Merchant can test the different payment options through their Payment Pages using the testing details found in section **12 Testing** on **page 38** of this document. SecureTrading recommend that the Merchant test their system thoroughly before deciding to switch their account live.

6 Allowed Fields

This section of the document covers the fields that can be submitted from the Merchant's website to SecureTrading.

For the examples provided in previous examples, only the required fields are included. SecureTrading recommend that the Merchant submits as much information as possible for their transactions, as they can help the merchant gain more information about a Customer which can then use to tackle fraud.

This section of the document also provides the reader with the additional field names the Merchant can include within their post, and also the benefits of including this information.



It is important that the field names submitted match those within the following tables, as these are the ones that are recognised by SecureTrading's servers. The field names are case sensitive.

6.1 Required Fields

The table below includes the required field names the Merchant will need to pass to SecureTrading's system in order to display their Payment Page.

Field Name	Details
sitereference	The unique SecureTrading site reference that the Merchant receives when they sign-up.
currencyiso3a	The currency that the transaction will be processed in. There is a list of available currencies on our website (http://www.securetrading.com/support/currency-codes.html).
mainamount	The amount of the transaction should be in main units, with no commas, so £1000 would be 1000.00 Currencies such as Japanese Yen which do not require a decimal place can be submitted without. So 1000 Yen would be 1000
version	This value will be set to 1.

6.2 Address Verification System (AVS)

The Address Verification System provides the Merchant with a further level of security to a transaction as it allows them to carry out checks regarding the validity of the address information supplied by the Customer in relation to the card used.

The availability of the Address Verification System is dependent on the Acquiring Bank and Card Issuer. Please contact SecureTrading for further information on the supported acquirers and card types (e.g. Visa, MasterCard etc.).

6.2.1 What is Address Verification?

A Customer's Billing Address is checked against the address that the Card Issuer holds for that card. The Acquiring Bank will indicate whether there is a match between the entered address and the card address on record.

When obtaining an authorisation for a transaction, SecureTrading will pass the customer's address (if provided) to the Acquiring Bank along with the details required for authorisation.

6.2.2 Address Field Names

In order to perform Address Verification on a card, the Merchant will need to include the address details within their post.



Please Note In order for the AVS checks to be performed, it is the **Billing** Address details that need to be included.

The table below includes the various field names the merchant can pass to SecureTrading's system in order for the address details to be checked.

Field Name	Details
billingpremise	The house number or first line of the Customer's Billing Address.
billingstreet	The street entered for the Customer's Billing Address
billingtown	The town entered for the Customer's Billing Address.
billingcounty	The county entered for the Customer's Billing Address.
billingpostcode	The postcode entered for the Customer's Billing Address.

6.3 Billing Fields

In addition to the Address fields required for the Address Verification System (AVS) checks outlined above, the Merchant can also submit the following billing fields through SecureTrading's systems.

Field Name	Details
billingprefixname	This will be the Customer's prefix. The options available are Mr, Mrs, Miss, Dr, Ms, Prof and Rev.
billingfirstname	The Customer's first name.
billinglastname	The Customer's last name.
billingcountryiso2a	The Customer's country for their billing address. This will need to be in iso2a format. For a list of countries, please see http://webapp.securetrading.net/countrycodes.html
billingemail	The Customer's e-mail address. This can then be used for correspondence with the customer.
billingtelephone	The Customer's telephone number. Requires <code>billingtelephonenumber</code> to

Field Name	Details
	be specified.
billingtelephonenumber	The type of telephone number inputted. The options available are: H = Home M = Mobile W = Work Required if billingtelephone is entered.

6.4 Customer Fields

The Merchant may also submit details with regards to an additional address for the Customer. This usually relates to the delivery address. These fields are included below.

Field Name	Details
customerpremise	The house number or first line of the Customer's additional/delivery address.
customerstreet	The street entered for the Customer's additional/delivery address
customertown	The town entered for the Customer's additional/delivery address.
customercounty	The county entered for the Customer's additional/delivery address.
customerpostcode	The postcode entered for the Customer's additional/delivery address.
customertelephone	The Customer's telephone number associated with their additional/delivery address. Requires customertelephonenumber if entered.
customertelephonenumber	The type of telephone number entered. The options available are: H = Home M = Mobile W = Work Only required if customertelephone is entered.
customercountryiso2a	The Country for the Customer's additional/delivery address. This will need to be in ISO2A format. For a list of Country Codes, please see http://webapp.securetrading.net/countrycodes.html
customeremail	The Customer's e-mail address associated with their additional/delivery details. This can then be used for correspondence with the Customer.

6.5 Settlement Deferral

The Merchant is able to defer settlement on their transactions by submitting **settleduedate** through their Payment Pages system. This field is detailed below (for more information on settlement, please see **4 Settlement** on **page 15**):

Field Name	Details
settleduedate	The date the Merchant wishes for the transaction to settle. This needs to be in the format YYYY-MM-DD.



Please note the due date should be a maximum of 7 days after the authorization.

6.6 Settlement Status

The Merchant can set the status of a transaction by submitting **settlestatus** through their Payment Pages system.

Field Name	Details
settlestatus	This value relates to the status of the transaction. The possible vales are: 0 – Pending Settlement. 1 – Pending Settlement, manually overridden. 2 – Suspended. 100 – Settled (this is only currently available for certain acquirers. For more information, contact SecureTrading Support). The default value is 0.



Please note if 100 is submitted for **settlestatus**, the transaction is settled immediately when the transaction is authorised.

6.7 Order Reference

The Merchant can pass their reference to be stored in the database.

Field Name	Details
orderreference	The Merchant's own reference for the transaction. This can be useful when matching transactions to orders within the Merchant's system.

6.8 Charset

In order for data to be transmitted the Customer's browser encodes it using a character encoding. SecureTrading's servers need to know this encoding (or charset) in order to correctly decode the data. Many browsers do not provide this information, in which case SecureTrading will assume the character encoding is ISO-8859-1. This is compatible with all

browsers but can result in some characters (in particular non-western characters) being interpreted incorrectly.

The Merchant can tell the browser to specify the correct charset by including a hidden field “_charset_” within their HTML form. Browsers will automatically fill the value of this field with the charset they are using so there is no need to specify a value for this field, for example:

```
<INPUT TYPE=hidden NAME="_charset_" />
```



Please note for more information on charset, refer to [http://msdn.microsoft.com/en-us/library/aa752010\(VS.85\).aspx](http://msdn.microsoft.com/en-us/library/aa752010(VS.85).aspx)

6.9 Custom Fields

The Merchant is able to pass custom fields through SecureTrading’s systems.

The field names do not need to be a specific case and will not be saved in the database.

The Merchant can include their fields within the HTTP Post to SecureTrading’s Payment Pages. No customisation is required of their Payment Pages system.



Please Note The field names should **not** be the same as the SecureTrading field names outlined above, or end with “_html”.



Please Note If the Merchant wishes to receive any custom fields back in a POST from SecureTrading’s servers they will need to contact SecureTrading support in order to update their Notification URL (see **9 Notification** on **page 33**).

7 Security

To ensure the data that has been passed through SecureTrading has not been modified, the Merchant can submit a security field called **sitesecurity** to their Payment Page. This field contains a cryptographic hash of a predefined set of field values.

Enabling the security feature within the Payment Pages can be done through the following steps.

7.1 Step 1: Field Selection

The Merchant will need to select the fields that they wish to hash then notify SecureTrading Support (**13.1 SecureTrading Support on page 39**).

The default fields are **sitereference**, **currencyiso3a** and **mainamount**.

Once the Merchant has chosen their fields they will need to produce a password to SecureTrading that will be included at the end of their hash.



Please Note if the Merchant wishes to change their password or add/remove fields from the hash, they must notify SecureTrading Support (**13.1 SecureTrading Support on page 39**).



Please Note the order of the fields within the hash must be correct. If the correct details are not supplied, the transaction will be stopped.

7.2 Step 2: Building the Hash

The Merchant will need to setup their system to build the hash.

When building the hash, only the field values are used.



Please Note SecureTrading recommends the Merchant include as many unique fields when creating the hash as possible. Only including the **merchant** and **currency** fields will end up creating the same hash even though the amount field may have been compromised.

There are three different algorithm types currently supported:

- md5
- sha1
- sha256

The recommended default algorithm type and the one included in the examples below is **sha256**. If the Merchant wished to use another of the types listed, they would need to notify SecureTrading Support (**13.1 SecureTrading Support on page 39**).

For the examples, the values supplied are:

Field Name	Field Value	Position
sitereference	test_site1234	1 st
currencyiso3a	USD	2 nd
mainamount	100.00	3 rd
password	PASSWORD	4 th



Please Note the **password** must always be the last field included in the hash.

7.2.1 Python Example

```
import hashlib
securityHashObj = hashlib.new("sha256")
securityHashObj.update("test_site1234USD100.00PASSWORD")
securityHash=securityHashObj.hexdigest()
return securityHash
```

Figure 1 - Python Example of sha256 algorithm

7.2.2 PHP Example

```
<?php
echo hash('sha256', 'test_site1234USD100.00PASSWORD');
?>
```

Figure 2 - PHP Example of sha256 algorithm

7.2.3 Java Example

```
import java.math.*;
import java.lang.*;
import java.security.*;
public class mysha256 {
    public static void main(String args[]) throws Exception{
        String stringToHash="test_site1234USD100.00PASSWORD";
        MessageDigest mDigest=MessageDigest.getInstance("SHA-
256");

mDigest.update(stringToHash.getBytes(),0,stringToHash.length())
;
        String merchantHash(""+new
BigInteger(1,mDigest.digest()).toString(16));
        System.out.println(merchantHash);
    }
}
```

Figure 3 - Java Example of sha256 algorithm

7.2.4 Perl Example

```
#!/usr/bin/perl

use Digest::SHA qw(sha256 sha256_hex);
$merchantFieldData = 'test_site1234USD100.00PASSWORD';
$merchantHash = sha256_hex($merchantFieldData);
print $merchantHash;
```

Figure 4 - Perl Example of sha256 algorithm

7.3 Step 3: Submitting the Hash

Once the Merchant has built the hash, they will then need to submit it to SecureTrading's system.

They can do this by posting the field **sitesecurity** to the Payment Pages system. The value of **sitesecurity** needs to be the hash generated by the Merchant. For more information, see **5.1 Configuring the HTTP Post** on **page 17**.

For any payment that is attempted resulting in an incorrect hash, the payment page will be redisplayed containing the error message.

8 Customisation - CSS

The Merchant can define the appearance of their Payment Page using their own CSS (Cascading Style Sheets).



Please Note the Merchant will need to upload their CSS files to SecureTrading using the My-ST File Manager.

When the Customer is transferred to SecureTrading's servers to make payment, the Parent CSS is called to specify the styling of the Merchant's Payment Page. The Child CSS is then called which can override all or part of the Parent CSS before displaying the Page to the Customer.

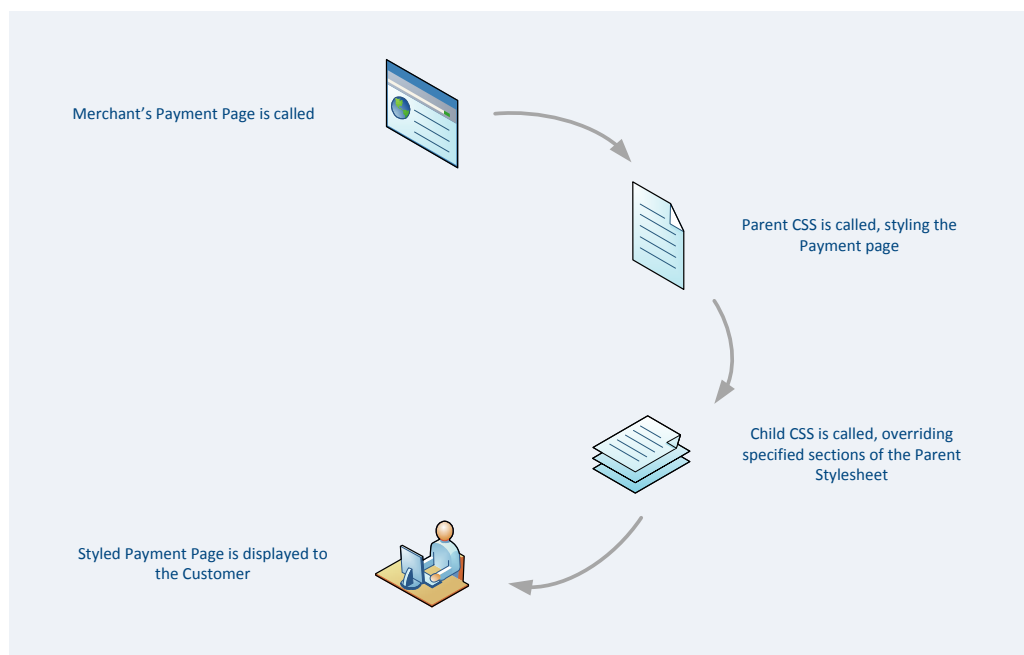


Figure 5 - Parent and Child CSS Overview

Multiple Parent and Child CSS files can be uploaded to SecureTrading. Which CSS file is used is specified in the POST (**8.3 CSS Specification on page 32**).

8.1 Parent CSS

The Parent CSS defines the entire styling of the Merchant's Payment Page. Below is how the Payment Page would be displayed with no CSS:

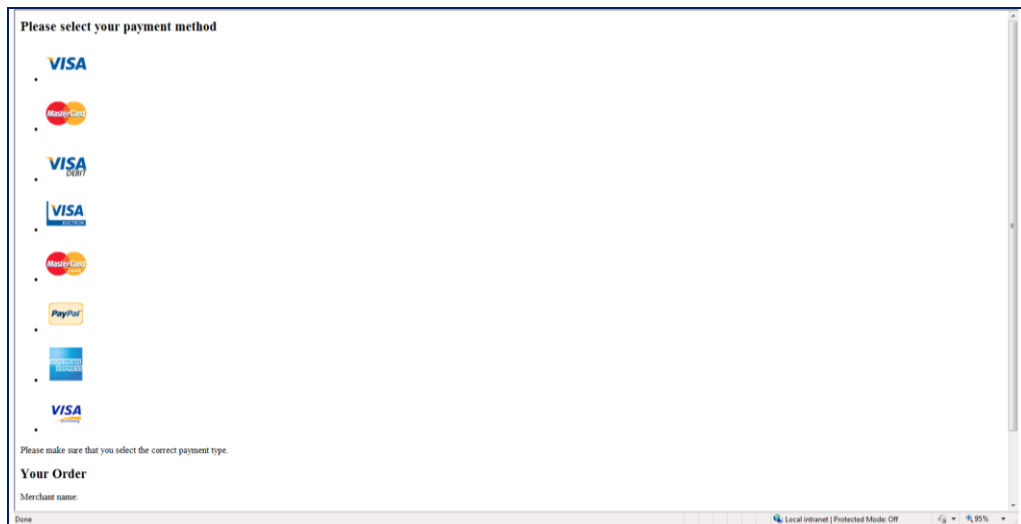


Figure 6 - Payment Page with no CSS

By default and if no CSS is specified, the Parent CSS will be SecureTrading's Default Payment Pages CSS as seen below.

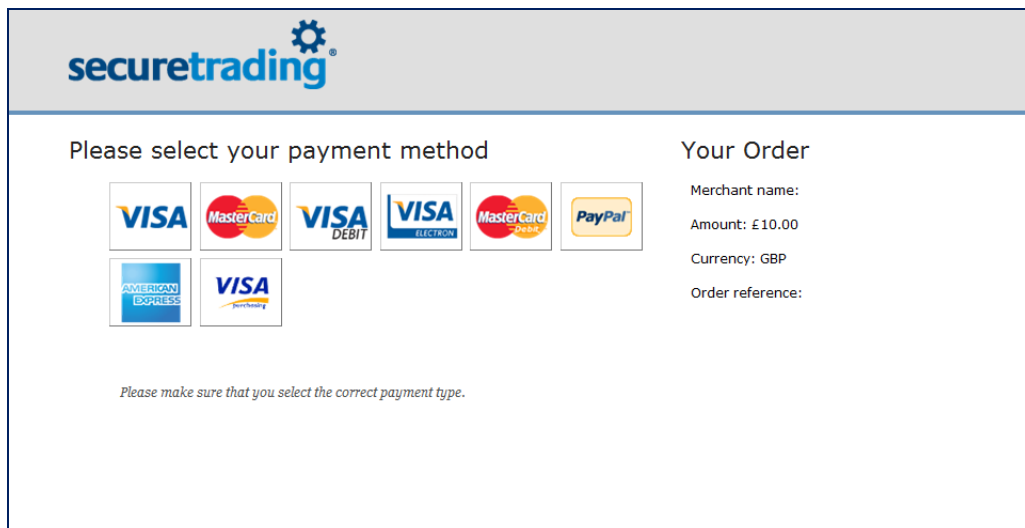


Figure 7 - Default SecureTrading Payment Pages CSS

This Parent CSS is a good base for the styling of the Payment Page. The Child CSS can then be used to override certain parts of the styling.

The Merchant can generate their own Parent CSS or use one of the CSS files uploaded on SecureTrading's servers. The files can be viewed on SecureTrading's website (<http://www.securetrading.com/support/downloads-stpp.html>).

8.2 Child CSS

The Child CSS allows the user to override all or part of the Parent CSS. Below are some examples.

8.2.1 Child CSS – Including a Company Logo

By default, the block where the logo is displayed is hidden. In order to display a company logo on the page, the Merchant will need to show the block, position it and define its dimensions as well as setting the image to display.

The following example would need to be included for a company logo named **logo.gif** that was 200 pixels by 100pixels within the Merchant's Child CSS file:

```
#head #branding_logo{
  background-image:url('logo.gif');
  background-repeat:no-repeat;
  width:200px;
  height:100px;
  padding:0px;
  display: block;
  position: absolute;
  right: 0px;
  top: 0px;
}
```



Please Note the Merchant will need to upload their image files to SecureTrading using the My-ST File Manager.



Please Note the image dimensions used need to be correct or the logo may appear cut off (or not at all).

8.2.2 Child CSS – Background Colour

The background colour can be set by including the correct colour code in the Child CSS file.

The line below would set the background colour on the page to red:

```
#content { background-color: #ff0000; }
```

The Merchant can also set the background colour of the header or footers:

```
#head, #footer { background-color: red; }
```

Or

```
#head, #footer { background-color: transparent; }
```

8.2.3 Child CSS – Font

By setting the font in the body tag, all other elements will inherit it (unless the font is specified)

```
body { font-family: Georgia, "Times New Roman", Times, serif;
}
```

The merchant can also set the font to individual elements:

```
#footer { font-family: Arial, Helvetica, sans-serif; }
```

8.2.4 Child CSS - Troubleshooting

If any of the above do not work, it might be that the priority has not been set. Adding “**!important**” to the Child CSS should fix it.

```
#head, #footer { background-color: red!important; }
```

8.3 CSS Specification

The Merchant specifies which Parent and/or Child CSS is used in the POST to SecureTrading:

- **parentcss** – The name of the Parent CSS file. If this field is not included then the default SecureTrading Parent CSS will be used.
- **childcss** – The name of the Child CSS file.



Please Note when submitting the CSS filename in the post, the file extension “.css” is **NOT** required.



Please Note both fields are **NOT** mandatory.

Below is an example of a POST where both fields are marked in **bold**.

```
https://payments.securetrading.net/process/payments/choice?site
reference=test_site1234&currencyiso3a=USD&mainamount=100.00&ver
sion=1&parentcss=testparent&childcss=testchild
```

The POST above would reference **testparent.css** as the Parent CSS and **testchild.css** as the Child CSS.

8.4 Further Customisation

Merchants can upload their own Parent CSS files. This allows the Merchant to completely customise how they would like the Payment Page to be displayed.

This would only be recommended for Merchants who have a good understanding of CSS.

The Merchant can download a sample CSS from SecureTrading’s website (<http://www.securetrading.com/support/downloads-stpp.html>) to follow as they build their own custom CSS files.

9 Notifications

An additional step of the Payment process can be Notifications. Notifications are performed depending on the result of a payment through SecureTrading's system and can be a HTTP Post to a pre-defined URL or an email.

9.1 HTTP Post

Notifications can submit a HTTP Post to a pre-defined URL of the Merchant's choosing upon completion of a transaction.

The benefit of implementing this system is that the Merchant will receive updates if a transaction was successful or not, as opposed to having to log-in to their My-ST area to check their transactions.

The Merchant will need to ensure that you have setup their URL correctly.

9.2 Emails

Notifications can send emails to a Customer or Merchant following a transaction through SecureTrading. These e-mails will be in HTML format.

9.3 Configuring Notifications

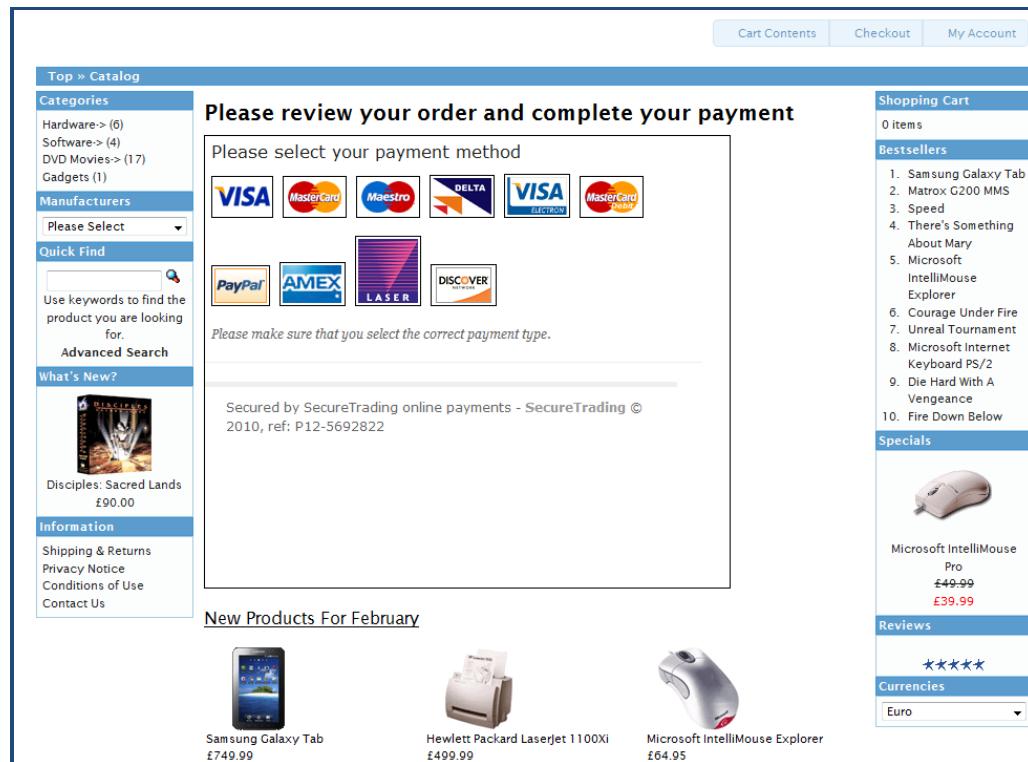
The Merchant can setup and manage their Notifications within their My-ST area.

For more information, refer to the My-ST Guide on SecureTrading's website (<http://www.securetrading.com/support/downloads-stpp.html>).

10 iframe

An option available to the Merchant is that they can display their Payment Page within an iframe. The benefit from a Merchant's viewpoint is that they can display the Payment Page within the layout of their website.

This section of the document outlines how the Merchant could setup their Payment Page within an iframe. The screenshot below is an example of how the iframe would look.



10.1 Configuring the Merchant's website

In order to include the iframe within their website, the Merchant only needs to include a line similar to the below within their HTML on their page. The main fields to note are the ones marked in **bold**.

```
<iframe src="https://payments.securetrading.net
/process/payments/choice?sitereference=
test_site1234&mainamount=10.00&currencyiso3a=GBP&version=1"
width="100%" height="600" scrolling="auto"
style="border:0px;"></iframe>
```

The above example includes the minimum required fields the Merchant needs to for their link. For more information on these fields or additional fields the Merchant can include, please refer to **Allowed Fields** on page 21.

10.2 Changing the appearance of the iframe

By following the instructions outlined in 10.1 above, the standard Payment Page is included within the Merchant's page. The Merchant can format the Payment Page in a more iframe friendly way by modifying their CSS (**8 Customisation - CSS** on page 29).

The screenshot shows a payment page with the following layout:

- Top Navigation:** Cart Contents, Checkout, My Account
- Left Sidebar:**
 - Top » Catalog
 - Categories: Hardware-> (6), Software-> (4), DVD Movies-> (17), Gadgets (1)
 - Manufacturers: Please Select
 - Quick Find: Use keywords to find the product you are looking for. Advanced Search
 - What's New?: Disciples: Sacred Lands £90.00
 - Information: Shipping & Returns, Privacy Notice, Conditions of Use, Contact Us
- Main Content:**
 - Title:** Please review your order and complete your payment
 - Payment Details:**
 - Billing:**
 - Title: Mr (dropdown), First name, Last name
 - Address, Billing country
 - Street, E-Mail
 - Town, Telephone
 - County, Telephone type (dropdown)
 - Postcode
 - Radio buttons: This is also my delivery address, I have a different delivery address
 - Card number *
 - New Products For February:** Samsung Galaxy Tab (£749.99), Hewlett Packard LaserJet 1100Xi (£499.99), Microsoft IntelliMouse Explorer (£64.95)
- Right Sidebar:**
 - Shopping Cart: 0 items
 - Bestsellers: 1. Samsung Galaxy Tab, 2. Matrox G200 MMS, 3. Speed, 4. There's Something About Mary, 5. Microsoft IntelliMouse Explorer, 6. Courage Under Fire, 7. Unreal Tournament, 8. Microsoft Internet Keyboard PS/2, 9. Die Hard With A Vengeance, 10. Fire Down Below
 - Specials: Microsoft IntelliMouse Pro, £49.99, £39.99
 - Reviews: ★★★★★
 - Currencies: Euro (dropdown)

Once the support team have configured the Payment Page, the appearance will change from the above, where the delivery information is unseen and would require the Customer to use the scrollbars to view the page correctly to be formatted as the below:

The screenshot shows the payment page after configuration, with the following layout:

- Top Navigation:** Cart Contents, Checkout, My Account
- Left Sidebar:** (Same as the previous screenshot)
- Main Content:**
 - Title:** Please review your order and complete your payment
 - Payment Details:**
 - Billing:**
 - Joe Bloggs
 - Click to change these details.
 - Card number *
 - Issue
 - Security code *
 - where is my security code?
 - Start date, Expiry date *
 - Pay button
 - New Products For February:** Samsung Galaxy Tab (£749.99), Hewlett Packard LaserJet 1100Xi (£499.99), Microsoft IntelliMouse Explorer (£64.95)
- Right Sidebar:** (Same as the previous screenshot)

As can be seen, the payment details are now visible within the iframe and the Customer details are now hidden. Although the delivery and Customer fields are now hidden, the information is still passed through the system if they were submitted from the Merchant's website.

11 Going Live

Once the Merchant is happy with their testing, they can go live. In order to do so, their post will need to be updated to being for the live site. It is simply a case of modifying the **sitereference** field to the Merchant's live Site Reference. For both options outlined in section 5 Posting Information (**5.1.1 Option 1: Link to SecureTrading, page 17** and **5.1.2 Option 2: Perform a post, page 17**), the change is outlined below.



Please note that for both examples, they will be for updating the test site reference, **test_site1234**, to the live site reference, **site1235**

11.1.1 Option 1: Link to SecureTrading

If the Merchant has setup a link directly to their Payment Page, the value of site reference will need to be modified to the live site reference, so the URL for testing will be:

```
https://payments.securetrading.net/process/payments/choice?site
reference=test_site1234&currencyiso3a=USD&mainamount=100.00&ver
sion=1
```

This then needs to be changed to the below. Please note the field changed is marked in **bold**.

```
https://payments.securetrading.net/process/payments/choice?site
reference=site1235&currencyiso3a=USD&mainamount=100.00&version=
1
```

11.1.2 Option 2: Perform a HTTP post

As with Option 1 outlined above, the only field that needs to be updated is the site reference field which needs to be changed to the Merchant's live site reference. Therefore, the below example supplied for testing would need to be updated from the following (please note the data that needs to be changed is marked in **bold**):

```
<html>
<head>
</head>
<body>
<form method="post"
action="https://payments.securetrading.net/process/payments/cho
ice">
<input type="hidden" name="sitereference"
value="test_site1234">
<input type="hidden" name="currencyiso3a" value="USD">
<input type="hidden" name="mainamount" value="100.00">
<input type="hidden" name="version" value="1">
<input type="submit" value="Pay">
</form>
</body>
</html>
```

The **sitereference** value therefore needs updating to the Merchant's live site reference, see example below for HTML button update:

```
<html>
<head>
</head>
```

```
<body>
<form method="post"
action="https://payments.securetrading.net/process/payments/cho
ice">
<input type="hidden" name="sitereference" value="site1235">
<input type="hidden" name="currencyiso3a" value="USD">
<input type="hidden" name="mainamount" value="100.00">
<input type="hidden" name="version" value="1">
<input type="submit" value="Pay">
</form>
</body>
</html>
```

The look of the button on the page or the page a Customer is transferred to would appear exactly the same as for the Merchant's test site but now that the live site reference has been used, the account will process transactions through the Acquiring Bank.

11.1.3 Live Testing

Now that the Merchant has switched to their live account, SecureTrading recommend they perform a test transaction using a live card to check the process works. The Merchant can login to their My-ST web interface to manage their transactions. Therefore they can cancel the transactions processed on a live card.



Please note The Merchant should not use the same live card too many times as the requests will still be authorised, and could cause the issuer to suspect fraud or the cardholder could exceed their limit!

12 Testing

12.1 Testing Authorisation

During integration testing, the following test card details can be used.



It should be noted that these are TEST card details, and will not return the expected responses in a LIVE environment.

Card Type	Authorisation	Decline
VISA	4111110000000211	4111110000000112
DELTA	4137330000000611	4137330000000512
PURCHASING	4484000000000411	4484000000000312
ELECTRON	4245190000000311	4245190000000212
MASTERCARD	5100000000000511	5100000000000412
MASTERCARDDEBIT	5124990000000101	5124990000000002
MAESTRO	5000000000000611	5000000000000512
DINERS	3000000000000111	3000000000000012
DISCOVER	6011000000000301	6011000000000202
JCB	3528000000000411	3528000000000312
LASER	6304850000000040	63048500000000602
AMEX	3400000000000611	3400000000000512
VPAY	4370000000000061	4370000000000012

For these cards, when performing tests, the tester needs to input a expiry date that is in the future in order for the transactions to be authorised by SecureTrading's fake bank.

12.2 Testing Security Code and Address Verification System

To test the Security Code and Address Verification responses, then they can use the following data. This information can be used with any of the card numbers included in **12.1 Testing Authorisation** above.

Security Code	Address	Postcode	Response
123 (see note)	No 78, 9 Test Street	TE45 6ST	ALL MATCH
214	No 78, 9 Test Street	TE45 6ST	ADDRESS MATCH ONLY
123 (see note)	111 Test Place, Testville	PZ54 1ST	SECURITY CODE MATCH ONLY
	Test House, Test Street	TEST	DATA NOT CHECKED
214	111 Test Place, Testville	PZ54 1ST	NO DATA MATCHES



AMEX cards have four digit security codes, so 1234 should be used for these cases.

13 Further Information and Support

This section provides useful information with regards to documentation and support for the Merchant's SecureTrading solution.

13.1 SecureTrading Support

Any questions regarding integration or maintenance of the system, please contact our support team using one of the following methods.

Method	Details
Phone	+44 (0) 1248 672 050
Fax	+44 (0) 1248 672 099
E-Mail	support@securetrading.com
URL	http://www.securetrading.com/support/support.html

13.2 SecureTrading Sales

If you do not have an account with SecureTrading, please contact our Sales team and they will inform you of the benefits of a SecureTrading account.

Method	Details
Phone	0800 028 9151
Phone (Int'l)	+44 (0) 1248 672 070
Fax	+44 (0) 1248 672 079
E-Mail	sales@securetrading.com
URL	http://www.securetrading.com