



Notifications

This document explains how to configure your system to accept notifications sent by Secure Trading.

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1 Introduction

Secure Trading uses notifications to keep merchants informed of transactions processed on their accounts. Secure Trading supports the sending of both URL POST and email notifications.



Please note that this document is a general guide to Secure Trading notifications that applies to the most frequently used Request types. Any exceptions to the content of this document will be clearly stated in the relevant documentation.

1.1 Process Overview

The following is a diagrammatic overview of a payment processed through Secure Trading, where notifications are configured.

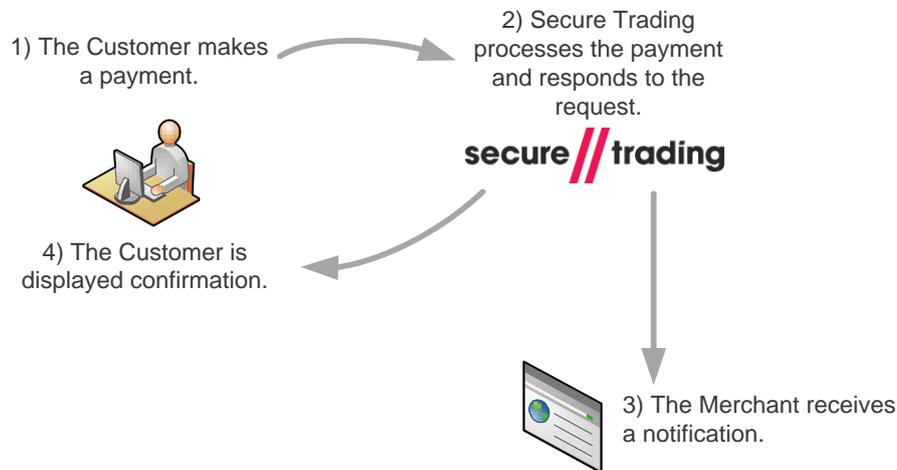


Figure 1 - Diagrammatic Process Overview of a Secure Trading transaction with notifications configured

2 URL Notifications

2.1 Process Overview

URL notifications are requests sent from Secure Trading to a pre-defined URL. These notifications contain information about transactions processed on your Secure Trading account. **Please note:** We do not support localhost, loopback or multicast IP ranges in the URL.

2.1.1 Accepting Notifications

The following is a diagrammatic overview of how your system must process notifications received from Secure Trading.

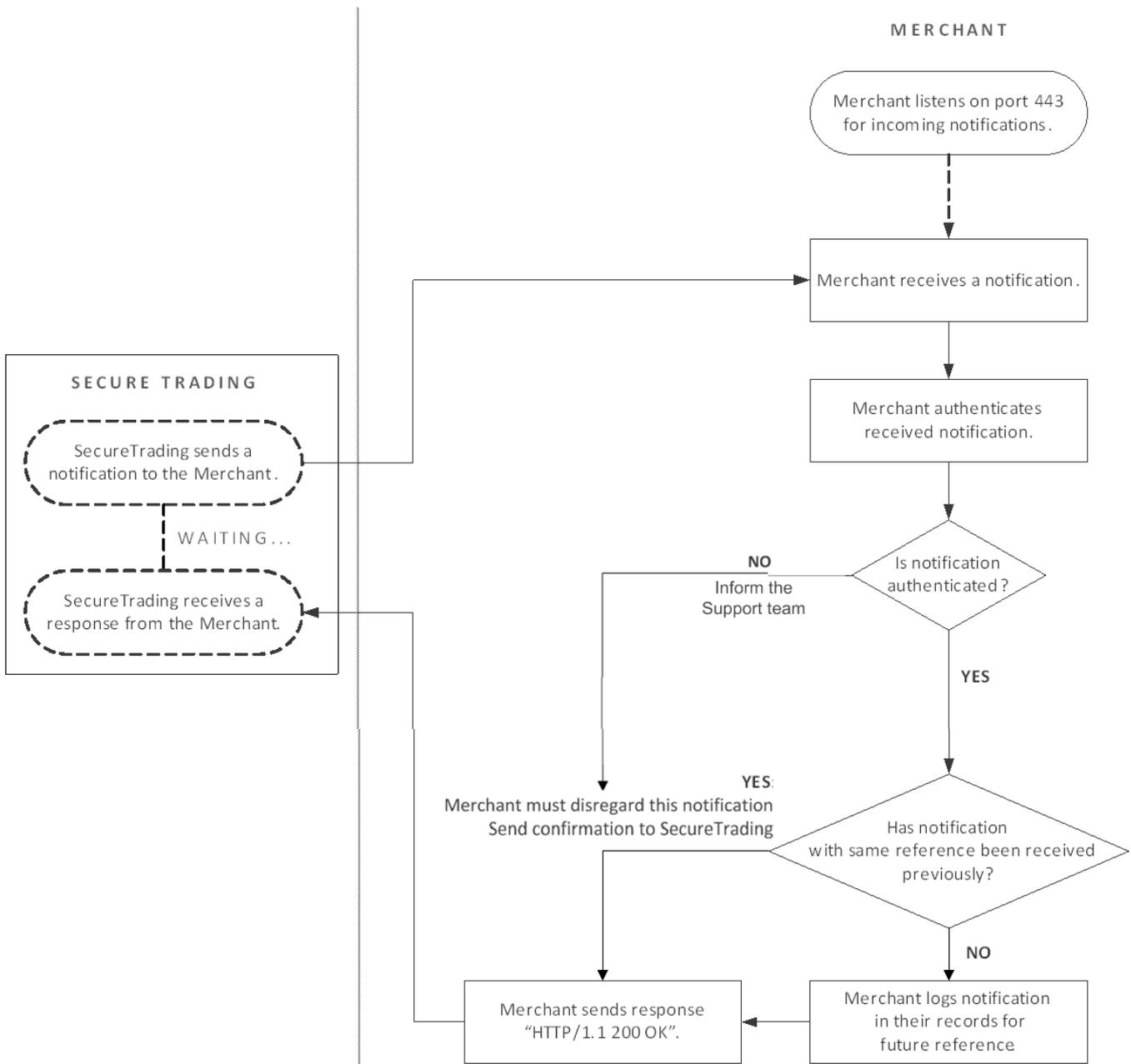


Figure 2 - Diagrammatic Process Overview of Merchant accepting URL Notifications

Notifications

2.1.2 Notification Types

The following table describes the characteristics of the three different notification types you can choose from:

Notification Type	Characteristics
Online	<ul style="list-style-type: none"> # The notification will be processed during the transaction. # Your customer will be made to wait for your server to respond. # In the event of failure, the notification will not be retried.
Offline	<ul style="list-style-type: none"> # The notification will be scheduled during the transaction. # Scheduled notifications will be processed as soon as possible after the customer has been shown a response. # In the event of failure, the notification will be retried for approximately 48 hours.
Failover	<ul style="list-style-type: none"> # The notification will be processed during the transaction. # Your customer will be made to wait for your server to respond. # In the event of failure, the notification will be scheduled to be sent again and will be retried for approximately 48 hours.



Please note that if multiple online notifications are configured for a transaction, only the first online notification will be processed during the transaction and any other online notifications will be discarded.

If there are no online notifications but there are multiple failover notifications, only the first failover notification will be processed during the transaction and any other notifications will be scheduled to be sent at a later time (treated as offline notification).

2.1.2.1 Online URL Notifications



When using online URL notifications, the customer will be made to wait for your server to respond to the notification before completing the transaction.

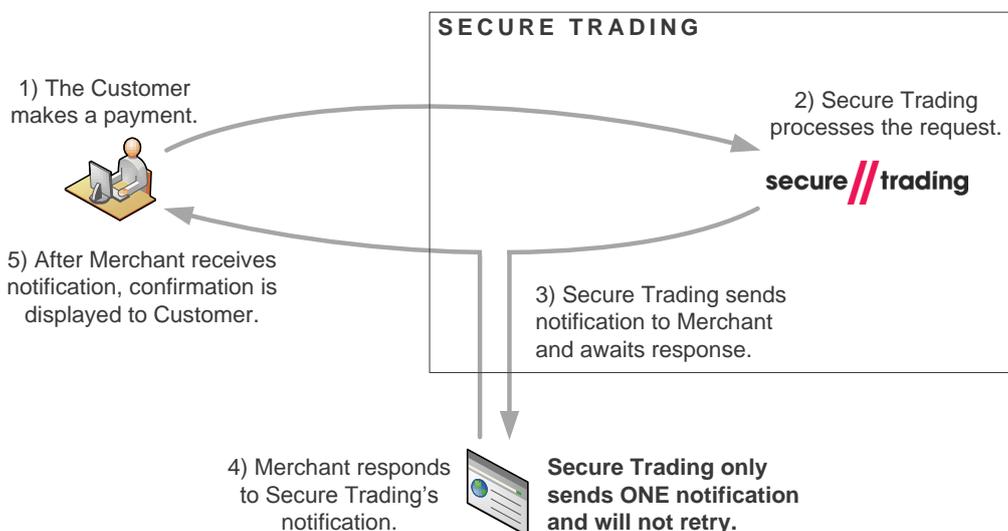


Figure 3 - Diagrammatic Overview of Payment with Online URL Notifications enabled

Notifications

2.1.2.2 *Offline URL Notifications*

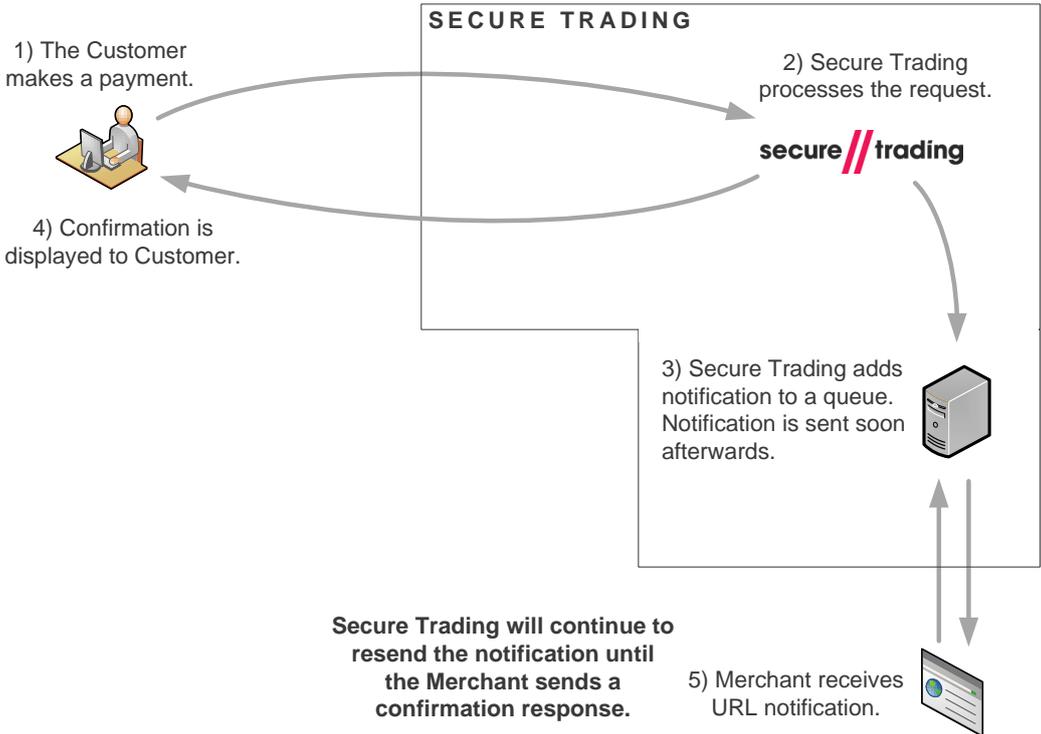


Figure 4 - Diagrammatic Overview of Payment with Offline URL Notifications enabled

2.1.2.3 *Failover URL Notifications*

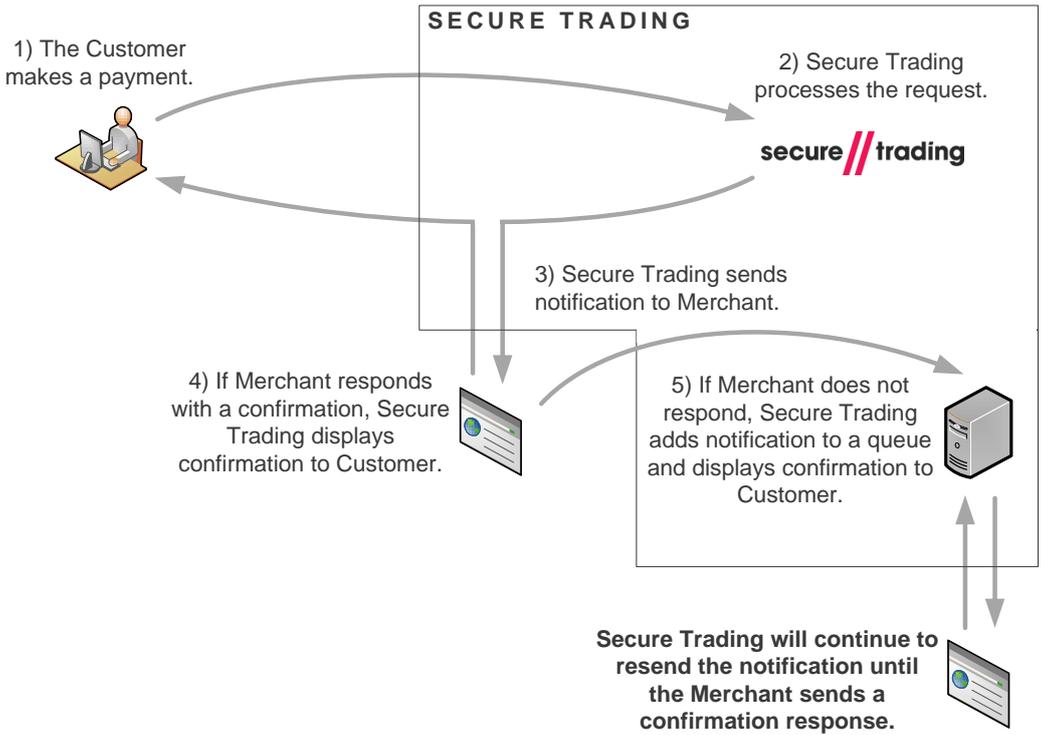


Figure 5 - Diagrammatic Overview of Payment with Failover URL Notifications enabled

2.2 Format of URL Notification

The notification sent from Secure Trading will include a valid HTTP/1.1 Content-type header to be accepted by your system. For example:

```
Content-type: application/x-www-form-urlencoded; charset=UTF-8
```

The included field names and data will be urlencoded.

For example, if the notification contains the fields "baseamount", "errorcode" and "orderreference" with values "2499", "0" and "customerorder1" respectively, then the notification may look like the following (**notificationreference** field is always returned):

```
baseamount=2499&errorcode=0&notificationreference=1-A60356
&orderreference=customerorder1
```

2.2.1 Authentication (Notification Security)

To ensure the notification has not been modified by a malicious user, a field called **responsesitesecurity** can be included in the POST to your system, when configuring the notification in MyST. This field contains a cryptographic hash of a predefined set of field values.

Using the example above, with the addition of a notification password of "password", using the **sha256** security algorithm, the notification may look like the following:

```
baseamount=2499&errorcode=0&notificationreference=1-A60356
&orderreference=customerorder1&responsesitesecurity=033e6bcc1971f150c5
a6d5487548b375b8971c9bdc1962b2cc1844d26ff82c2a
```



Please note that Secure Trading recommends you implement the **sha256** security algorithm, but also supports **sha1** and **md5**.



Please note that if you update your action to use a new notification password, all future notifications sent from the queue (offline or failover) will include a notification hash generated using the new password.

STEP

1

To check the notification is legitimate, concatenate the values of all the fields in the request (excluding `notificationreference` and `responsesitesecurity`), in order of field name, in ASCII alphabetical order:

- // All uppercase letters come before lowercase letters, e.g. “Z” before “a”.
- // Digits and many punctuation marks come before letters; for example, “4” precedes “one”.
- // Numbers are sorted naively as strings; for example, “10” precedes “2”.

STEP

2

To the end of this, append the notification password. This leaves:

```
24990customerorder1password
```



If a field returned in a notification has multiple values, (e.g. `fieldname=bravo&fieldname=alpha`), these values are concatenated in the order they were submitted in the POST to Payment Pages. When included in the example above, the string generated would be: 24990**bravoalpha**customerorder1password

STEP

3

Then generate a hexadecimal hash of this value using `sha256` and ensure the value matches the value in `responsesitesecurity`:

```
033e6bcc1971f150c5a6d5487548b375b8971c9bdc1962b2cc1844d26ff82c2a
```

If the generated hexadecimal hash does not match the `responsesitesecurity` received from Secure Trading, the notification should not be accepted. In such a case, please contact Secure Trading Support (see section **6.1 Secure Trading Support** on **page 15**).

2.3 Using Secure Socket Layer (SSL/TLS)

You can set up your system to receive URL notifications using SSL/TLS. In order to do so, your server must present a valid TLS certificate chain to the Secure Trading notifications client. A valid certificate contains the domain of the Notification URL in the common name of the certificate and the chain must correctly validate to an accepted certificate authority.



You must configure your system to accept incoming URL notifications on port 443.



Please note that If the certificate is not signed by a known certificate authority (for example Verisign), your test notifications may work but you will need to use a valid CA for live transactions.

Notifications

2.4 Response to Secure Trading

You **must** configure your system to respond to a notification with an HTTP 200 OK response. For example: "HTTP/1.0 200 OK".

Your system must reply within 8 seconds of receiving a notification.

2.5 Retrying Notifications

A notification is sent shortly after the criteria defined in the filters have been fulfilled. One notification is sent per transaction.



Each notification contains a unique reference that is called **notificationreference**.

If Secure Trading fails to receive a response to an offline or failover notification, the notification will be resent with the same notification reference.



If your system does not respond to offline and failover URL notifications, Secure Trading will continue to resend the notifications for up to 48 hours until confirmation is received.

2.6 Email Alerts for Failed URL Notifications

Once a day, Secure Trading will send email alerts for failed URL notifications on your account. A URL notification failure may be attributed to an invalid URL or if Secure Trading fails to receive a response from your system.

The alert is sent to the email address of the user that configured the notification and has a subject of "Notification Problems".

Please ensure your email server is configured to accept all incoming emails from support.stpp@securetrading.com. An example of the appearance of a notification failure email can be found in section 7.3.

3 Email Notifications

3.1 Merchant Email Notifications

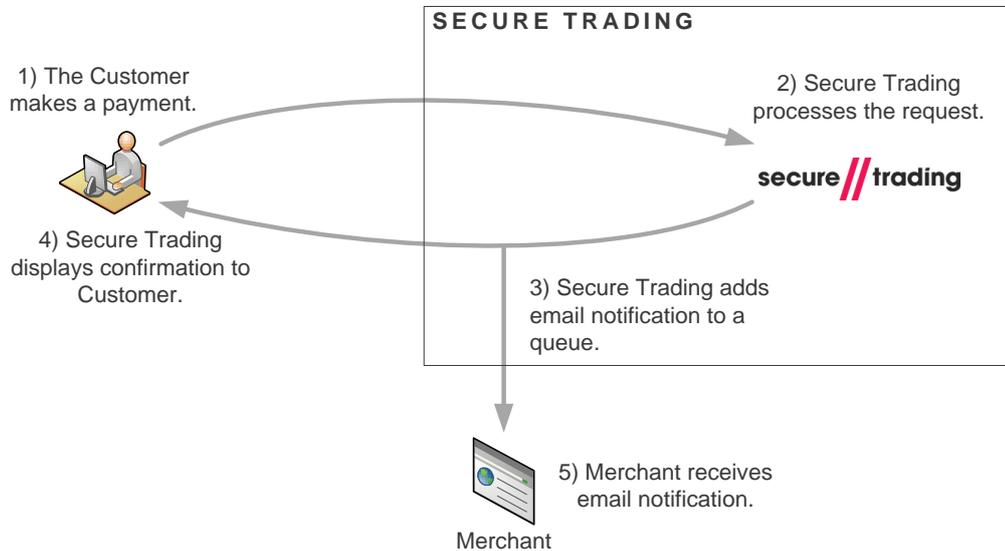


Figure 6 - Diagrammatic Overview of Payment with Merchant Email Notifications enabled

Merchant email notifications are sent from Secure Trading’s systems when pre-specified criteria are met. These are designed to be sent to your company, containing a customised selection of fields.

Please ensure your email server is configured to accept all incoming emails from the email address you specified when configuring the notification. An example of the appearance of a merchant email notification can be found in section 7.1 on page 16).

3.2 Customer Email Notifications

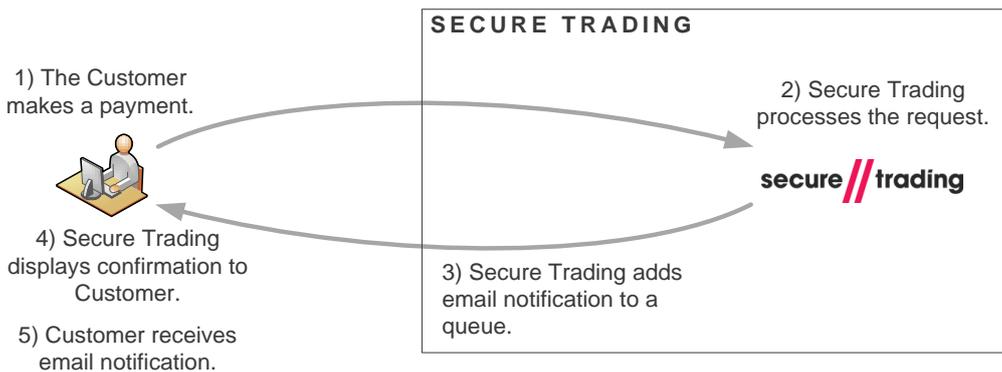


Figure 7 - Diagrammatic Overview of Payment with Customer Email Notifications enabled

Customer email notifications are sent from Secure Trading’s systems when pre-specified criteria are met. These are designed to be sent to your customers, and can act as a receipt or confirmation following a transaction.

While customer email notifications are enabled, please inform your customer to expect an email notification when they make a payment on your Secure Trading site.

Each customer email notification appears to the customer to be sent from the email address specified when it was configured. An example of the appearance of a customer email notification can be found in section 7.2 on page 17).

4 Configuring notifications

Most notification types supported by Secure Trading are configured by using MyST. Merchants wishing to configure notifications for ACH bank transfers or Chargebacks should refer to section 4.2 on page 13 for alternative instructions.



Please note that you can assign a maximum of 5 notification URLs and 5 notification emails for each transaction.

4.1 Configuring Notifications using MyST

The process of setting up notifications involves the following main steps:

- // **Selecting a site** for the notifications to be applied to.
- // **Defining filters** – these are conditions that trigger the sending of notifications when met.
- // **Defining destinations** – these define how and where notifications will be sent.
- // **Assigning filters to destinations** – these form rules that instruct Secure Trading how/where to send the notifications when the filters have been fulfilled.

Notifications

Notifications

SiteReference
test_site12345

Change site 1

Manage notifications

Manage notification options Add filter Add destination 2

⚠ A maximum of 5 notifications of each type can be sent per transaction.
If a URL notification fails all attempts the user who created the destination will receive an email containing the notification information.

Existing notifications for test_site12345 5 6

For: test_site12345	Filters 3	Destinations 4	Active 5	Delete 6
For a transaction		send a notification to		
For a transaction	ACH transactions	send a notification to	My email	<input checked="" type="checkbox"/> <input type="checkbox"/>
For a transaction	Successful Currency Rate	send a notification to	My server	<input checked="" type="checkbox"/> <input type="checkbox"/>
For a transaction	Visa Mastercard Account Checks	send a notification to	My email	<input checked="" type="checkbox"/> <input type="checkbox"/>

Figure 8 - MyST Notifications page

When you log in to MyST, click “**Notifications**” from the left side-bar.

You can view notifications for different **sites** by using the drop-down menu at the top of the page, and clicking “**Change site**” 1.

You can **define new filters and destinations** by using the buttons provided 2.

Notifications are set up by assigning **filters** 3 to **destinations** 4.

Notifications are turned on/off by selecting/de-selecting checkboxes in the “Active” column 5.

Notifications can be deleted by highlighting the checkboxes in the “Delete” column 6.

When you have finished making your changes, **click “Save”**.



More details on configuring notifications using MyST can be found in the [MyST User Guide](#).
All Secure Trading documents can be found on [our website](#).



Please note that only users with Site Admin or Developer roles are permitted to make changes to notifications on your account.



Please note that email addresses specified for notifications can have a maximum length of 255 (maximum of 64 characters before the “@” symbol).

4.2 Configuring Subscription Notifications

By using MyST as outlined in section 4.1, it is possible to configure notifications that are sent for every successful new subscription that is scheduled on your account. When creating the filter for subscription notifications, please ensure you select:

- // "SUBSCRIPTION" in the "Requests" box,
- // all payment types needed in the "Payment types" box, and
- // "0 - Ok" in the "Error codes" box.

The screenshot shows a web form titled "Add new filter". At the top, there is a "Description" text input field containing the text "successful SUBSCRIPTION". Below this are three columns of checkboxes:

- Requests:** Includes REFUND, RISKDEC, SUBSCRIPTION (checked), and THREEDQUERY.
- Payment types:** Includes MasterCard (checked), PayPal (checked), SOFORT (checked), and Visa (checked).
- Error codes:** Includes 0 - Ok (checked) and 70000 - Decline.

At the bottom right of the form are two buttons: "Save" and "Cancel".

Figure 9 - Configuring filters in MyST for Subscription notification

URL notifications can be configured to include additional Subscription-specific fields:

- // `subscriptionbegindate`
- // `subscriptionfinalnumber`
- // `subscriptionfrequency`
- // `subscriptionnumber`
- // `subscriptiontype`
- // `subscriptionunit`



Please note that Secure Trading also offers a feature where a summary of all subscription payments processed on your account in a day are compiled into a daily email report. For more information, please contact Support (see section 6.1).

4.3 Configuring Other Notifications

Please contact Secure Trading Support to enable the following notifications on your account (see section 6.1 **Secure Trading Support** on page 15).

4.3.1 Confirmation Notifications (only for ACH transactions)

Once a day, Secure Trading performs checks for confirmation that outstanding authorisations have been settled. Following these checks, the settle status of transactions will be updated where appropriate and URL notifications are sent in the following situations:

- // Transaction is cancelled by the acquiring bank (settle status changes from '10' to '3').
- // Transaction is settled (settle status changes from '10' to '100').

For more information on the ACH payment type, please refer to Secure Trading's ACH documentation (see section 6.3 **Useful Documents** on page 15).

4.3.2 Chargeback Notifications

Once a day, Secure Trading performs checks if any new Chargebacks have been processed against transactions settled on your account. If you opt to receive these notifications, your system will receive an individual URL notification for every Chargeback processed on your account. For more information on how Chargebacks are processed by STPP, please refer to Secure Trading's Chargeback documentation (see section 6.3 **Useful Documents** on page 15).

5 Fields included in Notification

5.1 URL Notification

Secure Trading recommends including at least the following fields as a minimum for inclusion in typical URL notification notifications:

- // Acquirer Response Code (acquirerresponsecode)
- // Acquirer Response Message (acquirerresponsemessage)
- // Auth Code (authcode)
- // Base Amount (baseamount) (e.g. £10.50 is "1050")*
- // Main Amount (mainamount) (e.g. £10.50 is "10.50")*
- // Currency (currencyiso3a)
- // Error Code (errorcode)
- // Live Status (livestatus)
- // Order Reference (orderreference)
- // Parent Transaction Reference (parenttransactionreference)
- // Payment Type (paymenttypedescription)
- // Request Type (requesttypedescription)
- // Settle Status (settlestatus)
- // Site Reference (sitereference)
- // Transaction Reference (transactionreference)

*Please choose your preferred format.

5.2 Email Notification

The following fields are included in all email notifications:

- // Amount
- // Auth Code
- // Billing County
- // Billing Email Address
- // Billing Full Name
- // Billing Postcode
- // Billing Premise
- // Billing Town
- // Merchant Name
- // Order Reference
- // Request Type
- // Transaction Reference

6 Further Information and Support

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

6.1 Secure Trading Support

If you have any questions regarding integration or maintenance of the system, please contact our support team using one of the following methods.

Method	Details
Telephone	+44 (0) 1248 672 050
Fax	+44 (0) 1248 672 099
Email	support@securetrading.com
Website	http://www.securetrading.com/support/support.html

6.2 Secure Trading Sales

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

Method	Details
Telephone	0800 028 9151
Telephone (Int'l)	+44 (0) 1248 672 070
Fax	+44 (0) 1248 672 079
Email	sales@securetrading.com
Website	http://www.securetrading.com

6.3 Useful Documents

The documents listed below should be read in conjunction with this document:

- // [STPP MyST User Guide](#) – This document outlines how to use MyST to monitor your transactions and manage your account.
- // [STPP ACH](#) – This document outlines processing ACH transactions using Secure Trading's STAPI or Web Services solutions.
- // [STPP Chargebacks](#) – This document introduces the reader to Chargebacks and how they are processed through STPP.

Any other document regarding the STAPI system can be found on Secure Trading's website (<http://www.securetrading.com>). Alternatively, please contact our support team as outlined above.

6.4 Frequently Asked Questions

Please visit the FAQ section on our website (<http://www.securetrading.com/support/faq>).

7 Appendix

7.1 Example of Merchant Email Notification



Auth confirmation 2014-03-03 15:31:30

A request has been processed by Secure Trading for site reference: test_site12345. More information about the transaction can be found by logging into MyST at <https://myst.securetrading.net>

The details of the request are:

Transaction Request Type:	AUTH
Merchant Name:	Test Merchant
Amount:	GBP 123.99
AuthCode:	TEST
Transaction Reference:	23-9-80103
Name:	Ann Example
Email:	customer@securetrading.com
Address:	789 Test Street
Town:	Bangor
County:	Gwynedd
Postcode:	TE45 6ST
Country:	GB
Order Ref:	My order

This e-mail was sent from a notification-only address that cannot accept incoming e-mail. Please do not reply to this message.

Figure 10 - Example of Merchant Email Notification

7.2 Example of Customer Email Notification



Auth confirmation 2014-03-03 15:31:30

Your request has been securely processed by Secure Trading on behalf of: Test Merchant.
We hope that you find our service satisfactory.

The details of the request are:

Transaction Request Type:	AUTH
Merchant Name:	Test Merchant
Amount:	GBP 123.99
AuthCode:	TEST
Transaction Reference:	23-9-80103
Name:	Ann Example
Email:	customer@securetrading.com
Address:	789 Test Street
Town:	Bangor
County:	Gwynedd
Postcode:	TE45 6ST
Country:	GB
Order Ref:	My order

Secure Trading are not involved in the provision of goods and services ordered and paid for.
If you have any issues with this transaction please contact the merchant as stated above.

Figure 11 - Example of Customer Email Notification

7.3 Example of Email Alert for Failed URL Notifications



Secure Trading Notifications

Notification Warnings

The Notifications for the following transaction reference(s) have failed despite repeated attempts made during the last 2 hours. These notifications will be attempted for up to 46 hours only. At which point no further retries will be made.

MyST Username: `merchant@securetrading.com`

SiteReference	Transaction reference	Order reference	Notification Url	Notification Timestamp
test_site12345	23-9-80015		http://www.merchantsite.co.uk	2014-01-07 11:00:06

To establish possible reasons for the failure, we would suggest you attempt the following:

Please check your MyST transaction view screens and your server logs to see why the notification for each transaction has failed. Ensuring that the notification url is correct and setup to receive responses from our servers

If this does not help, then please contact Support for further assistance

This e-mail was sent from a notification-only address that cannot accept incoming e-mail. Please do not reply to this message

Figure 12 - Example of Email Alert for Failed URL Notifications