



CTS User Guide

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Global Processing Services Ltd.

6th Floor, Victoria House, Bloomsbury Square, London, WC1B 4DA

Support Email: ops24@globalprocessing.com

Support Phone: +442037409682

Documentation queries: docs@globalprocessing.com

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1. About this Document

This guide describes the Card Transaction System (CTS) and explains how to use it to integrate and test your systems with the GPS Apex payment processing platform. It describes the CTS user interface and shows how to run the built-in standard test cases.

Target Audience

This guide is aimed at Program Managers and developers who want to test the integration of their systems and validate the setup of the External Host Interface (EHI) before going live in a production environment.

What's Changed?

To find out what's changed since the previous release, see the [Document History](#) section.

1.1. Related Documents

Refer to the table below for other documents which should be used in conjunction with this guide.

Document	Description
<i>Smart Client Guide</i>	How to use Smart Client, which is an administration application that can be used to view and manage cards and transactions in your programme.
<i>External Host Interface (EHI) Guide</i>	Describes the GPS External Host Interface (EHI) and provides specifications on how to process and respond to messages received from EHI.
<i>Web Services Guide</i>	Describes how to use the GPS SOAP API to send requests to GPS and provides specifications on the available web service calls.

Tip! See the [GPS Developer Portal](#) for a full suite of documentation.

2. Overview

The Card Transaction System (CTS) enables you to test the integration of your card processing systems and validate the setup of your External Host Interface (EHI) before you go live in a production environment. A simple dashboard provides built-in standard test cases and a transaction history screen.

The service is written as a SOAP and REST service which enables you to submit card test transactions in the GPS UAT environment in line with your programme setup. All input parameters are strings or numerics, making integration and testing simple and fast.

Using CTS, you can:

- Run standard built-in tests to simulate typical POS, ATM, mail-order/telephone-order (MOTO) and e-commerce transactions
- Test authorisation messages for Chip & PIN, Contactless, Magstripe, ATM cash withdrawal, e-commerce, MOTO, and Scheme Stand-in Processing (STIP)
- Simulate clearing for all successful authorisations created on CTS. The Clearing screen displays a list of all eligible transactions that can be cleared to simulate the presentment/financial record
- Execute refunds (full or partial) for all cleared transactions
- Test recurrence by specifying if a transaction is recurring (for e-commerce or MOTO)
- Execute reversals for successful authorisations that have not been cleared
- Simulate foreign exchange (FX) transactions by specifying the country where the transaction occurs to simulate cross-border transactions
- View a history of all CTS transactions which you can filter and refine
- Simulate a scheme STIP message for POS and e-commerce transactions

2.1. How does CTS work?

The figure below illustrates how you can simulate and test the payment authorisation flow using CTS.

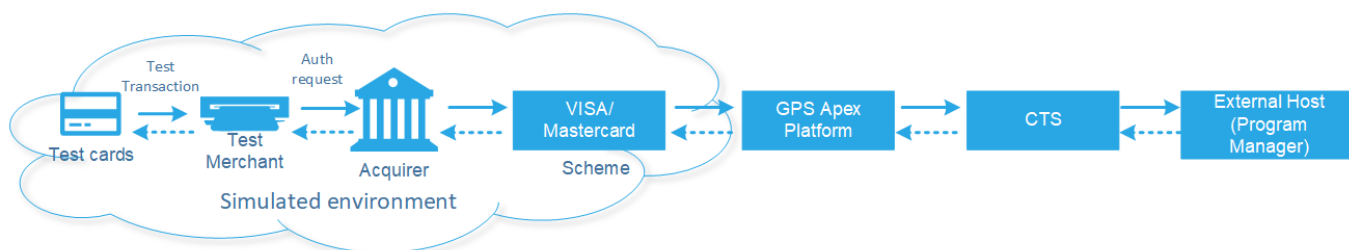


Figure 1: Testing authorisations using the Card Transaction System

3. Accessing CTS

This topic explains what you require to set up CTS and how you access the system.

3.1. Pre-requisites

To access CTS, you need the following:

- Your public IP address(es) added to the GPS 'allowed' list if different to Web Services IP address(es)
- Your programme set up in UAT
- A unique username and password for each user (you can use the same credentials which you use to access Smart Client UAT with CTS enabled)
- EHI set up at product level (refer to your Product Setup Form)

To submit test transactions, you will use GPS Web Services to create and activate test cards. If you are using EHI Mode 2 or 3, you will also need to load funds onto the test cards. You will need the 9-digit token, CVV2, and Expiry Date (provided in the Ws_CreateCard Web Service response). For the PIN, GPS recommends setting this in the Ws_CreateCard request, otherwise you will need to use Ws_PINControl to retrieve the generated PIN.

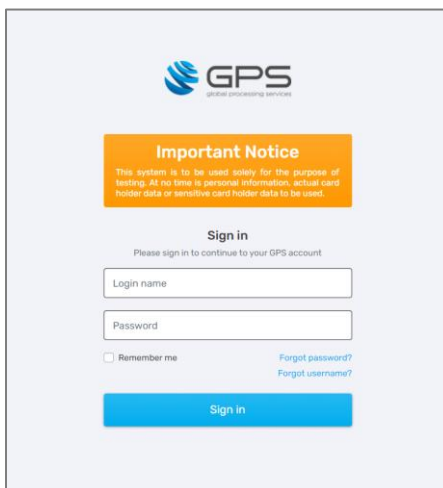
For more information about deploying CTS in your environment, contact your Account Manager.

3.2. Logging into CTS

You access CTS using a web browser. GPS recommends Google Chrome or Microsoft Edge.

To log into CTS:

1. Go to: <https://cts-uat.globalprocessing.net:54340/>. The Sign in screen appears:



The screenshot shows the GPS Login Screen. At the top is the GPS logo. Below it is an orange box with the text 'Important Notice' and a disclaimer. Underneath is a 'Sign in' section with the text 'Please sign in to continue to your GPS account'. There are two input fields: 'Login name' and 'Password'. Below these is a checkbox for 'Remember me' and two links: 'Forgot password?' and 'Forgot username?'. At the bottom is a blue 'Sign in' button.

Figure 2: GPS Login Screen

2. Enter your username and password and click **Sign in**. The CTS Dashboard appears (described in the following section).

Note: If the message *"This site can't be reached"* appears, this means that your IP address is not on the 'allowed list' on our system. Contact GPS by raising a [GPS JIRA](#) to request that your IP address is added to the allowed list.

4. Using the CTS Dashboard

This topic describes the main CTS screen and explains how to run the built-in tests available.

4.1. About the Main CTS Screen

After logging into the CTS platform, the main CTS screen appears:

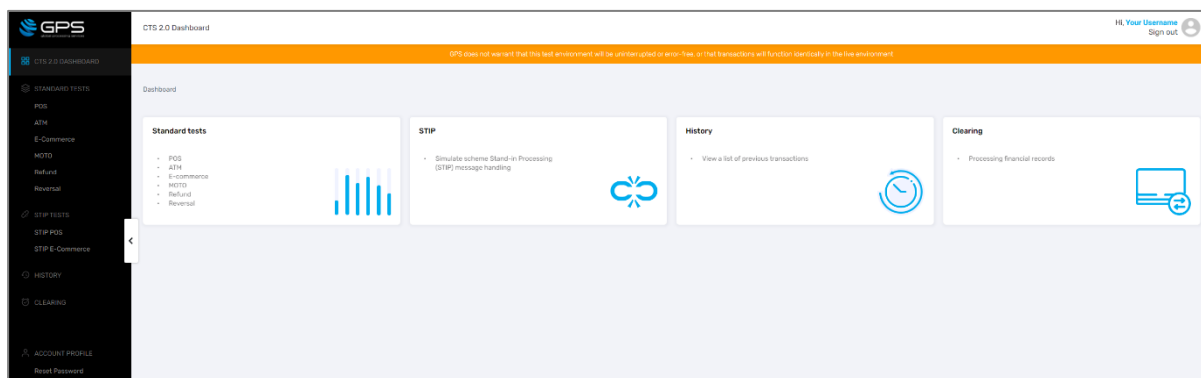


Figure 3: CTS Dashboard

The interface is divided into three main sections:

Toolbar — Use the toolbar along the top of the screen to see your username and sign out.

Menus — Use the menu on the left-hand side to select an option such as a standard test, display your account profile, and reset your password. See [Running Standard Tests](#) for more information.

Dashboard — View the dashboard to access standard tests, simulations, and transaction history details. See [Using the CTS Dashboard](#) for more information.

4.2. Running Standard Tests

CTS provides the following standard simulation tests:

- **POS** – simulates a Point-of-Sale transaction completed through a card terminal
- **ATM** – simulates a balance enquiry or cash withdrawal transaction made on an Automated Teller Machine (ATM)
- **E-Commerce** – simulates an online, e-commerce transaction
- **MOTO** – simulates a Mail Order/Telephone Order (MOTO) transaction
- **Refund** – simulates a refund transaction initiated by a cardholder or merchant
- **Reversal** – simulates an acquirer reversing a previous authorisation

To run a test:

1. Click **Standard tests** on the dashboard and select a test (or choose a test from the menu). A screen appears showing the standard tests available:

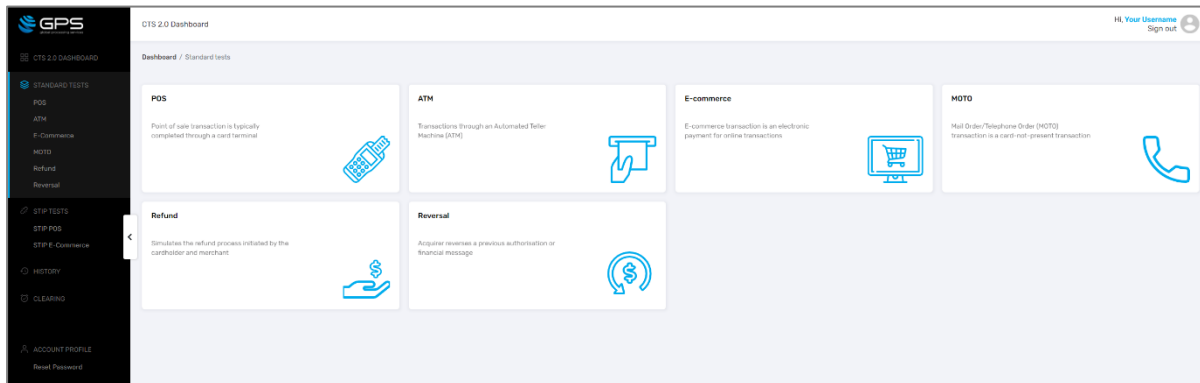


Figure 4: Standard Tests Screen

See the following sections for more information about the various tests.

4.2.1. POS Transaction Test

Use this test to simulate a Point-of-Sale (POS) transaction on a card terminal.

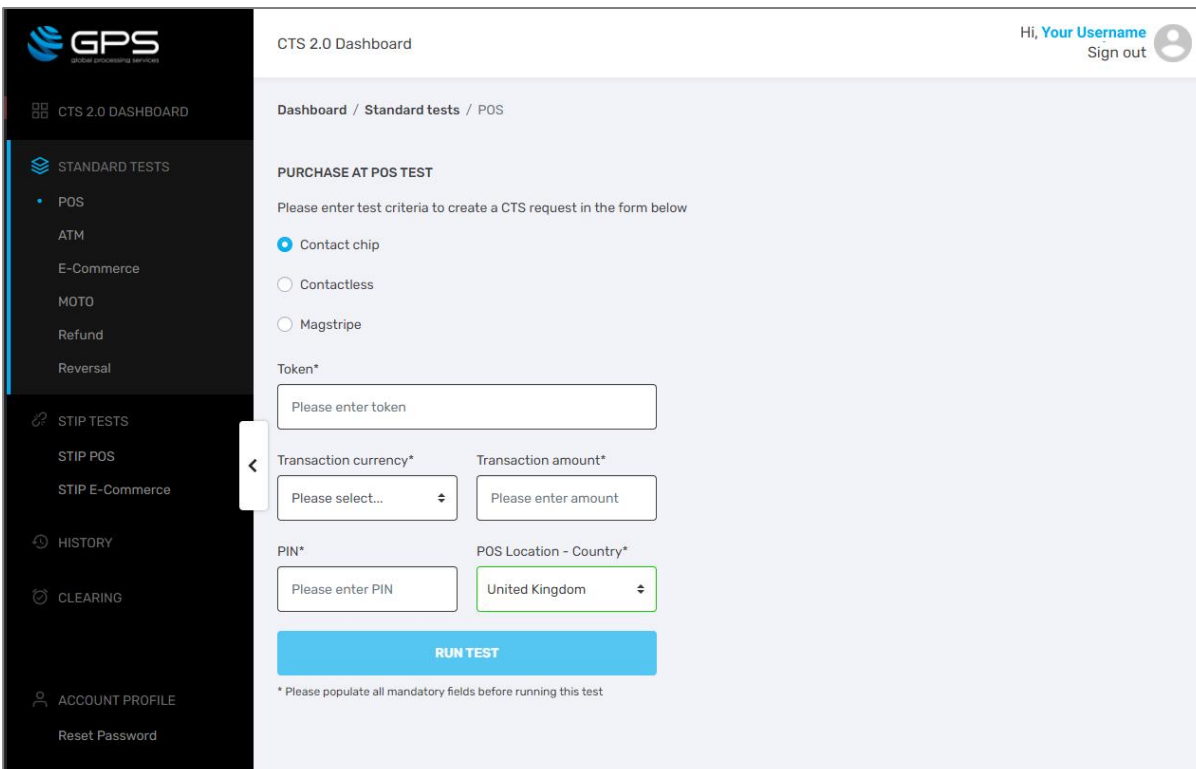


Figure 5: POS Transaction Test Screen

1. Select the card element being tested:
 - Contact chip
 - Contactless

- Magstripe
2. Enter the 9-digit **Token**, **Transaction currency**, **Transaction amount**, card **PIN** and **POS Location - Country**.

Note: If the transaction currency is different to the billing currency of the card, GPS provides an FX transaction based on static values pulled from a database. These rates may not represent the market value.

3. Click **Run Test**.

4.2.2. ATM Transaction Test

Use this test to simulate an ATM balance enquiry or cash withdrawal at an ATM location.

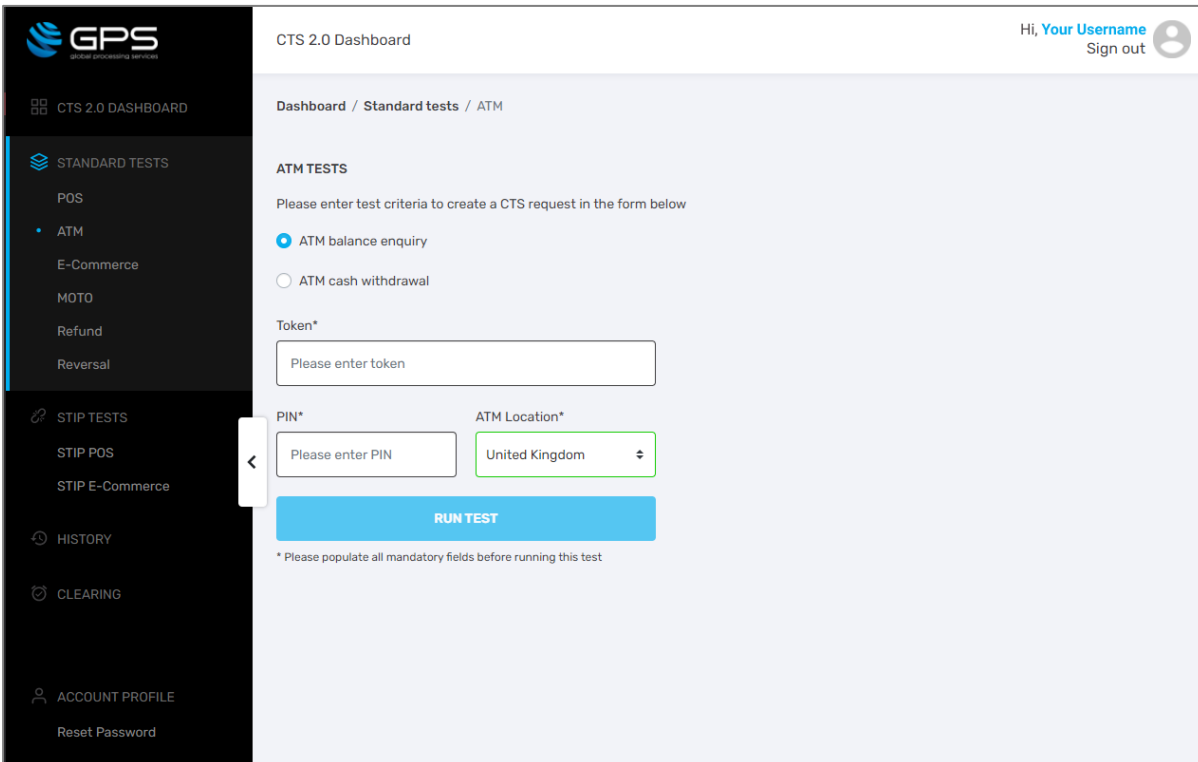


Figure 6: ATM Transaction Test Screen

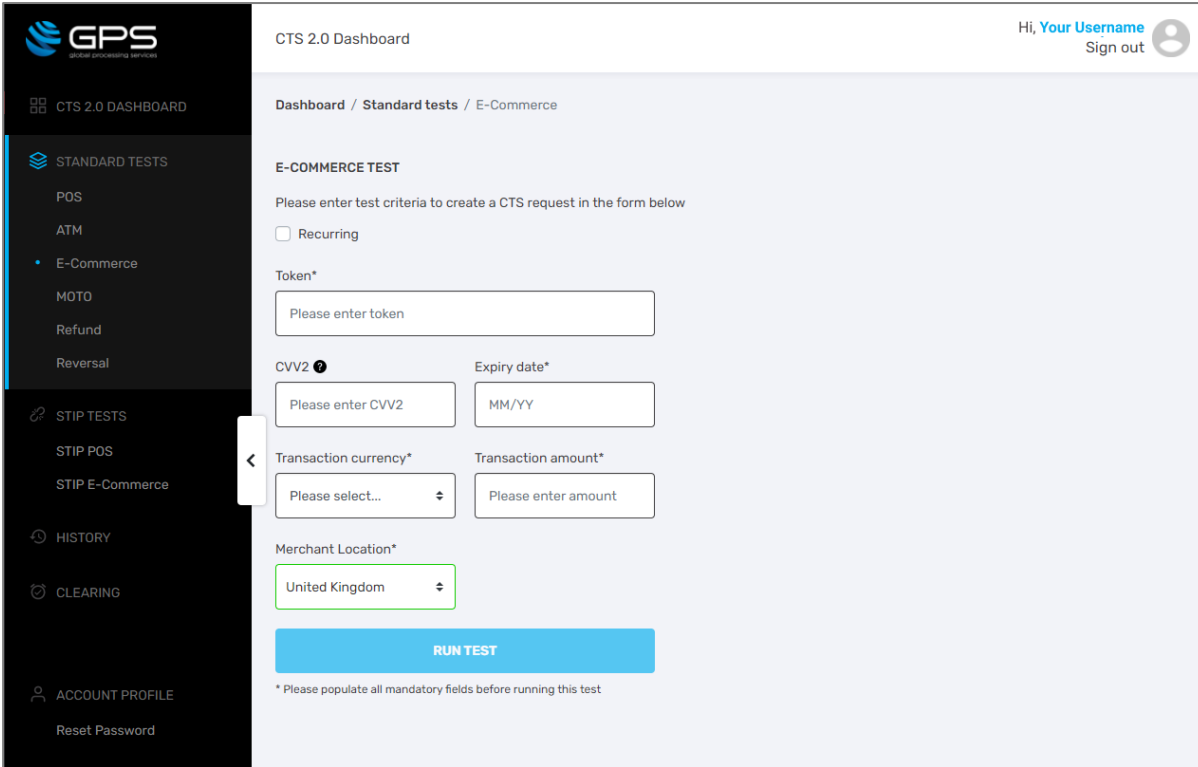
1. Select the ATM element being tested:
 - ATM balance enquiry
 - ATM cash withdrawal
2. Enter the 9-digit **Token**, **Transaction currency**, **Transaction amount**, card **PIN** and **ATM Location** (country).

Note: If the transaction currency is different to the billing currency of the card, GPS provides an FX transaction based on static values pulled from a database. These rates may not represent the market value.

3. Click **Run Test**.

4.2.3. E-commerce Transaction Test

Use this test to simulate an e-commerce transaction made through an online website.



The screenshot shows the CTS 2.0 Dashboard with a sidebar menu on the left. The sidebar includes sections for 'CTS 2.0 DASHBOARD', 'STANDARD TESTS' (with sub-items: POS, ATM, E-Commerce, MOTO, Refund, Reversal), 'STIP TESTS' (with sub-items: STIP POS, STIP E-Commerce), 'HISTORY', 'CLEARING', and 'ACCOUNT PROFILE' (with sub-item: Reset Password). The main content area is titled 'CTS 2.0 Dashboard' and shows the user's name and a 'Sign out' button. Below this, the breadcrumb trail is 'Dashboard / Standard tests / E-Commerce'. The 'E-COMMERCE TEST' section contains a form with the following fields: 'Recurring' (checkbox), 'Token*' (text input), 'CVV2*' (text input), 'Expiry date*' (text input), 'Transaction currency*' (dropdown), 'Transaction amount*' (text input), and 'Merchant Location*' (dropdown). A blue 'RUN TEST' button is at the bottom of the form. A note at the bottom of the form states: '* Please populate all mandatory fields before running this test'.

Figure 7: E-Commerce Transaction Test Screen

1. Enter the 9-digit **Token**, the cards' **CVV2** (if required) and the card **Expiry date**.
2. Enter the **Transaction currency**, **Transaction amount**, and **Merchant Location** (country).

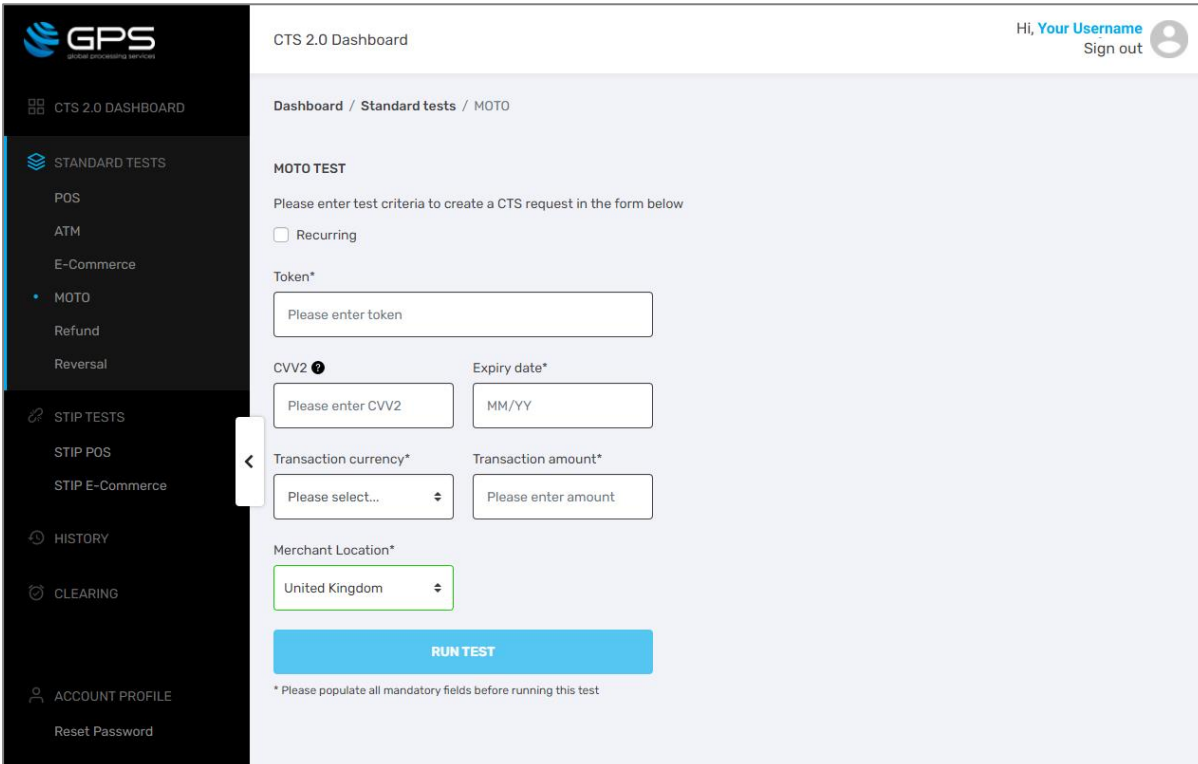
Note: If the transaction currency is different to the billing currency of the card, GPS provides an FX transaction based on static values pulled from a database. These rates may not represent the market value.

3. In **Merchant Location**, specify a location for the merchant.
4. Click **Run Test**.

Note: To simulate a recurring transaction, select **Recurring**.

4.2.4. MOTO

Use this test to simulate a Mail and Telephone Order (MOTO) transaction, which is a payment made over the telephone (for example, via a call centre) or via a mail order catalogue.



The screenshot shows the GPS CTS 2.0 Dashboard. On the left is a dark sidebar with navigation links: CTS 2.0 DASHBOARD, STANDARD TESTS (with sub-links POS, ATM, E-Commerce, MOTO, Refund, Reversal), STIP TESTS (with sub-links STIP POS, STIP E-Commerce), HISTORY, CLEARING, ACCOUNT PROFILE, and Reset Password. The main content area is titled 'CTS 2.0 Dashboard' and shows the user 'Hi, Your Username' with a 'Sign out' link. Below this is a breadcrumb trail: 'Dashboard / Standard tests / MOTO'. The 'MOTO TEST' section contains the following fields and options:

- Recurring:** A checkbox labeled 'Recurring'.
- Token*:** A text input field with placeholder text 'Please enter token'.
- CVV2*:** A text input field with placeholder text 'Please enter CVV2'.
- Expiry date*:** A text input field with placeholder text 'MM/YY'.
- Transaction currency*:** A dropdown menu with placeholder text 'Please select...'.
- Transaction amount*:** A text input field with placeholder text 'Please enter amount'.
- Merchant Location*:** A dropdown menu with 'United Kingdom' selected.

At the bottom of the form is a blue button labeled 'RUN TEST'. A small note at the very bottom states: '* Please populate all mandatory fields before running this test'.

Figure 8: MOTO Transaction Test Screen

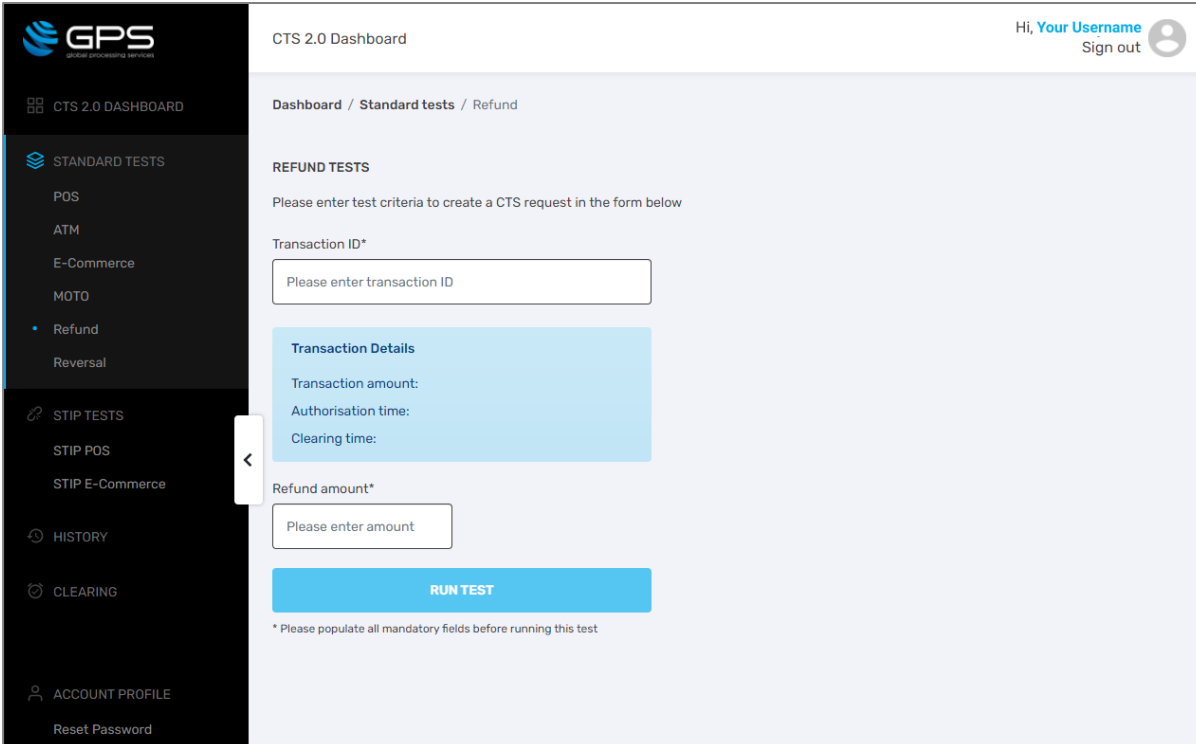
1. To simulate a recurring transaction, select **Recurring**.
2. Enter the 9-digit **Token**, the card's **CVV2** (if required) and the card **Expiry date**.
3. Enter the **Transaction currency**, **Transaction amount**, and **Merchant Location** (country).

Note: If the transaction currency is different to the billing currency of the card, GPS provides an FX transaction based on static values pulled from a database. These rates may not represent the market value.

4. Click **Run Test**.

4.2.5. Refund

Use this test to simulate a refund process initiated by the cardholder and merchant.



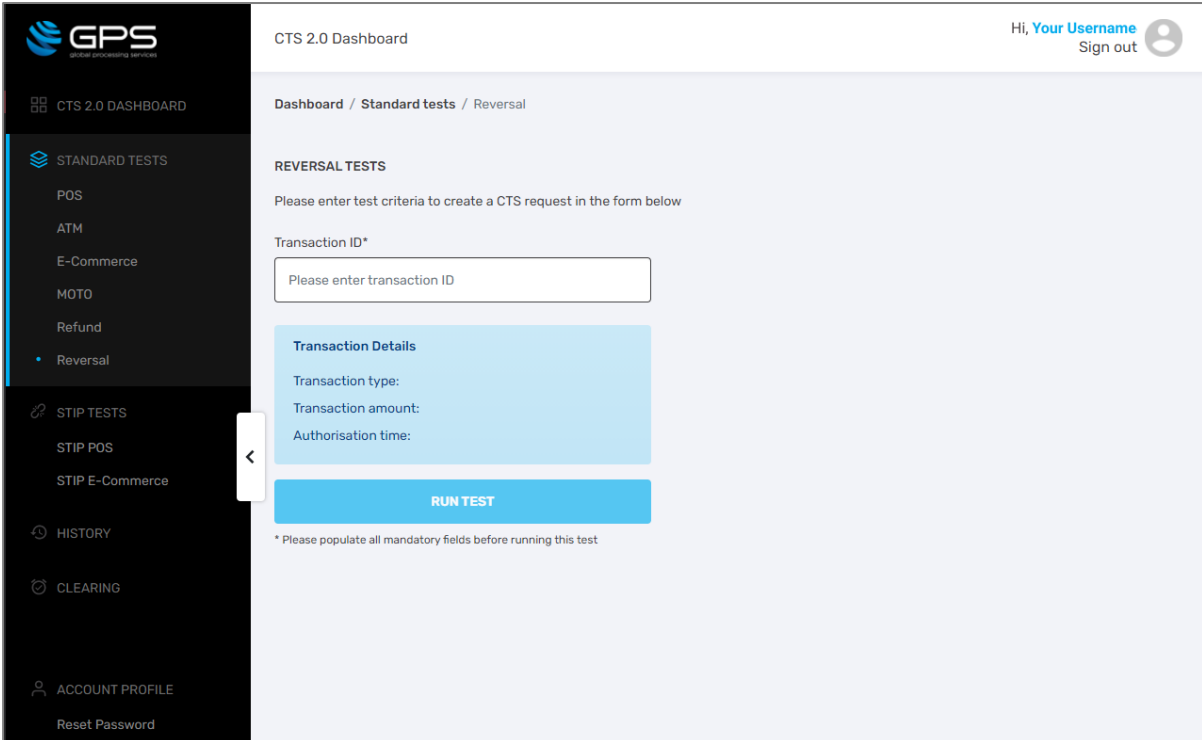
The screenshot shows the CTS 2.0 Dashboard with a sidebar menu on the left. The sidebar includes sections for 'STANDARD TESTS' (POS, ATM, E-Commerce, MOTO, Refund, Reversal), 'STIP TESTS' (STIP POS, STIP E-Commerce), 'HISTORY', 'CLEARING', and 'ACCOUNT PROFILE' (Reset Password). The 'Refund' option is selected. The main content area is titled 'CTS 2.0 Dashboard' and 'Dashboard / Standard tests / Refund'. It contains a 'REFUND TESTS' section with the instruction 'Please enter test criteria to create a CTS request in the form below'. There is a 'Transaction ID*' field with a placeholder 'Please enter transaction ID'. Below this is a 'Transaction Details' box with fields for 'Transaction amount:', 'Authorisation time:', and 'Clearing time:'. There is also a 'Refund amount*' field with a placeholder 'Please enter amount'. A blue 'RUN TEST' button is at the bottom. A note at the bottom states '* Please populate all mandatory fields before running this test'.

Figure 9: Refund Screen

1. Enter the 10-digit **Transaction ID** that corresponds to a transaction that has been successfully cleared.
2. Enter the **Refund amount** (this can be a partial amount, or full amount which cannot exceed the total amount of the transaction).
3. Click **Run Test**.

4.2.6. Reversals

Use this test to simulate an acquirer reversing a previous authorisation.



The screenshot shows the CTS 2.0 Dashboard interface. On the left is a dark sidebar with the GPS logo and navigation menu. The main content area is titled 'CTS 2.0 Dashboard' and shows the 'Reversal' test page. It includes a breadcrumb trail 'Dashboard / Standard tests / Reversal', a 'REVERSAL TESTS' section with instructions, a 'Transaction ID*' input field, a 'Transaction Details' box with labels for transaction type, amount, and time, a blue 'RUN TEST' button, and a footnote about mandatory fields.

CTS 2.0 Dashboard

Hi, [Your Username](#) Sign out

Dashboard / Standard tests / Reversal

REVERSAL TESTS

Please enter test criteria to create a CTS request in the form below

Transaction ID*

Please enter transaction ID

Transaction Details

Transaction type:

Transaction amount:

Authorisation time:

RUN TEST

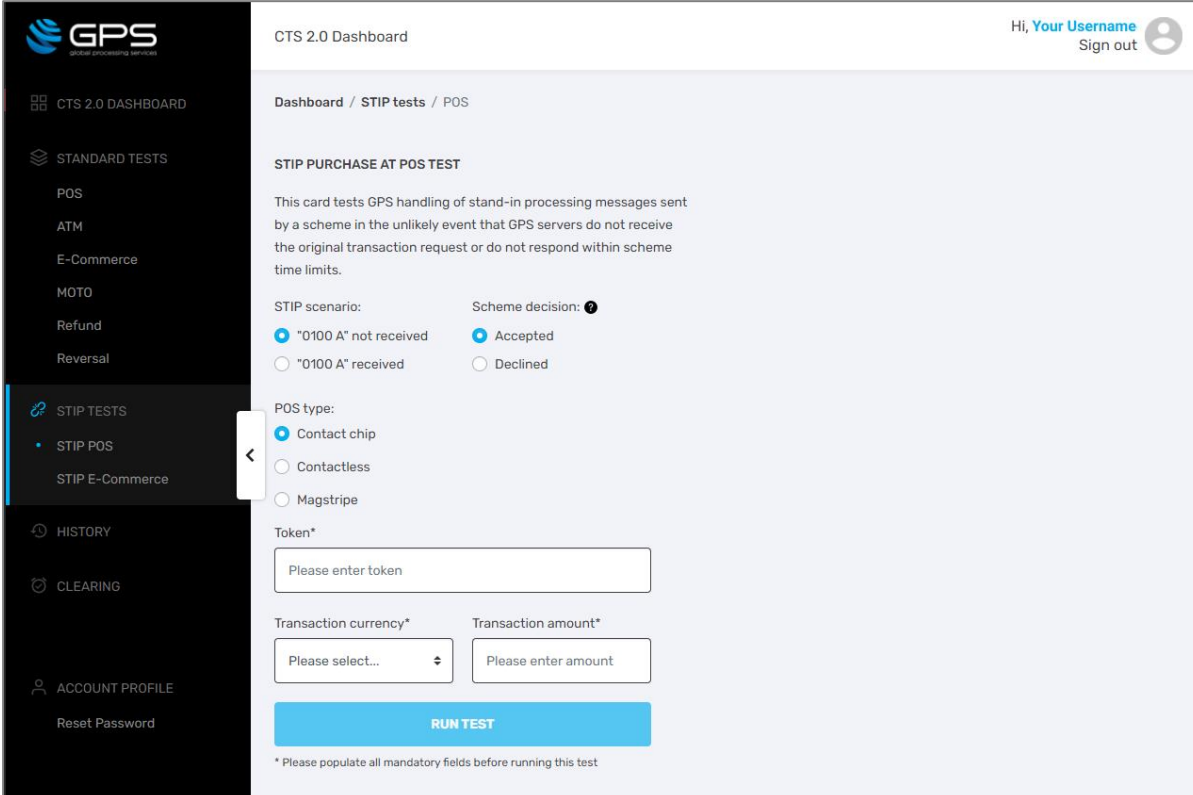
* Please populate all mandatory fields before running this test

Figure 10: Reversals Screen


1. Enter the 10-digit **Transaction ID** that corresponds to an authorisation.
2. Click **Run Test**.

4.3. Running a STIP test

Use this test to simulate scheme Stand-in Processing (STIP) messages for POS and e-commerce transactions.



CTS 2.0 Dashboard

Hi, [Your Username](#)  [Sign out](#)

Dashboard / STIP tests / POS

STIP PURCHASE AT POS TEST

This card tests GPS handling of stand-in processing messages sent by a scheme in the unlikely event that GPS servers do not receive the original transaction request or do not respond within scheme time limits.

STIP scenario: ☒ "0100 A" not received ☐ "0100 A" received

Scheme decision: ☒ Accepted ☐ Declined

POS type: ☒ Contact chip ☐ Contactless ☐ Magstripe

Token*

Please enter token

Transaction currency*

Transaction amount*

RUN TEST

* Please populate all mandatory fields before running this test

Figure 11: STIP Tests Screen

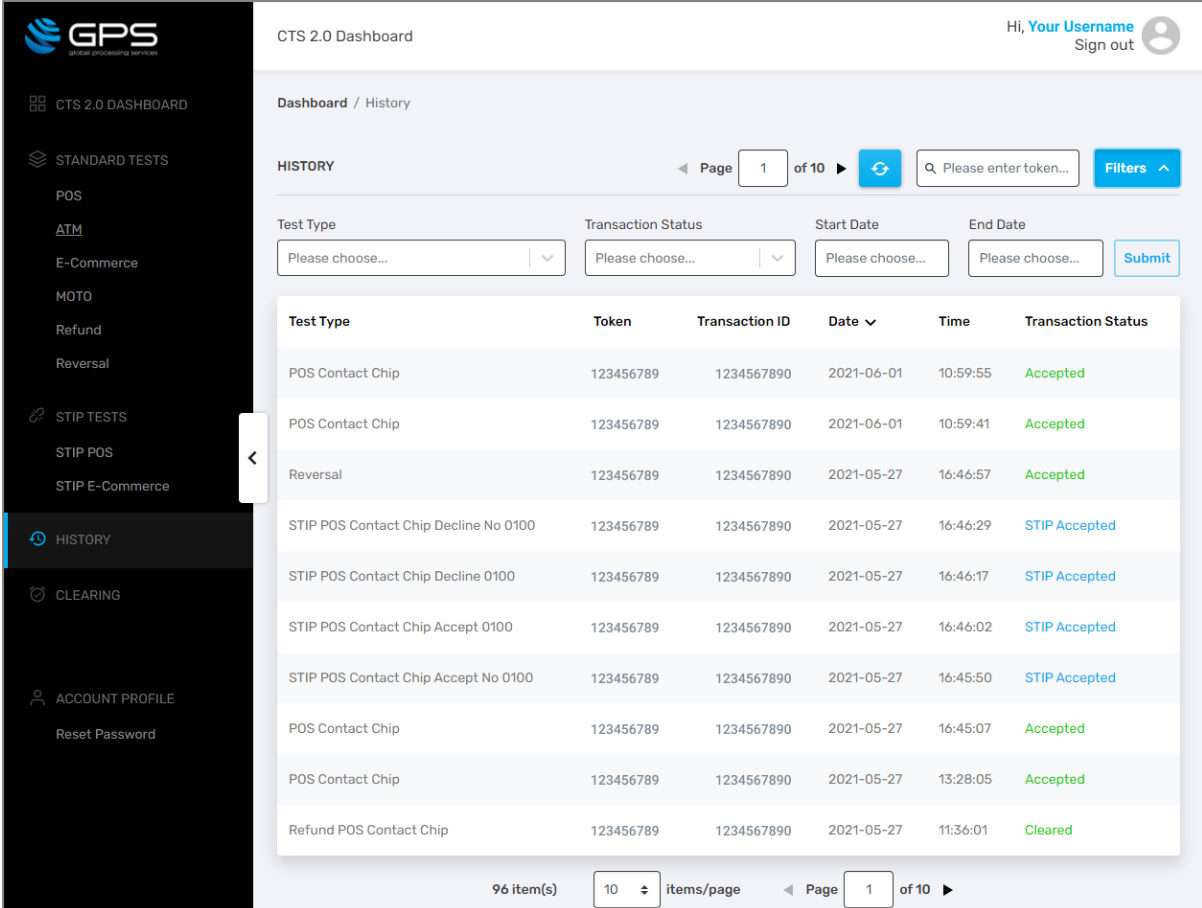
1. Select the STIP scenario and decision that you would like to simulate.
2. Choose the POS type from the list.
3. Enter the 9-digit **Transaction ID** that corresponds to an authorisation.
4. Enter the **Transaction currency** and **Transaction amount**.

Note: If the transaction currency is different to the billing currency of the card, GPS provides an FX transaction based on static values pulled from a database. These rates may not represent the market value.


5. Click **Run Test**.

4.4. Transaction History

The History screen displays a list of all the transactions made using CTS.



CTS 2.0 Dashboard

Hi, [Your Username](#)  [Sign out](#)

Dashboard / History

HISTORY

Page 1 of 10

Test Type: Please choose... Transaction Status: Please choose... Start Date: Please choose... End Date: Please choose... [Filters](#) [Submit](#)

Test Type	Token	Transaction ID	Date	Time	Transaction Status
POS Contact Chip	123456789	1234567890	2021-06-01	10:59:55	Accepted
POS Contact Chip	123456789	1234567890	2021-06-01	10:59:41	Accepted
Reversal	123456789	1234567890	2021-05-27	16:46:57	Accepted
STIP POS Contact Chip Decline No 0100	123456789	1234567890	2021-05-27	16:46:29	STIP Accepted
STIP POS Contact Chip Decline 0100	123456789	1234567890	2021-05-27	16:46:17	STIP Accepted
STIP POS Contact Chip Accept 0100	123456789	1234567890	2021-05-27	16:46:02	STIP Accepted
STIP POS Contact Chip Accept No 0100	123456789	1234567890	2021-05-27	16:45:50	STIP Accepted
POS Contact Chip	123456789	1234567890	2021-05-27	16:45:07	Accepted
POS Contact Chip	123456789	1234567890	2021-05-27	13:28:05	Accepted
Refund POS Contact Chip	123456789	1234567890	2021-05-27	11:36:01	Cleared

96 item(s) 10 items/page Page 1 of 10

Figure 12: History Screen

4.4.1. Filtering transactions

To filter transactions, click **Filters**. The filter pane appears where you can refine the list of transactions:



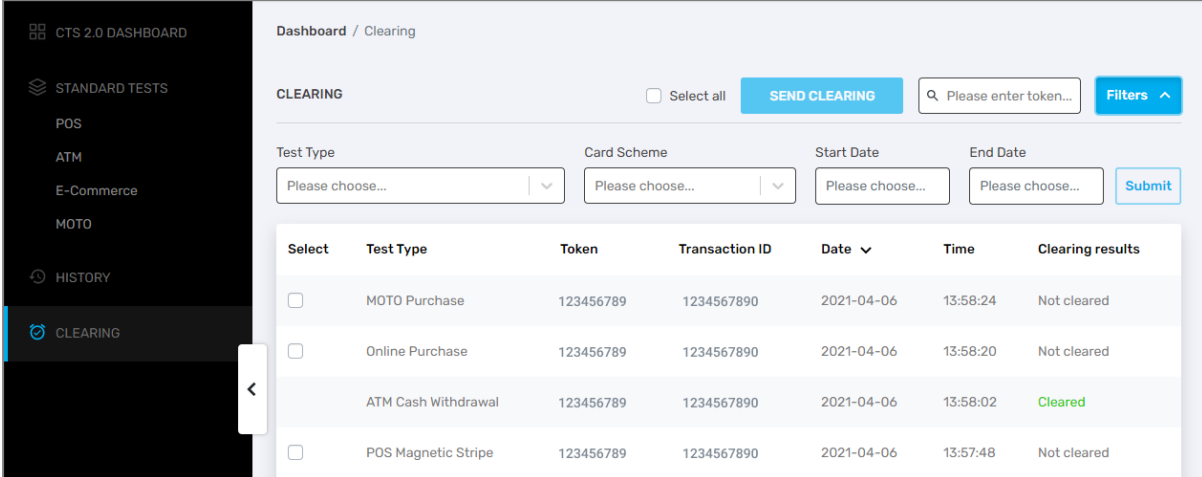
Test Type: Please choose... Transaction Status: Please choose... Start Date: Please choose... End Date: Please choose... [Submit](#)

Figure 13: Filter pane

Click **Submit** to apply a filter.

4.5. Clearing

The Clearing screen displays a list of all eligible transactions made using CTS that can be cleared to simulate the presentment/financial record.



Select	Test Type	Token	Transaction ID	Date	Time	Clearing results
<input type="checkbox"/>	MOTO Purchase	123456789	1234567890	2021-04-06	13:58:24	Not cleared
<input type="checkbox"/>	Online Purchase	123456789	1234567890	2021-04-06	13:58:20	Not cleared
<input type="checkbox"/>	ATM Cash Withdrawal	123456789	1234567890	2021-04-06	13:58:02	Cleared
<input type="checkbox"/>	POS Magnetic Stripe	123456789	1234567890	2021-04-06	13:57:48	Not cleared

Figure 14: Clearing Screen

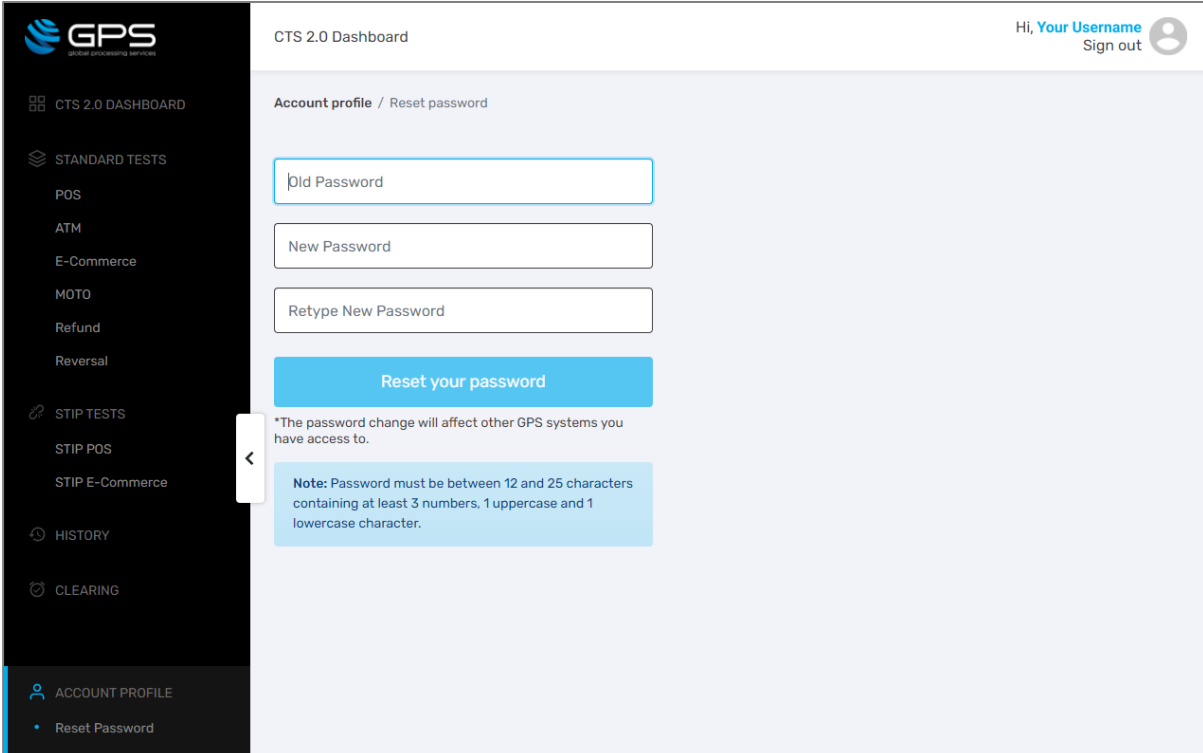
Select the authorisations you want to send to clearing, and then click **Submit**.

To filter transactions, click **Filters**. The filter pane appears where you can refine the list of transactions.

5. Resetting your Password

The **Reset Password** option enables you to reset your password for CTS.

Note: Resetting your password will impact other GPS-related systems that use these credentials.



GPS
global processing services

CTS 2.0 Dashboard

Hi, [Your Username](#)
Sign out

Account profile / Reset password

Old Password

New Password

Retype New Password

Reset your password

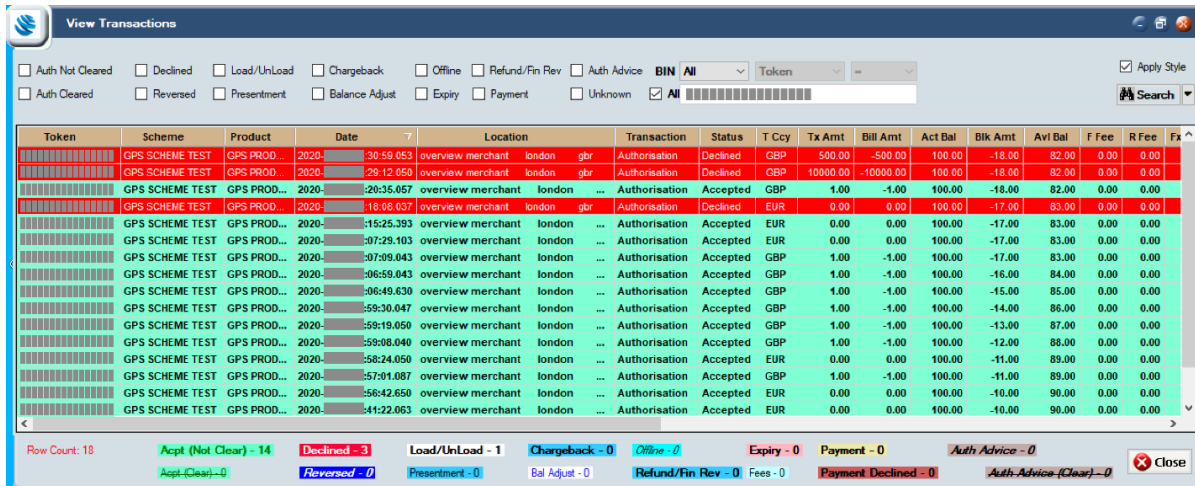
*The password change will affect other GPS systems you have access to.

Note: Password must be between 12 and 25 characters containing at least 3 numbers, 1 uppercase and 1 lowercase character.

Figure 15: Reset Password Screen

6. Smart Client UAT Validation

You can use Smart Client in the UAT environment to see the transactions that have taken place on the card, by searching on either the 9-digit token or transaction ID provided in the CTS response. For details, see the [Smart Client User Guide](#).



The screenshot shows the 'View Transactions' window in the Smart Client. It features a search bar at the top with filters for transaction status (e.g., Auth Not Cleared, Declined, Load/Unload, Chargeback, Offline, Refund/Fin Rev, Auth Advice, BIN, All, Tokens) and a search button. Below the search bar is a table of transactions with columns: Token, Scheme, Product, Date, Location, Transaction, Status, T Ccy, Tx Amt, Bill Amt, Act Bal, Bk Amt, Avl Bal, F Fee, R Fee, and Fx. The table displays 18 rows of transaction data, including details like 'GPS SCHEME TEST', 'GPS PROD...', '2020-12-29', 'overview merchant', 'london', 'gbr', 'Authorisation', 'Declined', 'GBP', '500.00', '-500.00', '100.00', '-18.00', '82.00', '0.00', '0.00'. At the bottom, there is a summary bar showing counts for various transaction types: Row Count: 18, Acpt (Not Clear) - 14, Declined - 3, Load/Unload - 1, Chargeback - 0, Offline - 0, Expiry - 0, Payment - 0, Auth Advice - 0, Acpt (Clear) - 0, Reversed - 0, Presentment - 0, Bal Adjust - 0, Refund/Fin Rev - 0, Fees - 0, Payment Declined - 0, and Auth Advice (Clear) - 0. A 'Close' button is located in the bottom right corner.

Token	Scheme	Product	Date	Location	Transaction	Status	T Ccy	Tx Amt	Bill Amt	Act Bal	Bk Amt	Avl Bal	F Fee	R Fee	Fx
...	GPS SCHEME TEST	GPS PROD...	2020-12-29 05:53	overview merchant london gbr	Authorisation	Declined	GBP	500.00	-500.00	100.00	-18.00	82.00	0.00	0.00	
...	GPS SCHEME TEST	GPS PROD...	2020-12-29 12:05	overview merchant london gbr	Authorisation	Declined	GBP	10000.00	-10000.00	100.00	-18.00	82.00	0.00	0.00	
...	GPS SCHEME TEST	GPS PROD...	2020-12-26 15:05	overview merchant london gbr	Authorisation	Accepted	GBP	1.00	-1.00	100.00	-18.00	82.00	0.00	0.00	
...	GPS SCHEME TEST	GPS PROD...	2020-12-18 08:03	overview merchant london gbr	Authorisation	Declined	EUR	0.00	0.00	100.00	-17.00	83.00	0.00	0.00	
...	GPS SCHEME TEST	GPS PROD...	2020-12-15 25:39	overview merchant london ...	Authorisation	Accepted	EUR	0.00	0.00	100.00	-17.00	83.00	0.00	0.00	
...	GPS SCHEME TEST	GPS PROD...	2020-12-07 29:10	overview merchant london ...	Authorisation	Accepted	EUR	0.00	0.00	100.00	-17.00	83.00	0.00	0.00	
...	GPS SCHEME TEST	GPS PROD...	2020-12-07 09:04	overview merchant london ...	Authorisation	Accepted	GBP	1.00	-1.00	100.00	-17.00	83.00	0.00	0.00	
...	GPS SCHEME TEST	GPS PROD...	2020-12-06 59:04	overview merchant london ...	Authorisation	Accepted	GBP	1.00	-1.00	100.00	-16.00	84.00	0.00	0.00	
...	GPS SCHEME TEST	GPS PROD...	2020-12-06 49:30	overview merchant london ...	Authorisation	Accepted	GBP	1.00	-1.00	100.00	-15.00	85.00	0.00	0.00	
...	GPS SCHEME TEST	GPS PROD...	2020-12-05 30:04	overview merchant london ...	Authorisation	Accepted	GBP	1.00	-1.00	100.00	-14.00	86.00	0.00	0.00	
...	GPS SCHEME TEST	GPS PROD...	2020-12-05 28:04	overview merchant london ...	Authorisation	Accepted	GBP	1.00	-1.00	100.00	-13.00	87.00	0.00	0.00	
...	GPS SCHEME TEST	GPS PROD...	2020-12-05 28:04	overview merchant london ...	Authorisation	Accepted	GBP	1.00	-1.00	100.00	-12.00	88.00	0.00	0.00	
...	GPS SCHEME TEST	GPS PROD...	2020-12-05 24:05	overview merchant london ...	Authorisation	Accepted	EUR	0.00	0.00	100.00	-11.00	89.00	0.00	0.00	
...	GPS SCHEME TEST	GPS PROD...	2020-12-05 21:08	overview merchant london ...	Authorisation	Accepted	GBP	1.00	-1.00	100.00	-11.00	89.00	0.00	0.00	
...	GPS SCHEME TEST	GPS PROD...	2020-12-04 42:50	overview merchant london ...	Authorisation	Accepted	EUR	0.00	0.00	100.00	-10.00	90.00	0.00	0.00	
...	GPS SCHEME TEST	GPS PROD...	2020-12-04 22:06	overview merchant london ...	Authorisation	Accepted	EUR	0.00	0.00	100.00	-10.00	90.00	0.00	0.00	

Figure 16: Smart Client Transactions Screen

7. Troubleshooting

This section provides answers to common troubleshooting issues.

Access

Cannot log into CTS

- Check your credentials are correct. You use the same credentials to access CTS as you do Smart Client UAT. Both the username and password are case sensitive.
- If you forget your username or password, contact GPS by raising a [GPS JIRA](#) to request your username or a password reset.

How do I reset my password?

If you are logged into CTS, you can change your current password using the **Reset Password** option. For more information, see [Resetting your Password](#).

If you are not logged in and need to reset your password, contact GPS by raising a [GPS JIRA](#)

"This site can't be reached"

If the message "*This site can't be reached*" appears, this means that your IP address is not on the 'allowed list' on our system. Contact GPS by raising a [GPS JIRA](#) to request that your IP address is added to the allowed list.

Test

400 or 500 errors

The CTS system provides you with responses each time a transaction is executed. Depending on the information sent, the transaction is either *approved* or *declined*. If the transaction is declined, CTS provides a reason and response code to explain why.

Occasionally, if the system does not get a response within the required time frame, a timeout may occur and a 400 or 500 error is displayed. This shows as aborted in the history screen. If this issue continues, raise a [GPS JIRA](#) for Ops to investigate further.

For a list of response codes, refer to the [GPS External Host Interface Guide](#).

8. FAQ

This section provides answers to frequently asked questions about CTS.

Q. What MCC codes are used?

The following Merchant Category Codes (MCC) are used:

- E-commerce: 5734 - Computer Software Stores
- MOTO: 5311 – Department Stores
- POS: 5734 - Computer Software Stores
- ATM: 6011 – Automated Cash Disburse

Q. What merchant name is displayed on the transactions?

The following Merchant names are displayed:

- E-commerce: e-commerce merchant
- MOTO: moto merchant
- POS: Shop with Chip POS
- ATM: offsite ATM

Q. Are PSD2 counter limits validated in CTS?

Currently the CTS system does not validate against any PSD2 counters that may be setup in the system as there are several different hosts that manage these limits.

Q. Are contactless limits validated in the CTS tests?

Due to the contactless limits varying by country, currency and merchant, CTS is unable to validate this.

Q. What FX Rate does CTS provide?

If the transaction currency is different to the billing currency of the card, GPS provides an FX transaction based on static values pulled from a database. These rates may not represent the market value.

9. Glossary

This section explains the terms used in this document.

Acquirer	The merchant acquirer or bank that offers the merchant a trading account, to enable the merchant to take payments in store or online from cardholders.
ATM	Automated Teller (Cash) Machine.
Contact chip	Card transaction where the POS terminal reads and validates the card's chip.
Contactless	Secure payment method using a debit or credit card or another payment device by using RFID technology and near-field communication. To use the system, a cardholder taps the payment card near a POS terminal equipped with the technology.
CVV2	The Card Verification Value (CVV) is a 3-digit number on VISA and MasterCard branded credit and debit cards. Cardholders are typically required to enter the CVV during any online or cardholder not present transactions. CVV numbers are also known as CVV2 numbers, which are the same as CVV numbers, except that they have been generated by a 2nd generation process that makes them harder to guess.
EHI	The GPS External Host Interface (EHI) is a system which provides real-time transactional data and control over your transaction authorisations.
EMV	EMV is a payment standard for smart payment cards, payment terminals and automated teller machines (ATMs). EMV is an acronym for "Europay, Mastercard, and Visa", the three companies that created the standard. EMV cards are smart cards, also called chip cards, integrated circuit cards, or IC cards which store their data on integrated circuit chips, in addition to magnetic stripes for backward compatibility.
GPS Web Services	GPS's SOAP based Application Program Interface (API) which enables integration of your systems with GPS.
Issuer	The card issuer, typically a financial organisation authorised to issue cards. The issuer has a direct relationship with the relevant card scheme.
Magstripe	The magnetic stripe on the back of the card. Can be used for a card point of sale (POS) transaction using a merchant POS terminal.
Merchant	The shop or store providing a product or service that the cardholder is purchasing. Physical stores use a terminal or card reader to request authorisation for transactions. Online sites provide an online shopping basket and use a payment service provider to process their payments.
Merchant Category Code (MCC)	A unique identifier of the merchant, to identify the type of account provided to them by their acquirer.

MOTO	Mail and Telephone Order (MOTO) transaction, which is a payment made over the telephone (e.g., via a Call centre) or via a mail order catalogue.
POS	Point of Sale transaction.
Smart Client	GPS's user interface for managing your account on the GPS system. Smart Client is installed as a desktop application and requires a VPN connection to GPS systems in order to be able to access your account.
STIP	Stand-In Processing. Where GPS holds the card balance on behalf of a Program Manager, in some instances where the Program Manager is not available, GPS provides an authorisation decision for a transaction on their behalf.

10. Document History

Version	Date	Description	Author
1.0	09/02/2021	First version	AW
1.1	13/04/2021	Clearing added	AW
1.2	06/04/2021	Additional POS tests added STIP added Reversals added	AW
	06/04/2022	Minor text amendments	WS
1.3	07/06/2022	Documentation improvements	AL