Web Services Guide

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For the latest technical documentation, see the Documentation Portal.

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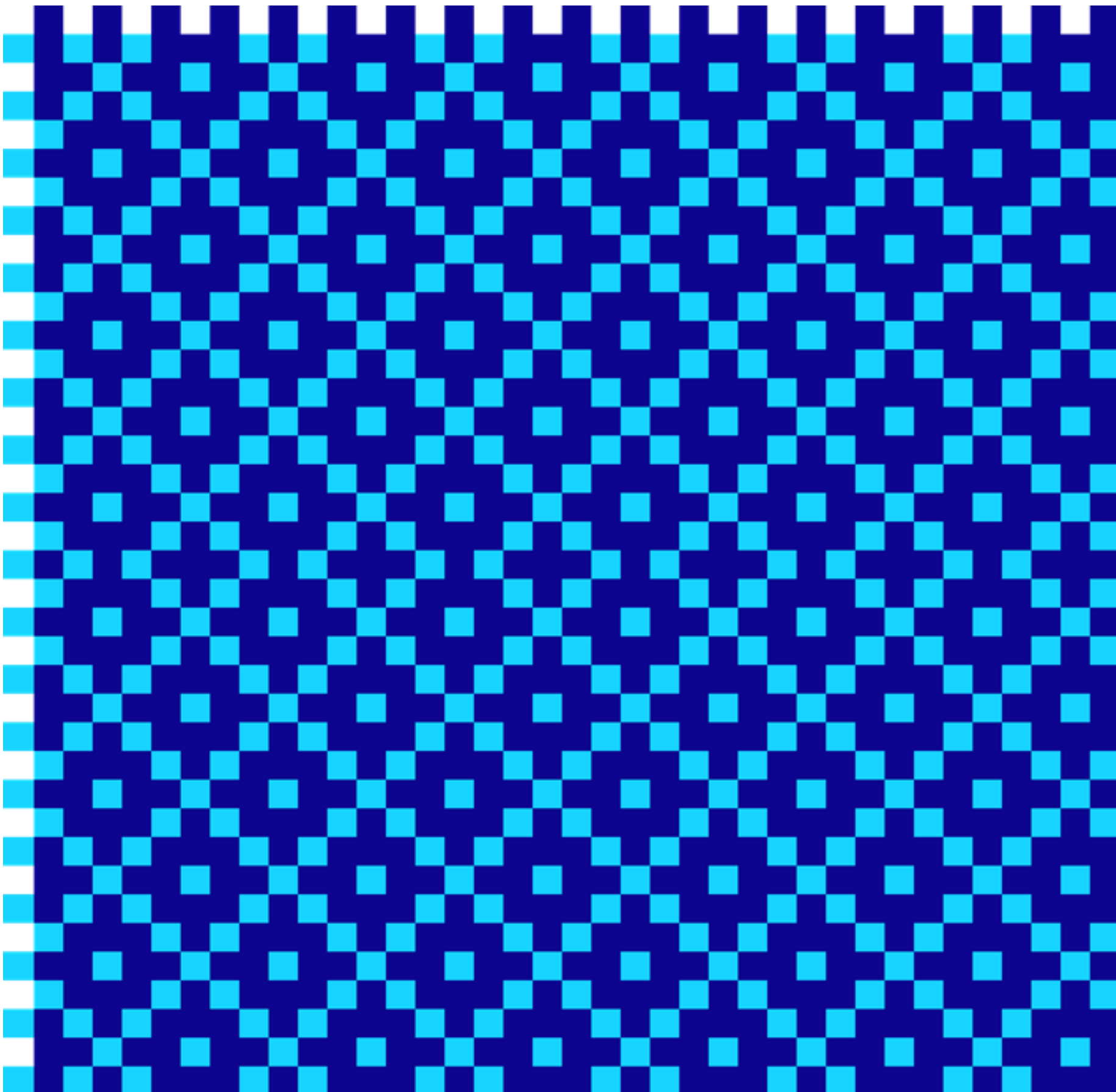

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About this Guide

This guide is intended as a reference guide, to provide information on the available Thredd web services and fields in each web service.

Target audience

This guide is aimed at developers who need to integrate their applications to Thredd, using our SOAP-based web services. You should know how to implement SOAP-based calls and handle the response.

What's changed?

If you want to find out what's changed since the previous release, see the Document History section.

How to use this Guide

Before you start:

- Make sure you have read the Integration Steps section and understand what information and system access you will need to be able to use the web service sandbox and test environments.
- Read the Use Case Scenarios section, which explains how to implement the most common user scenarios and provides recommendations as to which web services to use.
- Make sure you can connect to the Thredd web service, by implementing a simple call, as explained in Using the API.

If you are an experienced user and don't want to read through the Getting Started sections, you can go directly to the Web Services API section.

Implementing web service calls

- When implementing a web service request, you must at a minimum include the mandatory request fields and handle the fields that are mandatory in the response.
- Where a field requires you to submit a code value or returns a code value, the guide provides links to the relevant appendix for details. If in doubt as to which code to include in your request, you should use the default or recommended value.
- Do not change the default xmlns attributes (XML namespaces) in the SOAP request.
- Don't use spaces in xml tags.
- Please pay particular attention to XML tag name spelling and capitalisation. Different web services may sometimes adopt different case and naming conventions. If in doubt, always refer to the Thredd-provided SOAP WSDL. See Using the API.

Conventions used in this Guide

When reading the tables in this guide, note the following information is provided for each XML field:

Element	Description
Tag	The XML tag name. Please pay particular attention to the capitalisation and spelling. Where a tag name is used within text, this is formatted as in the following example: <ActionCode>
Type	The type of field value supported. Options include: N = number AN = alpha-numeric YYYY-MM-DD = date format: Year-Month-Date HHMMSS = time format: Hour-Minute-Second D = decimal B = boolean

Element	Description
Minimum / Maximum Length	The allowed minimum and maximum field length. If in doubt, refer to the WSDL or examples provided in the guide.
Request / Response	The status of the field in the request and response. Options are: Mandatory = must be included in the request and will be in the response Conditional = this field is mandatory under specified conditions. Refer to the description for details. Optional = can be included. May be in the response. Omit = you should omit this field. Will not be in the response

Related Documents

Refer to the table below for a list of other relevant documents that should be used together with this guide.

Document	Description
EHI Guide	Provides details of the Thredd External Host Interface (EHI).
Smart Client Guide	Describes how to use the Thredd Smart Client to manage your account.
Thredd Portal Guide	Describes how to use the Thredd Portal to manage your cards and transactions.
Card Generation Interface Specification	Provides detailed specifications for card manufacturers on Thredd card creation.
3D Secure Guide (Apata)	Describes the Thredd 3D Secure Apata service.
3D Secure Guide (Cardinal)	Describes the Thredd 3D Secure Cardinal service.
Fraud Transaction Monitoring Guides	Describes the Thredd fraud protection service.

Tip: For the latest technical documentation, see the Documentation Portal.

Overview

The Thredd web service is based on SOAP Version 1.1.

SOAP (Simple Object Access Protocol) is a messaging protocol for exchanging structured information in the implementation of web services. It uses Extensible Markup Language (XML) for its message format and relies on application layer protocols such as HTTP for message negotiation and transmission. SOAP allows developers to invoke processes running on disparate operating systems (such as Windows, macOS, and Linux) to authenticate, authorise and communicate using XML.

The figure below describes how the web services API is used to integrate external systems to Thredd.

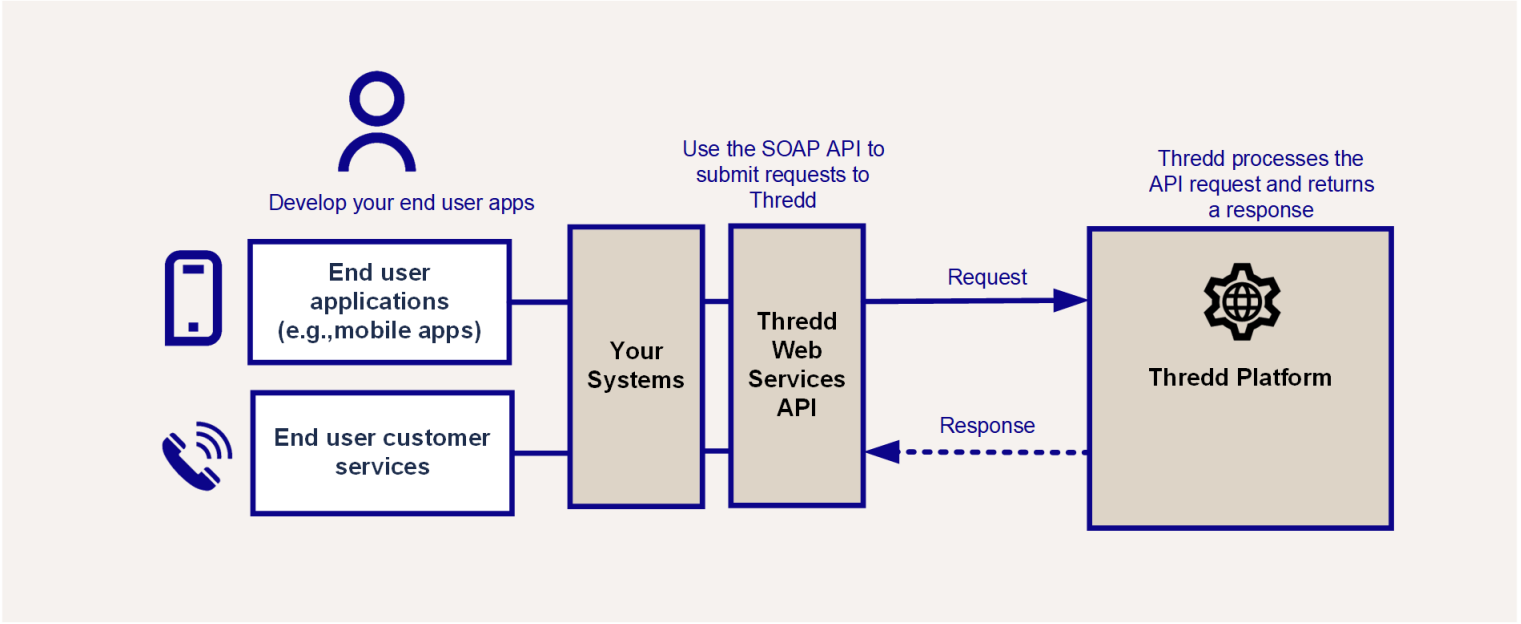

Figure 1: API Architecture Overview

Integration Steps

To integrate using the web services API, you should complete the following steps in the order outlined below.

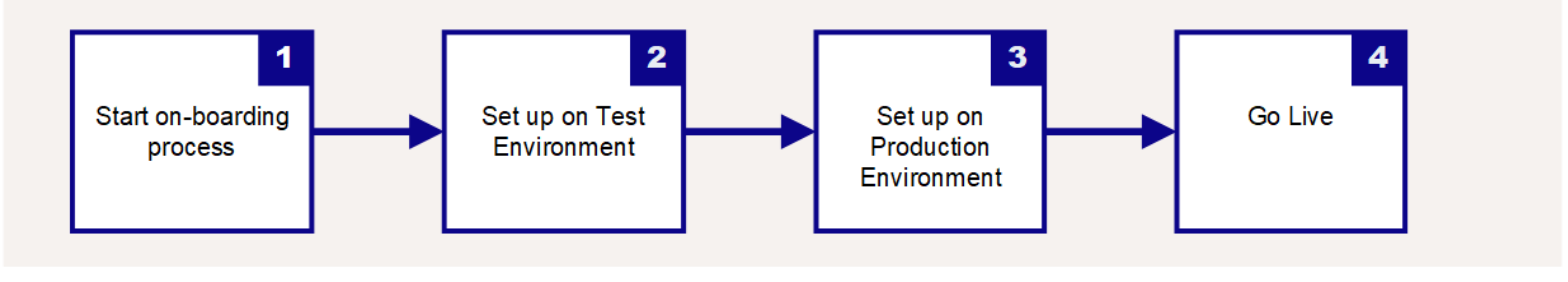

Figure 2: Integration Steps

Step 1: Start the On-boarding Process

Thredd recommend you start the on-boarding process as soon as possible, as this may take several weeks due to dependencies on external parties, such as the Card Schemes (payment network).

For project scoping and scheduling information, please refer to your Thredd Implementation Manager and to the following Thredd documentation: Project Initiation Document (PID) , Project Scoping Document (PSD) and Project Requirements Document (PRD).

On-boarding steps:

1. Make sure you have completed your Product Setup Form (PSF), to enable us to configure your programme-specific Thredd setup.
2. Enable Thredd to exchange security keys between your card manufacturer, so that Thredd can generate the PAN stock in our systems, which is required to create physical cards.
3. When ready to go live with your service, check that your Thredd contracts are signed and payments are up to date.

Step 2: Set up on the Test Environment

Access to the Thredd generic test product

Thredd provides you with access to a generic Thredd test product setup (referred to as dummy UAT or dummy setup), shared by all of our clients, where you can start exploring the web services. The test product setup provides a restricted set of card functionality, which enables you to perform basic actions such as: create and load cards, manage PINs, change card status and change card velocity groups.

Access to your own dedicated setup

Thredd configures your dedicated programme on the test environment (ITS-Thredd), with unique credentials, based on the details agreed in your Product Setup Form (PSF). At this stage transactions are managed within the test environment and not via the Card Scheme (payment network).

Test environment setup steps:

1. Ensure you have secure access to all the required Thredd systems:
    - Provide Thredd with a list of IP addresses allowed to use the web services.
    - You require secure access to Thredd in order to use the web services. For more information on Thredd's Secure Connectivity Framework, see the Connecting to Thredd Guide.
2. Ensure you have the required user credentials and codes needed to submit web service requests:
    - You need a *username* and *password*, which must be included in the authorisation header of your SOAP request. Your Implementation Manager will provide you with your credentials.
    - You will need an Issuer Code, supplied by Thredd. This must be included in the body of your SOAP request.

Test your Integration:

1. Decide which web services you need. This depends on the Thredd External Host Interface (EHI) mode you are using. For example:
    - If you are set up for Gateway Processing (mode 1 and 4) you mainly use the web services related to card creation, card management and card usage groups.
    - If you are set up for Cooperative Processing (mode 2) and Full Service Processing (mode 3), you may need to use other web services for loading/unloading cards and updating the balance on the card.
2. Test your EHI integration. For more information, refer to the *EHI Specifications*.
3. Submit test web services transactions to the Thredd test system. See Using the API. View the results and fix any errors.

    Note: Thredd recommend you start with a simple check of the status of the web service to make sure you can connect, using `Ws_Check`. See Check Service Availability.
4. When you are satisfied you understand how the web service API works, build your front-end user application with the SOAP API functionality included.

Tip: See the Use Case Scenarios section for general pointers to getting started with the Thredd API. For field validation rules that are run on specific fields, see Field Validation.

CHIP Profile and White Test Plastics

Create test card tokens and generate white test plastics. These are generic, non-branded cards with test keys on the card. Your Implementation Manager will work with your card manufacturer to produce test cards:

- Thredd generates a card file for any test cards that have been created and manually sends to the card manufacturer.
- The card manufacturer produces white test plastics in line with the agreed project plan. Test cards are sent to the relevant parties (e.g. the Program Manager and Visa or Mastercard).
- Testing is undertaken in line with the agreed scope.

Step 3: Set up on Production

Once all production readiness activities are complete, Thredd provides you with production credentials and generates a limited number of PAN stock, as approved by your card issuer.

Production testing steps:

Additional end-to-end transaction testing is required at this stage. In particular:

- Create card tokens for automated card production.
- Thredd sends a file to the card manufacturer via sFTP (Secure File Transfer Protocol). The card manufacturer generates live physical cards and despatches to the relevant parties for testing, which include Thredd, Programme Manager and Card Schemes (payment networks).
- Thredd can provide you with a test script to run tests that cover aspects you should test, such as:
    - Test traffic through the BIN tables.
    - Test the card chip profile is working in line with how it has been configured (for example, if the card is enabled to draw out money at ATMs and charges a fee for ATM withdrawals, check this works as expected).
    - Test to ensure usage groups and velocity limits set up for your products work as expected and return the expected results.
- Make sure you understand any messages returned from the Card Schemes (payment networks) and card issuers and know how to handle.
- Test the end-to-end customer experience and confirm that the card and account are operating as expected.

Step 4: Go Live

Thredd pavement testing approval is required in addition to any Issuer sign-off before Thredd can switch your account to *Active*.

Use Case Scenarios

This section provides examples of common scenarios using the Thredd web services.

- Creating a Card
- Using Tokens
- Loading a Card
- Running Card Enquiries
- Managing Cards
- Renewing Expiring Cards
- Updating a Card Status to Lost, Stolen or Destroyed
- Replacing a Lost, Stolen or Destroyed Card
- Registering a Cardholder for 3D Secure
- Using MFX Wallets

Creating a Card

Thredd provides web services to create a card, which can be either a physical or a virtual card. For a virtual card, Thredd may hold the card image or you can manage the image on your side; for a physical card some extra steps are involved in generating an XML file, which is sent to the Thredd Card Manufacturer for printing and sending to your customer. See the figure below.

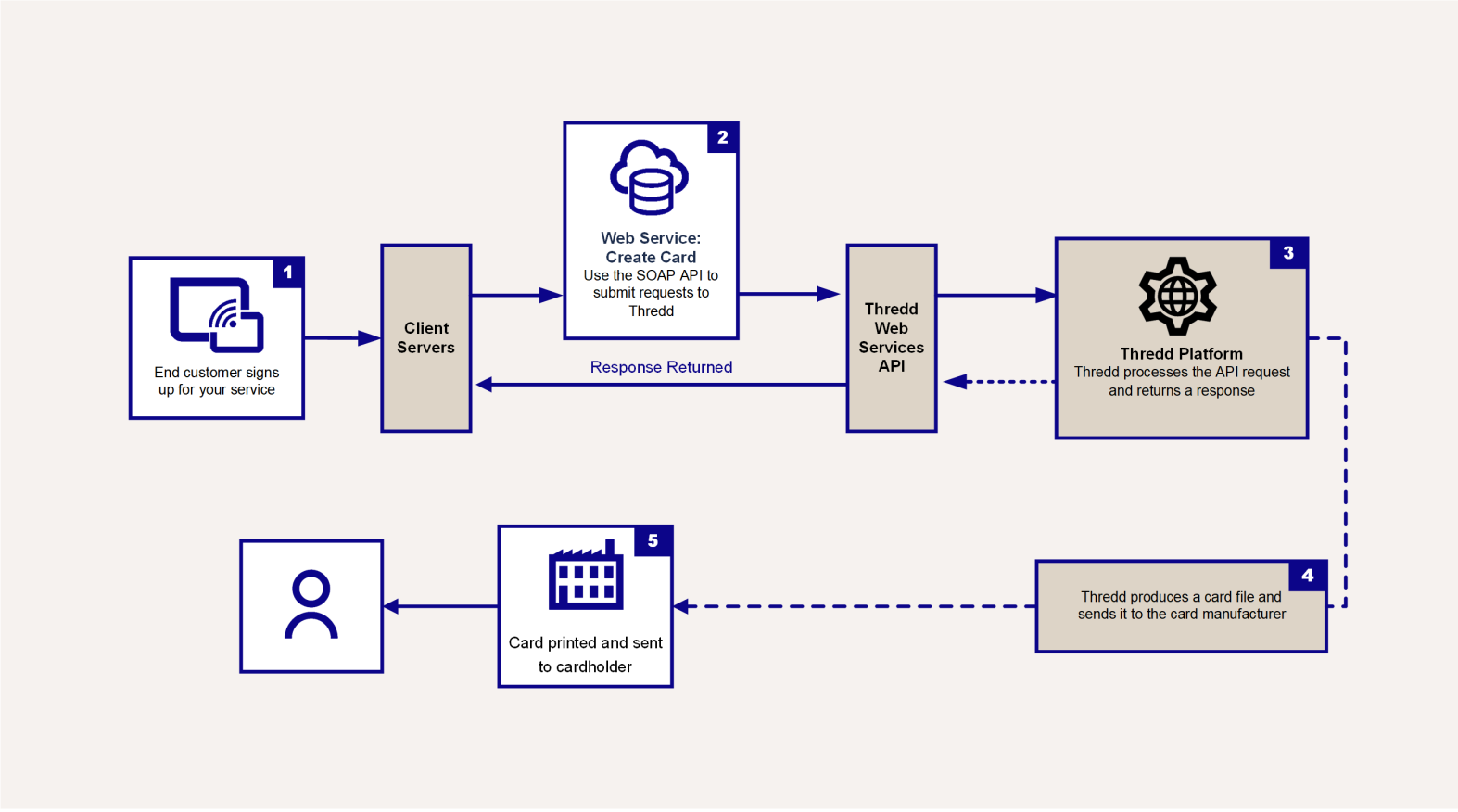

Figure 3: Using the Card Create web service

Recommended API

The API to use to create a card depends on the requirements of your application. We recommend the following:

- To create a card, use the Card Create API: `ws_CreateCard`. The card can be issued in a state of active or inactive:
  - If issued as inactive, it must be activated using the Card Activate API: `ws_Activate`. This scenario is typical for customers who sign up for a physical card via the Internet or their mobile App.
  - If issued as active, the card can be used immediately. This scenario is typical for customers who sign up for a card via a point of sale outlet or for certain types of prepaid cards which you want your customer to be able to immediately use.
- To activate a card and load an initial balance, use the Card Activate and Load API: `ws_Activate_Load`.

What to look out for:

- Card status: check to confirm the card status.
- Change the status to active if required, so that a customer can start using it. You can use the Card Activate API: Ws_Activate. Alternatively, if you provide your customers with a phone activation service, you can use the Phone Activation API: Ws_Phone_Activation.
- If a card is reported as lost or stolen, or you need to temporarily block the card, you can change the status of the card using the Card Change Status API: Ws_StatusChange. If the card is temporarily frozen, for example, it has been reported as lost and is later found, you can reactivate it using the Card Change Status API: Ws_StatusChange.
- If you deactivate a card that has been reported as destroyed or stolen, for security reasons it is not possible to reactivate. You will need to issue a new card.
- Card manufacturer fields: please check with your card manufacturer for details of the fields they are expecting. For details of supported manufacturers, see Card Manufacturers.
- Address fields: make sure you populate any address fields which may be used for AWS checks.

Using Tokens

Tokens enable you to use Thredd web services without needing to store or supply the full 16-digit card primary account number (PAN). When creating a card, Thredd always returns the <publicToken> linked to the physical or virtual card. When making a web service request, instead of supplying the PAN, you can include the card's <publicToken>, together with other mandatory information.

Thredd generates two types of tokens:

- 9-digit unique random token, linked to the PAN.
- 16-digit, formed from the 3-digit identifier, plus the 9-digit token, plus the last 4 digits of the PAN.

Example:

PAN = 6752993874229367

9 digit token = 734602981

16-digit token = 712+734602981+9367 = 7127346029819367

Thredd web services can receive the 9 digit public token in the request and return it in the response. Some web services may respond with the 16-digit public token. This guide will clarify when this is the case.

Using Tokens on Mobile Devices

You can use the Mastercard Digital Enablement Service (MDES) or Visa Token Service (VTS) to manage the tokens linked to a mobile device that has been bound to a card. This is a separate Mastercard or Visa <PaymentTokenId> linked to the digital PAN (DPAN), and should not be confused with the Thredd <PublicToken> linked to the card.

You can use the following web services to manage your mobile device tokens:

- Token Device Management: WS_Token_Device_Management
- Payment Token Get: Ws_Payment_Token_Get
- Payment Token Status Change: Ws_Payment_Token_StatusChange

Loading a Card

The load card web services enable you to load funds onto a card. Your EHI mode determines whether Thredd holds the card balance or you hold the balance on the card. See the example below for a client with Cooperative Processing (mode 2) or Full Service Processing (mode 3), where Thredd holds the balance.

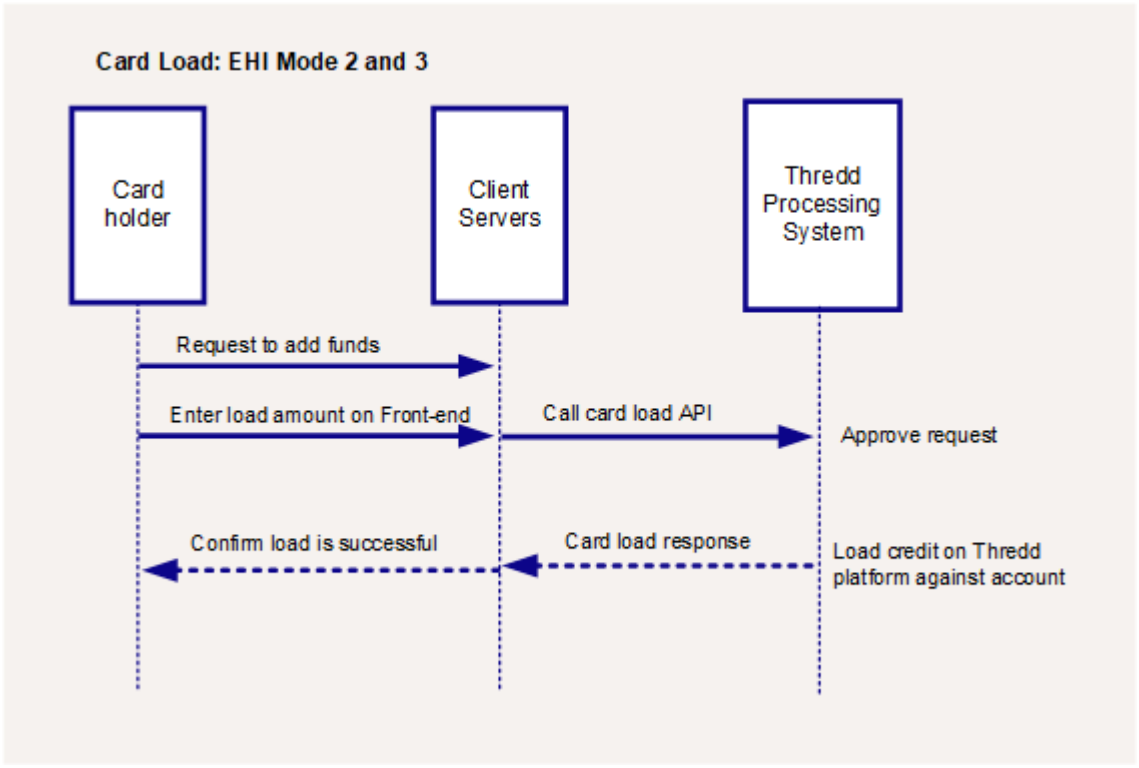

Figure 4: Using the Card Load web service

When using the API, you can specify the amount to load, the load source, and other load details.

Recommended API

The API to use to load a card depends on the requirements of your application. We recommend the following:

- To load a card without activation, use Card Load: `Ws_Load`
- To load and activate a card at the same time, use Card Activate and Load: `Ws_Activate_Load`
- To unload a card (debit a specified amount or the full balance), use Card Unload: `Ws_UnLoad`
- To unload a card and change the card status to inactive (e.g., customer closing an account), use Card Unload and Change Status: `Ws_UnLoad_StatusChange`

What to look out for:

- Check card status: The load will fail if the card is flagged as invalid, lost, stolen, destroyed, expired or restricted.
- The cardholder's load limits: the load will fail if the number of load attempts or load amount exceeds the daily or period limit configured for your product.
- Load source: the load will fail if you use a load source not configured for your product (if no load sources have been set up for your product, you are able to use any load source).

Running Card Enquiries

Thredd provides web services to enable you to check the status of the card, the available balance and other card details.

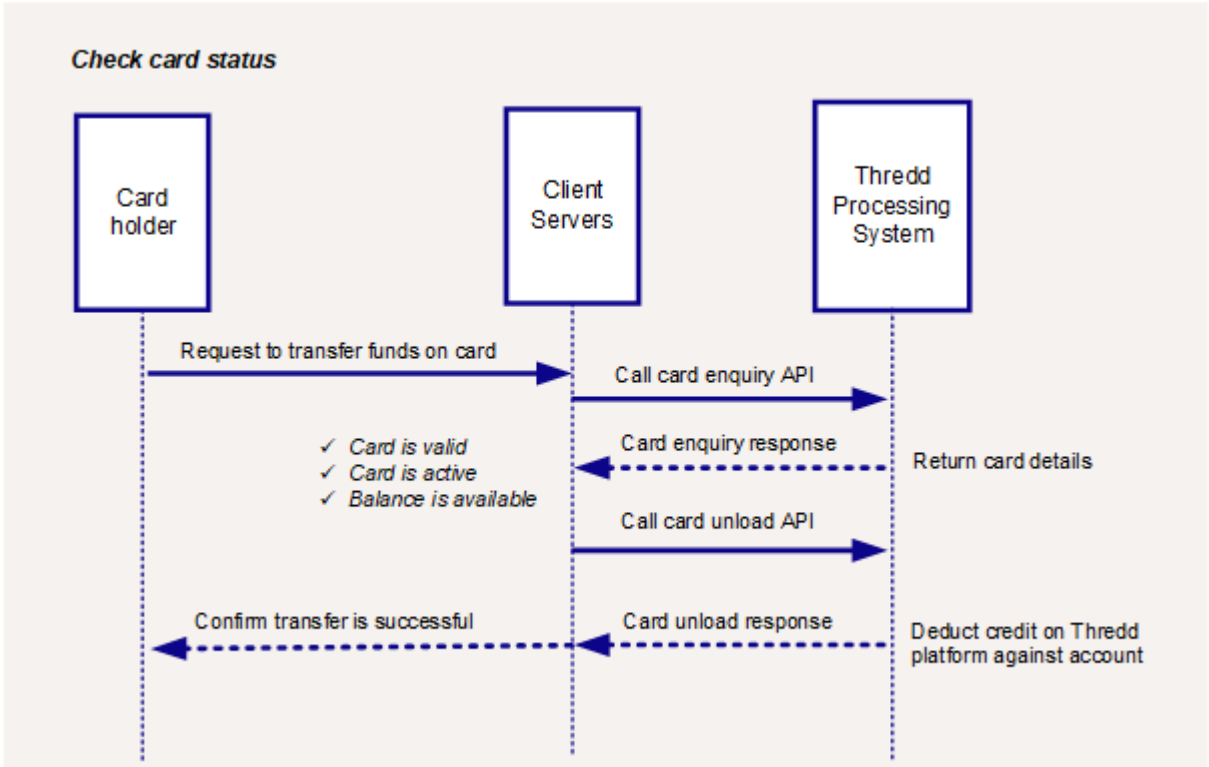

Figure 5: Using the Card Enquiry web service

Recommended API

The API to use to run a card enquiry depends on your requirements. We recommend the following:

- To confirm the status of a card and the available balance, use Card Enquiry: `Ws_Enquiry`. This returns both live and archived cards.
- To confirm the status of all live cards linked to a customer, use `Ws_Customer_Enquiry` or `Ws_Customer_Enquiry_V2`. See Customer Enquiry.

Managing Cards

Below are examples of other common web services you can use to manage your cards:

PIN Control

- To set, retrieve, unblock and change the PIN associated with a card, use Card PIN Control: `WS_PinControl`.
  You can also use this to unblock the CVC2 of a card or mobile device token.

Change Card Groups

You can link a card to the Thredd card groups configured for your programme (e.g. Limit Groups, MCC Group, Fee Group and Usage Group). The group determines how the card can be used and/or the types of charges that can be applied to the card.

- To change the groups linked to a card, use Card Change Groups (single): `Ws_Card_Change_Groups`
- To bulk change the groups for multiple cards, use Card Change Groups (Bulk): `Ws_Change_Groups`

What to look out for:

- If you change the velocity group for a card, this may prevent the customer using their card (e.g. POS daily limit for the existing group XXX-VL-XX is 500.00, but the new group for this card, XXX-VL-YY, has a POS daily limit of 250.00).
- You must use a group that has already been configured for you in Smart Client and in Thredd Portal (based on the information provided in your Product Setup Form). For any amendments or new groups, please contact your Account Manager.
- This change is at a card level and not a product level.

Manage Card Fees

The default fees for a card are linked to the generic Thredd product for the card, as set up for your programme. Thredd offer web service to enable you to query and apply fees to a specific card.

- To apply fees to a specific card, use the **Card Apply Fees** API: `Ws_Generic_Fees`
- To list pending fees due on a card, use the **Card List Pending Fees** API: `Ws_List_Pending_Fees`

Renewing Expiring Cards

We recommend you renew expiring cards as follows:

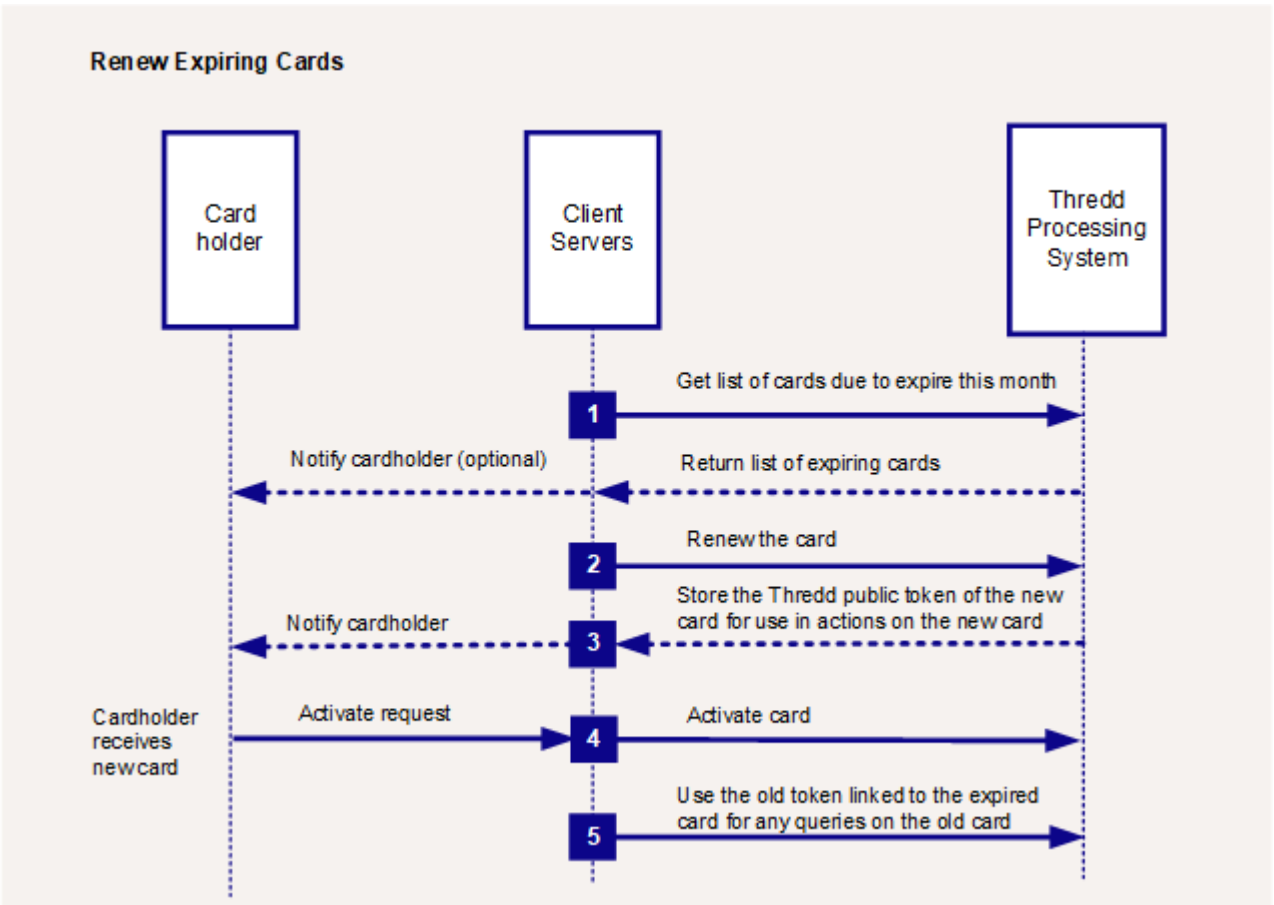

Figure 6: Renewing Expiring Cards

1. Use the Cards Get Expiring Soon API (`Ws_Get_Card_ExpireSoon`) to return a list of cards due to expire in the next month.
2. Renew any expiring soon cards using the Card Renew API: `Ws_Renew_Card`.

   Tip: You can transfer the card balance immediately to the new card and update any linked wallet/card payment tokens at the same time.
3. Thredd returns a new Thredd public token (`<PublicToken>`) to use for any further actions or queries on the renewed card.

   Note: If renewal options 0, 1 or 8 are requested, then Thredd returns the existing Thredd public token and does not create a new card record.
4. If you are replacing the card with a physical card, then you need to activate the card. See Card Activate.
5. The old expiring card record will still exist in the system; any queries using the old Thredd public token will return details of the status or balance on this record.

Note: When replacing a card, do not use the Create Card web service, with `<Replacement>` set to 1. This is a legacy option.

Note: We recommend you renew any physical cards well in advance of their expiry date, so that the new cards can be sent to cardholders for them to activate and use. Once a card's expiry date has passed, the cardholder will no longer be able to use the old card for payment transactions.

Note: When replacing a card, please be aware that when the new card is activated, Thredd will change the status of the old card to *62 restricted card*.

Extending the Expiry Date

In some circumstances you may be able to extend the Thredd expiry date of a card, using the Card Extend Expiry Date API: `Ws_ExtendExpiry`

Updating a Card Status to Lost, Stolen or Destroyed

You can use the Card Change Status API to update the card status to lost, stolen or destroyed.

Depending on the status being changed to, this will result in either a temporary block or a permanent block on the card.

Note: A *Lost, Stolen* or *Destroyed* status value results in a permanent block on the card. These card statuses are irreversible. This means that the cardholder can never use the card for future purchases or withdrawals. See Status Codes.

Note: You should be aware of the potential for some types of future transactions on a lost, stolen or destroyed card, including charges on the card. For example: authorisation declines, offline authorisations, credits, refunds, reversals and chargebacks.

Options for cards in an irreversible status

- Before changing the card status to an irreversible status such as *Lost, Stolen* or *Destroyed*, you can update the card's expiry date to expire the card and prevent some types of future transactions and card charges. See the Card Extend Expiry Date API.
- You can issue a replacement card using the Card Renew API. Cards with irreversible status are replaced with a new PAN number. The replacement card has the same balance as the original card.
- You can update or transfer the balance on a card in an irreversible status using the Card Balance Transfer, Card Unload or Card Balance Update API.

Replacing a Lost, Stolen or Destroyed Card

You can use the Card Renew API to replace a lost, stolen or destroyed card.

Registering a Cardholder for 3D Secure

3D Secure (3-domain structure), also known as a payer authentication, is a security protocol that helps to prevent fraud in online credit and debit card transactions. This security feature is supported by Visa and Mastercard and is branded as 'Verified by Visa' and 'Mastercard SecureCode' respectively.

Depending on the region in which you process cards, Thredd offer a choice of Apata or Cardinal Commerce to manage 3D enrolment and authentication. We provide web services to enable you to enrol your cardholders in the 3D Secure scheme, update and delete cardholder details.

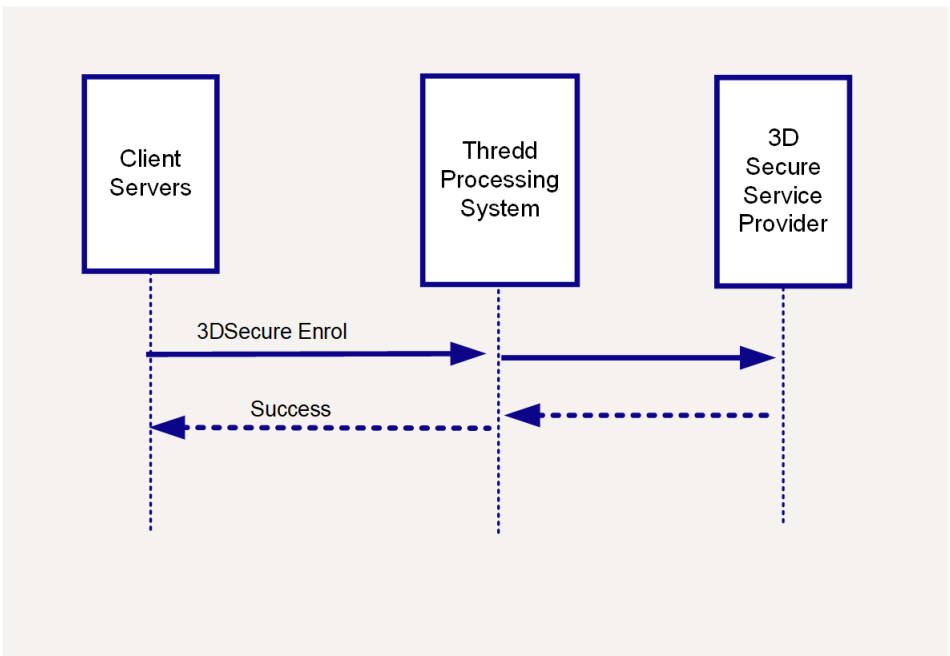

Figure 7: Using the 3D Secure cardholder enrolment web service

Recommended API

- To enrol a cardholder in 3D Secure, and add, edit or delete their credentials, use 3D Secure Enrol Credentials API: Ws_AddUpDelCredentials
- For details of additional legacy 3D Secure web services, see 3D Secure Overview.

For additional information on 3D Secure support, see our 3D Secure FAQs.

Note: The use of 3D Secure can help prevent cardholder fraud. 3D secure authentication checks are only applicable to cardholders and merchants enrolled in this scheme. For details see the 3D Secure Guide (Apata) and 3D Secure Guide (Cardinal).

Using MFX Wallets

Thredd offers web services to enable you to create and manage eWallets. The eWallet can support multiple currencies[1] and can be linked to a physical card.

- To create a wallet, use the Wallet Create API: Ws_CreateWallet
- To check the balance available on the wallet, use the Wallet Balance Enquiry API: Ws_Balance_Enquiry_Wallet
- To regenerate the wallet (e.g. for a lost or stolen card), use the Regenerate the Wallet API: ws_RegenerateWallet

[1] Currency support is region-specific. Please check with your account manager for support in your region.

Using the API

This section provides tips on how to integrate to Thredd using the SOAP web services API.

Using the Web Services

View the WSDL

You open the following URL in a browser to view the structure of the WSDL:

https://ws-uat.globalprocessing.net:13682/service.asmx?WSDL

Tip: We recommend you always refer to the WSDL for the correct XML tag name spelling and capitalisation, as different web services may sometimes adopt different case and naming conventions.

Install a SOAP Application

Thredd recommend that you use an API tool that supports SOAP to test out the Thredd web services.

SOAPUI is an open-source application, which you can download and install on any computer, which enables you to submit test transactions to Thredd.

Load the SOAP WSDL

You can load the Thredd SOAP test WSDL into your SOAP tool. If you are using SOAPUI, then:

1. Select **File > New SOAP Project**.
2. Enter a project name and then, in the **Initial WSDL** field, paste the following URL: https://ws-uat.globalprocessing.net:13682/service.asmx?WSDL
3. Click **OK**.

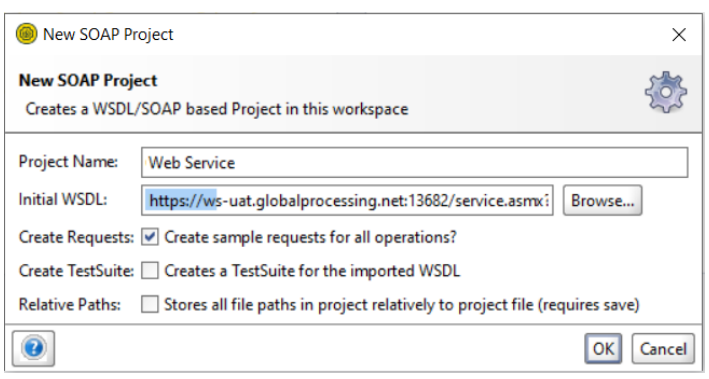

Figure 8: Starting a new SOAP project and importing the WSDL

Implementing a SOAP Request

Always follow the instructions provided for Implementing web service calls, to ensure that your XML requests are correctly formatted.

You can implement a SOAP call as follows:

1. Select a SOAP service from the left-hand navigation pane. Thredd recommend you start with a check of the status of the web service to make sure you can connect, using `Ws_Check`. See Check Service Availability.
2. In the centre pane, customise the SOAP details of your transaction. At a minimum, you will need to enter your username, password and Issuer Code (`IssCode`). If you don't have these details, check with you Thredd Implementation Manager.

   Tip: You can copy and paste examples in this guide into the SOAP window, and customise as required.
3. Click **Submit**.

The SOAP response should be displayed in the right-hand pane within SOAPUI. A successful request will return an ActionCode status of *000* (Normal, approved). See Action Codes.

Figure 9: Example of a SOAP Request in SOAPUI

Fair Usage Policy

Thredd has a Fair Usage Policy which restricts the maximum number of *concurrent* web service connections per client (IP address) to 20.

If you send more than 20 concurrent web service requests to Thredd an HTTP error message 403, sub-status 501 is returned. This can be mitigated by controlling your outbound web server configuration. For further details, please contact your Implementation Manager or Account Manager.

Additional charges for using some Web Services

Note that in the Production environment additional charges may apply to web services that retrieve the balance on the card from Thredd. Contact your account manager to discuss. You can avoid this charge if you use the EHI data feed to maintain the balance in your own systems. The following web services listed in this guide retrieve the balance on the card: Ws_Balance_Enquiry, Ws_Card_Statement, Ws_Enquiry, Ws_Card_BalEnq, Ws_Customer_Enquiry, Ws_Customer_Enquiry_V2 and Ws_Balance_Enquiry_V2

Viewing Transactions on Smart Client and Thredd Portal

You can log in to Smart Client or **Thredd Portal** to view the card token and associated activity generated by your web services.

Note: Smart Client must first be installed as a desktop application on your machine. A secure connection to Thredd is required to access Smart Client. Thredd Portal does not require local installation as it is a web application.

For more information on using Smart Client, refer to the Smart Client User Guide. For more information on using Thredd Portal, refer to the Thredd Portal Guide.

List of Web Services API

The table below lists the available web services (ordered alphabetically).

API	Description
Ws_Activate	Sets the status of the card to 'active' to enable Mastercard/Visa network transactions. Used to activate cards issued in an inactive state.
Ws_Activate_Load	Enables simultaneous load and activation of a card. This is a common requirement for cards sold from kiosks or from retail stores. For cards ordered over the internet, delayed activation provides added security by ensuring that any card stolen or lost in the post cannot be used.
Ws_Activate_MVCLoad	Enables simultaneous load from Master Virtual Card (MVC) and activation of cards. Ws_Activate_MVCLoad effectively combines the functions of Ws_BalanceTransfer and Ws_Activate for clients that are using MVCs (Master Virtual Card).
Ws_AddUpDelCredentials	Enables you to collect the cardholders' 3D Secure credentials and insert, update or delete those credentials using the Real-Time Data Exchange interface for Cardinal and Apata.
Ws_ApataCardLevelConfigurations	Enables you to add, update or delete card level configurations for 3D Secure via Apata, such as the language of the Apata Challenge screens and the Challenge Profile to use.
Ws_Balance_Enquiry (V2)	Returns the current available balance on the card.
Ws_Balance_Enquiry Wallet	Returns the current available balance on each of the available currency wallets for a multi-FX card.
Ws_BalanceAdjustment	Enables you to apply a debit or credit to a card record.
Ws_BalanceTransfer	Used to transfer an amount from one card to another.
Ws_BalanceUpdate	Updates the available and current (STIP) balance for Program Managers set up for EHI Processing with STIP (Stand-in processing mode 4). For details, see the External Host Interface (EHI) Guide.
Ws_Banking_AccountModulusCheck	Validates that a sort code and account number (UK Bank Accounts provided through programmes using Thredd Bottomline Agency Banking) are valid via a modulus check.
Ws_Banking_CancelDirectDebitBankingEnabledCard	Marks a direct debit as cancelled where a card has an associated UK Bank Account (provided through programmes using Agency Banking). The GUID (Globally Unique ID) for the direct debit is required and can be obtained by calling
Ws_Banking_Card_Statement_V2	This web service is an enhancement to Ws_Card_Statement and returns all statement details for this card and previous cards if the card has been replaced for various reasons
Ws_Banking_ChangeAccountBankingFeaturesStatus	Changes the features of the banking enabled card and allow the user to switch functionality on or off.
Ws_Banking_CreateCustomer	Enables you to register customer details without creating associated bank accounts or cards.
Ws_Banking_DD_CancelMandate	Cancels a specific mandate for a specific mandateId and token.
Ws_Banking_DD_GetMandate	Retrieves all mandates for a given token.
Ws_Banking_GetDirectDebitInstructionsBankingEnabledCard	Returns a list of all direct debits for a given token (with or without sub accounts). Note: Only for programmes using Agency Banking.
Ws_Banking_GetPendingDirectDebits	Returns a list of all direct debits that are due for payment today for a given token (with or without

API	Description
	sub accounts). Note: Only for programmes using Agency Banking.
Ws_Banking_RegisterNotification	For some banking integrations, once you have called Ws_CreateCard_V2 to create the bank account and card, you need to make additional calls to allow payments to be processed on and off the card. There are a number of options, but as a minimum, you should switch on PAYIN and PAYOUT to facilitate payments. Note: All notifications work at a customer level, so if a customer has more than one account, the notification will apply to all of the customers accounts
Ws_Banking_ReturnBankDetailsFromToken	Returns the sort code and account number (UK Bank Accounts provided through programmes using Agency Banking) from a token.
Ws_Banking_StatusQueryBankingEnabledCard	Returns the Agency Banking features (UK Bank Accounts provided through programmes using Agency Banking) that are enabled on a card and the status of the card.
Ws_Banking_TransferFunds	Makes an external payment via the Faster Payment banking network where a card has an associated UK Bank Account (provided through programmes using Agency Banking). Note that the money is queued and has not necessarily entered the banking network.
Ws_Banking_UpdateBankingEnabledCard	Updates the status of Banking services for a card depending on the current status.
Ws_BulkCreation	Creates a bulk number of virtual as well as physical cards in a single request. This web service takes an XML document as the input parameter with the information needed to create virtual or physical cards. It produces an XML document with the list of newly created virtual or physical cards as the response. Card images will be created in the web service directory when creating a virtual card.
Ws_BulkWalletCreation	Creates multiple wallets in a single request. This web service takes an XML document as its input parameter with the information needed to create wallets and produces another XML document with the list of newly created wallets as a response.
Ws_Card_BalEnq	Returns the available balance of a card and the sum of any blocked amounts.
Ws_Card_Change_Cardacceptor_List	Updates the card acceptor lists such as Allow and Deny lists that a card makes use of.
Ws_Card_Change_Groups	Changes one or more of the usage groups for a specific card within any of those configured for your programme (e.g. Limit Groups, MCC Group, Fee Group and Usage Group).
Ws_Card_Statement	Returns a list of transactions performed by the cardholder since a specified date, together with the starting balance and current balance. Typically you should specify a date range of within the last 7 days. If the date is omitted, then all transactions are returned. Current actual and available balance is also returned.
Ws_CardAcceptorBlacklist	Used to maintain Card Acceptor (MerchantID) Deny lists, which can then be assigned to a card or group of cards. Thredd will decline authorization transactions belonging to any merchant IDs on the Deny list. The response code will be '05 – Do not honour'.
Ws_CardAcceptorWhiteList	Used to maintain Card Acceptor (MerchantID) Allow lists which can then be assigned to a card or group of cards. Only merchant IDs on the Allow list will be approved by Thredd at authorisation stage.
Ws_CardHolder_Details_Enquiry	Returns the details of a cardholder.
Ws_Change_Cardacceptor_List	Updates the card acceptor lists such as Allow and Deny lists that a group of cards belong to.
Ws_Change_Groups	Changes groups such as Group Limits, MCC Group and Usage Group of cards within a product or a customer account.
Ws_Check	Checks web service availability. It validates the SOAP credentials and Issuer Code by calling database procedures.

API	Description
Ws_Client_FX	Enables you to send your own foreign exchange (FX) rates to Thredd. You can stream in FX rates at your chosen frequency (e.g. hourly, daily). The rates can be used for multi-FX wallet functions or for provisioning of fixed rate FX cards.
Ws_Convert_Card	Upgrades a virtual card to a physical card.
Ws_CreateCard	Creates both a virtual card and a physical card.
Ws_CreateCard_V2	Creates a card with Agency Banking features enabled. It will also upgrade an existing card to have banking features. Applies only to programmes using Agency Banking.
Ws_CreateWallet	Used to create virtual wallets as well as physical card wallets.
Ws_Customer_Enquiry	Returns the list of cards associated with a specified customer name.
Ws_Delete3DSecureDetails	Deletes 3D secure enrolment details for a card. (Cardinal Batch File Interface; Legacy use only).
Ws_Enquiry	Returns the details of a card, such as: Token, Expiry Date, Status, Cardholder name.
Ws_ExtendExpiry	Changes the Thredd expiry date of cards by the specified value.
Ws_Generic_Fees	Applies fees with a comment to a particular card.
Ws_Get_Card_ExpireSoon	Returns the details of cards that are going to expire within the month. The response will return all cards due to expire, regardless of the volume.
Ws_GetApataCardLevelConfigurations	Retrieves the card level configuration for 3D Secure (using Apata).
Ws_Get_Passcode	Used to retrieve the Access Code (also known as pass code or activation code) of cards.
Ws_Insert3DSecureDetails	Enrols a specified cardholder onto 3D Secure using the Cardinal Batch File Interface 3D Secure service. (Legacy use only)
Ws_link_cards	Links cards in a Primary and Secondary relationship, and can be used when the primary card with existing secondary card linkage(s) needs to be replaced with a new token. The secondary cards can be linked to the new token via this web service call.
Ws_list_group	Lists the codes and descriptions of all groups of a certain type (e.g. Fee Groups, Limit Groups).
Ws_List_Pending_Fees	Lists service lists details of pending fees that relate to a particular card.
Ws_List_Products	Lists products your programme has on the Thredd systems and their descriptions.
Ws_Load	Loads or re-loads a card with a specified amount.
Ws_MVCLoad	Loads funds from Master Virtual Cards (MVC) only. This is similar to balance transfer, the only difference is that the source is always an MVC token.
Ws_MVCUnload	Enables customers to unload back to Master Virtual Card (MVC) only.
Ws_Payment_Token_Get	Gets the details for MDES (Mastercard Digital Enablement Service) Payment Token Cards.
Ws_Payment_Token_StatusChange	Changes the status of an MDES (Mastercard Digital Enablement Service) Payment Token Card.
Ws_Phone_Activation	Enables activation of a card by phone. It also returns the PIN and the PIN status of that card.

API	Description
WS_PinControl	Enables you to set, retrieve, unblock and change the PIN associated with the card.
Ws_Query3DSecureDetails	Used to view the phone number of a particular user's token that has been enroled for 3D secure and gets the details from Thredd 3DS table. (Cardinal Batch File Interface; Legacy use only).
Ws_Regenerate	Retrieves the card image configured in the Thredd platform for virtual and physical cards that have been converted which can then be displayed to the cardholder. If a customer wants to see the image some time after card creation you can regenerate the image. This web service can also be used to replace Lost or Stolen cards; the customer will be issued with a new PAN, CVV2 and Expiry Date.
Ws_RegenerateWallet	Regenerates MFX cards.
Ws_Remove_CardHolder_Data	Removes personally identifying cardholder data (cardholder name, address, email and phone number) from the specified card. You can remove data from multiple cards in a single request.
Ws_Renew_Card	Enables you to renew or replace cards. Combines the functionality of card replacement and card renewal. The replacement card will automatically have the same balance as the original card at the time when the replacement card is activated. Any linked cards will still point to the correct card.
Ws_ResetAccumulator	Allows you to reset transaction and amount counters (since the last authenticated transaction) on a card to re-enable contactless devices and wearables, where a Secure Cardholder Authentication cannot be performed by the terminal (i.e. those that do not offer PIN).
Ws_SendMessage	Used to send a predefined message to the cardholder via SMS or Email. Thredd can configure the message using a selection of variables.
Ws_Simple Check	Checks web service availability. Can be called over HTTPS GET.
Ws_StatusChange	Enables the status of a card record to be changed. For example to: Do not honour, lost, stolen or Card Destroyed.
WS_Token_Device_Management	Allows you to retrieve a list of devices bound to a DPAN. Can be used to unbind a device by initiating an Unbind API call to Visa.
Ws_Transaction_Void	Enables cancellation of any transaction which has been implemented via a web service, and also allows you to remove uncleared authorizations.
Ws_UnLoad	Unloads a card. Note that any outstanding, unsettled authorisations on the card may result in the card going into a negative balance.
Ws_UnLoad_StatusChange	Simultaneously unloads the card and changes the card status (e.g. to expired).
Ws_Update_Cardholder_Details	Enables cardholder details to be updated. For example: name and address.
Ws_Update_Cardholder_Details_V2	This web service is an enhancement to Ws_Update_Cardholder_Details. It allows further cardholder details to be updated such as EmbossLine4, ProductRef, ThermalLine1 etc.
Ws_UpdateLastModifiedType	Used to update the last modified type of 3D secure action for a card. (Cardinal Batch File Interface; Legacy use only).
Ws_Update3DSecureDetails	3D Secure service to amends 3D secure details for a card; this web service can be used to update the phone number used for authentication SMS. (Cardinal Batch File Interface; Legacy use only).

The next sections in this guide are organised based on common tasks performed using the API, in the order in which we expect most users will use them. Please use the left-hand menu options to find the section and API you are interested in.

Service Status Checks

You can use the following web services to check the status of the Thredd service:

Check Service Availability: Ws_Check
Check Web Service Availability (HTTPS): Ws_Simple Check

Check Service Availability

API: Ws_Check

This web service is used to check web service availability. It validates the SOAP credentials and Issuer Code.

Note: Thredd has extensive automated monitoring of web services availability and response times. Our current annual service availability is over 99.96%.

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every request. For details, see the FAQs.	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<ActionCode>	AN	3	3	The action code for the response. See Action Codes. If the web service is available, returns “000”.	Omit	Mandatory

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_Check>
         <hyp:WSID>2021123456789</hyp:WSID>
         <hyp:IssCode>PMT</hyp:IssCode>
      </hyp:Ws_Check>
   </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_CheckResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_CheckResult>
            <WSID>2021123456789</WSID>
            <IssCode>PMT</IssCode>
            <ActionCode>000</ActionCode>
         </Ws_CheckResult >
      </ Ws_CheckResponse>
   </soap:Body>
</soap:Envelope>
```

Check Web Service Availability (HTTPS)

API: Ws_Simple Check

This web service can be called using HTTPS GET. It can be used to monitor web service availability.

If successful, returns "000".

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" GET /Service.asmx/Ws_Simple_Check? HTTP/1.1>
```

Response

```
<?xml version="1.0" encoding="utf-8"?>
<string xmlns="http://www.globalprocessing.ae/HyperionWeb">string</string>
```

Card Services Overview

You can use the following web services to create and manage your cards:

Create Card	Load and Unload Card
Card Create: Ws_CreateCard	Card Load: Ws_Load
Card Bulk Create: Ws_BulkCreation	Card Unload: Ws_UnLoad
	Card Unload and Change Status: Ws_UnLoad_StatusChange
Activate Card	**Mastercard Virtual Cards**
Card Activate: Ws_Activate	MVC Card Activation and Load: Ws_Activate_MVCLoad
Card Activate and Load: Ws_Activate_Load	MVC Load: Ws_MVCLoad
Card Phone Activation: Ws_Phone_Activation	MVC Unload: Ws_MVCUnload
Manage Card	**Other Card Services**
Card Change Status: Ws_StatusChange	Cardholder Send Message: Ws_SendMessage
Card PIN Control: WS_PinControl	Cards Link: Ws_link_cards
Card Extend Expiry Date: Ws_ExtendExpiry	
Card Renew: Ws_Renew_Card	
Card Regenerate Image: Ws_Regenerate	
Card Get Passcode: Ws_Get_Passcode	
Card Convert to Physical: Ws_Convert_Card	

Card Create

API: Ws_CreateCard

This web service allows you to create both virtual and physical cards.

- *For a virtual card*: the web service generates a JPEG image of the newly created card, with a PAN, Public Token and expiry date embossed on it. This image is returned in the response and encrypted via a pre-shared PGP key. An SMS can optionally be sent to the cardholder's mobile phone number with the CVV of the card. [2]
- *For a physical card*: the web service creates an XML file for this card, to be sent to the card manufacturer. For more information on the fields in the XML file, refer to the Thredd Card Generation Interface specification.

Note: To replace a card, you must use the Card Renew web service (Ws_Renew_Card).

Note: You need to be PCI DSS Compliant to receive virtual card images from Thredd.

Note: When creating a card, we recommend that you populate the address fields (e.g., <Addrl1>,<Addrl2>, <postcode>) for the Address Verification Service (AVS) checks.

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every web service request sent. For details, see the FAQs. **Tip**: You could use a number based on the current date and time, as long as it is unique (e.g., *20201217145006*).	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<TxnCode>	AN	1	2	The Transaction Code. See Transaction Codes. Default value is 10.	Mandatory	Mandatory
<ClientCode>	AN	1	64	User ID of the customer using the service. Only applicable to systems using member logins. Returned in the response if present in the request. **Note**: Legacy field. Not used.	Optional	Conditional
<Title>	AN	1	4	Cardholder's title. Also used as the card purchaser's title if no delivery address is supplied.	Optional	Omit
<LastName>	AN	1	30	Cardholder's last name. If no delivery address is supplied, this is the card purchaser's last name.	Conditional	Omit
<MiddleName>	AN	1	100	Cardholder's middle name. The	Optional	Omit

[2] If you are PCI compliant, you can retrieve the full virtual card details, which will include the PAN, Expiry and CVV. SMS is not sent by default.

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				<MiddleName> is not part of the <EmbossName> and therefore, does not check manufacture-approved characters. If a delivery address is not supplied, the cardholder's middle name will be the card purchaser's middle name.		
<FirstName>	AN	1	30	Cardholder's first name. Also used as the card purchaser's first name if no delivery address is supplied. Mandatory if <lastName> is present.	Conditional	Omit
<Addrl1>	AN	1	50	Cardholder's address line 1. Also used as the card purchaser's address line 1 if no delivery address is supplied. Mandatory if 'Address' fields are specified.	Conditional	Omit
<Addrl2>	AN	1	50	Cardholder's address line 2. Also used as the card purchaser's address line 2 if no delivery address is supplied.	Optional	Omit
<Addrl3>	AN	1	50	Cardholder's address line 3. Also used as the card purchaser's address line 3 if no delivery address is supplied.	Optional	Omit
<City>	AN	1	50	Cardholder's home city. Also used as the card purchaser's city if no delivery address is supplied. Mandatory if <addrL1> is present, and <postcode> is not present.	Conditional	Omit
<PostCode>	AN	1	10	Cardholder's home postcode. Also used as the card purchaser's postcode if no postcode is supplied. Mandatory if <addrL1> is present, and <city> is not present. See Postcode Permitted Characters.	Conditional	Omit
<Country>	AN	1	3	Cardholder's country of residence. This is represented as a 3 digit ISO country code (e.g. 826 for UK). Mandatory if <addrL1> is present.	Conditional	Omit
<Mobile>	AN	1	15	Cardholder's mobile phone number (including dialing code if applicable). See Processing of Telephone Numbers.	Optional	Omit
<PublicToken>	AN	1	9	The card's public token. The response always returns the public token of the newly-created card.	Omit	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<CardDesign>	AN	1	8	The identifier of the card product, or Product ID, within Thredd. For details, check with your Implementation Manager. **Note**: this is not the same field as the **CrdDesign** or **ProductRef**.	Mandatory	Omit
<ExternalRef>	AN	1	30	External reference code for the card. **Note**: Legacy field. Not used.	Optional	Conditional
<DOB>	YYYY-MM-DD	10	10	The cardholder's date of birth.	Optional	Omit
<AccCode>	AN	1	6	Access code or passcode for setting a code which is validated during activation (e.g. via the Thredd IVR system). If provided, must be 6 digits; leading zeroes are acceptable. Mandatory if the value of <AuthType> is '4'. Leave empty if not required.	Optional	Omit
<LocDate>	YYYY-MM-DD	10	10	The local current date in *year-month-date* format.	Mandatory	Mandatory
<LocTime>	HHMMSS	6	6	The local current time, in *hour-minute-second* format.	Mandatory	Mandatory
<ItemID>	AN	1	20	The unique item ID for the load. This field will only have a value if a load amount was specified in the request using the LoadValue field. Otherwise, the item ID value returned will be 0.	Omit	Mandatory
<TerminalID>	AN	1	15	Point of Sale (POS) or other terminal identifier, such as a hostname.	Optional	Omit
<LoadValue>	D	1	20	Load value to put on the card. The amount can include up to four decimal places, depending on the currency exponent (e.g., 10.99 for EUR which has a currency exponent of 2). See Currency Codes.	Mandatory	Mandatory
<CurCode>	AN	3	3	3-letter ISO currency code for the currency to load (e.g. EUR). This must match the card's currency or the action fails (**Note**: For a Multi-FX card, the card can be loaded in any of the card's currencies). If not provided, then the card uses its billing currency. See Currency Codes.	Conditional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<Reason>	AN	1	60	Reason for the card's status change. Overrides default of 'Card Activated' that is shown in the card processor. Text is shown in the Smart Client **Tracker** screen. On Thredd Portal, this information is captured in the Notes column in Transaction Search results.	Optional	Omit
<ItemSrc>	N	1	5	Source field to define alternate fees. Legacy field for information purposes only; see Item Source Types. Suggest using 0.	Mandatory	Omit
<SysDate>	YYYY-MM-DD	10	10	The system processing date.	Omit	Mandatory
<LoadFundsType>	AN	1	3	Payment method for loading funds onto the card. See Load Fund Types.	Optional	Omit
<LoadSrc>	AN	1	3	The source of the load request for determining the fee of the load, if applicable. If omitted, defaults to 14 "Unknown". See Load Sources.	Optional	Omit
<LoadFee>	D	1	20	Fixed fee amount charged to the card purchaser for handling the card purchase and load. The amount can include up to four decimal places, depending on the currency exponent (e.g., 10.99 for EUR which has a currency exponent of 2). See Currency Codes. If no load fee is required, specify 0. The load fee does not affect the card balance. It is only reported in the XML.	Mandatory	Omit
<LoadedBy>	AN	1	30	User who loaded the card.	Optional	Omit
<CreateImage>	N	1	1	Specifies whether to create a card image. 1= yes, 0 = No. Images are returned in the <Image> response parameter, encrypted by a pre-shared PGP encryption key.	Mandatory	Omit
<CreateType>	N	1	1	This field is mandatory. There are five possible values: 1 = Create a virtual card. Can be converted to a physical card at a later stage using the Convert Card web service. 2 = Create physical card. Also triggers the creation of a card file which is sent to the manufacturer. 3 = Create a virtual card. Works in the same way as option 1.	Conditional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				4 = Create a Master Virtual Card which is a deposit account that can be used to load other cards from. 5 = Create a virtual card and convert to a physical card. Triggers the creation of a card file which is sent to the manufacturer. **Note**: To use create type 5, the card must be created under a virtual product. **Note**: If the virtual card is activated then the physical card will also be active, so you should consider the security implications of this. Please speak to your implementation manager. Create types 3, 4 and 5 will not work if Quantity is greater than 1.		
<CustAccount>	AN	1	25	Cardholder account number or reference number. You can use this reference to find the cards linked to a cardholder. Also displayed in Smart Client and in Thredd Portal as *Customer Reference*.	Optional	Omit
<ActivateNow>	N	1	1	Whether to activate the card. 1= Yes, 0=No. When <Quantity> is greater than 1 then creation of <Quantity> numbers of identical cards will trigger a batch process that starts within minutes of the request. If <ActivateNow> is 1 in such requests then the issued tokens are sent to the customer already activated. This parameter only applies if the request is for a new card.	Mandatory	Omit
<Source_desc>	AN	1	50	Load source description recorded on the transaction, normally the address of the website or the Point of Sale (POS) terminal.	Optional	Omit
<StartDate>	AN	5	5	Start date printed on the card in the format *MM/YY*.	Omit	Mandatory
<ExpDate>	YYYY-MM-DD	10	10	Card expiry date. If left blank, updates with the default expiry date, based on the Card Scheme's validity period in months, otherwise updates with	Optional	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				the input value. The date returned of the actual physical expiry is in *MM/YY*.		
<CVV>	AN	3	3	Card Verification Value, the 3-digit code printed on the back of the card.	Omit	Mandatory
<CardName>	AN	1	27	The embossed name on the card. If present in the request then the embossed name on the card should be the given value. If it is not available and <Firstname> and <Lastname> are available then <Title> + <Firstname> + <Lastname> is the embossed name. If all the above parameters are unavailable in the request then the default embossed name remains as the embossed name. If a blank embossed name is required, then pass a single space character. See Card Name Permitted Characters.	Optional	Omit
<MaskedPAN>	AN	14	19	Card number displayed as masked (e.g., 675926******1234). **Note**. The full PAN can be returned if you are PCI DSS compliant. Contact your Implementation Manager.	Omit	Mandatory
<LimitsGroup>	AN	1	10	Group code of the Limits Group. If this parameter is not supplied and this is a new card request, then the default group for the card's product is used. If the default group is not required, you can remove it by passing a space character ' '. **Note**: The Limits Group is set up and configured in Smart Client and in Thredd Portal.	Optional	Omit
<MCCGroup>	AN	1	10	Group code of the MCC Group. If this parameter is not supplied and this is a new card request then the default group for the cards product is used. If the default group is not required, you can remove it by passing a space character ' '. The MCC group allows the card to be linked to a list of Merchant Category Codes (MCCs) that the card is allowed to or conversely is NOT allowed to transact at. **Note**: The MCC Group is set up and configured in Smart Client and in Thredd Portal.	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<PERMSGroup>	AN	1	10	Group code of the Usage Group. If this parameter is not supplied and this is a new card request then the default group for the card's product is used. If the default group is not required, you can remove it passing a space character ' '. **Note**: The Usage Group is set up and configured in Smart Client and in Thredd Portal.	Optional	Omit
<FeeGroup>	AN	1	10	Group code of the Fee Group. If this parameter is not supplied and this is a new card request then the default group for the cards product is used. If the default group is not required, you can remove it by passing a space character ' '. **Note**: The Fee Group is set up and configured in Smart Client and in Thredd Portal.	Optional	Omit
<SchedFeeGroup>	AN	1	10	Group code of the Scheduled Fee Group. If this parameter is not supplied and this is a new card request then the default group for the cards product is used. If the default group is not required, you remove it by passing a space character ' '.**Note**: The Scheduled Fee Group is set up and configured in Smart Client and in Thredd Portal.	Optional	Omit
<WSFeeGroup>	AN	1	10	Code of the Web Service Fee Group (). If this parameter is not supplied and this is a new card request then the default group for the cards product is used. If the default group is not required, you can remove it by passing a space character ' '. WSFeeGroup allows the card to be linked to a set of web service fees that are set up on the system. **Note**: The Web Service Fee Group is set up and configured in Smart Client and in Thredd Portal.	Optional	Omit
<FxGroup>	AN	1	10	Group code of the FX Fee Group. If this parameter is not supplied and this is a new card request then the default group for the cards product is used. If the default group is not required, you can remove it by passing a space character ' '.**Note**: The FX Fee Group is set up and configured via Smart Client.	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<ProductRef>	AN	1	50	The physical card design reference as used by the Card Manufacturer. Identifies the *PRODUCT_REF* field in the XML file sent to the card manufacturer.	Optional	Omit
<CarrierType>	AN	1	30	The Carrier Product design reference as used by the Card Manufacturer. This is the letter onto which the card is attached when sent to the cardholder. Identifies the Carrier Product type of the Card Manufacturer.	Optional	Omit
<Fulfil1>	AN	1	50	Free text field for transferring extra information to the card manufacturer, for example, to be printed on the Carrier. Identifies the *FULFIL1* field in the XML file sent to the card manufacturer.	Optional	Omit
<Fulfil2>	AN	1	50	Free text field for transferring extra information to the card manufacturer, for example, to be printed on the Carrier. Identifies the *FULFIL2* field in the XML file sent to the card manufacturer.	Optional	Omit
<DelvMethod>	AN	1	1	The delivery method for the card. Options include: 0 = Standard delivery; 1 = Registered mail; 2 = Direct delivery; 3 = Customized DelvMethod 1; 4 = Customized DelvMethod 2; 5 = Customized DelvMethod 3; 6= Customized DelvMethod 4; 7 = Customized DelvMethod 5; Default value is 0	Optional	Omit
<ThermalLine1>	AN	1	120	Free text field for transferring extra information to be printed on the card. For example, to add a customer service phone number.	Optional	Omit
<ThermalLine2>	AN	1	70	Free text field for transferring extra information to be printed on the card. For example, to add a link to your service terms and conditions.	Optional	Omit
<Lang>	AN	1	2	Two digit ISO 639-1 Language code for card mailers (e.g., En = English; Fr = French). **Note**: The available languages depend on the card manufacturer support.	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				Also used if bespoke SMS templates are set up.		
<EmbossLine4>	AN	1	27	The card's embossed line 4 on the front of the card. Could be used for example, to add an account number or sort code.	Optional	Omit
<ImageId>	AN	1	16	Reference which identifies the card manufacturer's image file that is printed on the face of the card.	Optional	Omit
<LogoFrontId>	AN	1	30	Reference which identifies the card manufacturer's logo file that is printed on the face of the card.	Optional	Omit
<LogoBackId>	AN	1	30	Reference which identifies the card manufacturer's logo file that is printed on the back of the card, if supported.	Optional	Omit
<PrimaryToken>	AN	9	19	The primary card's public token. If it is blank then the newly created card is a primary card, otherwise it is the secondary card in a primary/secondary relationship. Cannot be the token of a card that is already linked as a secondary card.	Optional	Omit
<Delv_AddrL1>	AN	1	50	Card purchaser's /delivery address line 1. Mandatory if 'Delivery Address' fields are specified.	Optional	Omit
<Delv_AddrL2>	AN	1	50	Card purchaser's/delivery address line 2.	Optional	Omit
<Delv_AddrL3>	AN	1	50	Card purchaser's /delivery address line 3.	Optional	Omit
<Delv_City>	AN	1	50	Card purchaser's /delivery address delivery city. Mandatory if <Delv_AddrL1> is present, and <Delv_PostCode> is not present.	Optional	Omit
<Delv_PostCode>	AN	1	10	Card purchaser's /delivery address postcode. Mandatory if <Delv_AddrL1> is present, and <Delv_City> is not present. See Postcode Permitted Characters.	Optional	Omit
<Delv_County>	AN	1	20	Card purchaser's /delivery address county.	Optional	Omit
<Delv_Country>	AN	1	3	Card purchaser's /delivery address country 3-digit ISO country code (e.g., 826 for UK). Mandatory if <Delv_AddrL1> is	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				present.		
<Delv_Code>	AN	1	12	The delivery code for the card. If specified, the card manufacturer sends all cards with the same delivery code to the specified delivery address.	Optional	Omit
<Sms_Required>	AN	1	1	Whether an SMS is sent to the cardholder with the card's CVV. 1 = yes; 0 =No. The default is '0'. The SMS is configurable.	Optional	Omit
<IsLive>	N	1	1	Specifies whether the card is active or not. 1 or True = Active; 0 or False = Not Active.	Omit	Mandatory
<CardManufacturer>	AN	1	50	The manufacturer to send the card generation request to. For example: *TCT*, *AllPay*, *GNC*, *Gemalto*, *Nitecrest* and *Exceet*. For a full list, see Card Manufacturers. If omitted, the default for the Card Scheme (payment network) will be used.	Optional	Omit
<CoBrand>	AN	1	6	The Co-Brand code for the card. If supplied it replaces the *PROGRAMID* field in the *Balance XML* file.	Optional	Omit
<ExternalAuth>	AN	1	1	External Authorisation flag. Possible values are: 0 = Do not set External Authorisation on; 1 = Set External Authorisation. Empty value defaults to 0. **Note**: For legacy use only. Not applicable if using EHI.	Optional	Omit
<ActionCode>	AN	3	3	The action code for the response. See Action Codes.	Omit	Mandatory
<Image>	Base64 Binary			PGP-encrypted image of the card. Requires configuration within Smart Client. Check with your Implementation Manager.	Omit	Conditional
<LinkageGroup>	AN	1	10	Group code of the Card Linkage Group. If this parameter is not supplied and this is a new card request then the default group for the cards product will be used. If the default group is not required, you can remove it by passing a space character ' '. **Note**: The Card Linkage Group is set up and configured via Smart Client.	Optional	Omit
<VanityName>	AN	1	32	Enables you to add an additional	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				alternative form of title to the card, e.g. “Company Director”. Can appear on *Embossed Line 4*, or *Thermal Line 1* and *Thermal Line 2*, if configured in Smart Client, and be recorded in the card purchaser details.		
<PBlock>	AN	4	12	Initial value of the card PIN.	Optional	Omit
<PINMailer>	AN	1	1	Whether to send a PIN Mailer: 0 = No (default); 1 = Yes. If 1, Thredd sends instructions in the file to the manufacturer for them to create a PIN Mailer letter.	Optional	Omit
<Email>	AN	1	50	Email address of the cardholder.	Optional	Omit
<MailOrSMS>	AN	1	1	The cardholder's preferred contact method. 0 = SMS; 1 = email. 2 = SMS and email. Default value is ‘0’.	Optional	Omit
<AuthCalendarGroup>	AN	1	10	Group code of the Card Auth Calender Group (controls the time when a card can be used). If this parameter is not supplied and this is a new card request then the default group for the cards product will be used. If the default group is not desired, it can be removed by passing a space character ‘ ‘.	Optional	Omit
<Quantity>	N	1	5	Enables you to generate the specified quantity of cards with the same cardholder details in a batch process. The issued tokens are sent in an XML file over SFTP. If the cards are physical, a manufacturer file is also sent to the printer. You can use the delivery address fields to specify the delivery address for the cards. **Note:** If quantity is greater than 1, then the following optional fields are not relevant and should be left blank: <Reason>, <Source_desc>, <CardManufacturer>, <VanityName>, <PaymentTokenUsageGroup>. <VirtualCardImage>, <ImageSize> The following mandatory fields are not relevant and should be set to the default value of '0': <ItemSRC> and	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				<CreateImage>. <CreateType> is relevant only when its value is 1 or 2. **Note:** Since bulk create (quantity greater than 1) is run as a scheduled job, Thredd recommend performing the token/ card details enquiry one day after the bulk card creation.		
<LoadToken>	N	1	9	The 9-digit Public Token of the MVC card that the initial load amount is to be taken from. The load shows as an MVC balance transfer (Unload + Load) in Smart Client.	Optional	Omit
<FeeWaiver>	N	1	1	Indicates whether to waive any web service fee set up on the system: 0 = No, 1=Yes. Default is 0.	Optional	Omit
<BlackList>	AN	1	10	Group code of the card acceptor Deny list. See Card Acceptor Deny list.	Optional	Omit
<WhiteList>	AN	1	10	Group code of the card acceptor Allow list. See Card Acceptor Allow list.	Optional	Omit
<PaymentTokenUsageGroup>	AN	1	10	Payment token usage group code. Defines configuration options specific to the provisioning of a digital payment token. For details, see the *Tokenisation Guide*. This is a numeric value; only digits 0-9 are valid. Leave empty if no usage group is required.	Optional	Omit
<VirtualCardImage>	AN	1	16	The Image ID for the virtual image for the new card. You can set up Image IDs in Smart Client in the **Image Master** and **Virtual Card Images** screens. **Note**: If you do not provide an image ID, the default virtual card image for the product is used.	Optional	Omit
<ImageSize>	N	1	1	The size of the virtual image: 1 = 100%; 2 = 200%; 3 = 300%; 4 = 400%; 5 = 500%. Default is 1.	Optional	Omit
<IsSingleUse>	AN	1	5	Enables you to specify whether	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				the card is single use only. Boolean values of either 1, 0 or *true*, *false* are accepted. (1= true, 0 = false). If not specified, then the default value from the card Product is used.		
<IsNonReloadable>	AN	1	5	Enables you to specify whether the card is non-reloadable. Boolean values of either 1, 0 or *true*, *false* are accepted. (1= true, 0 = false). If not specified, then the default	Optional	Omit
<Url>	AN	1	100	This value is included in the Thredd Card Generation file, in the `<QRCode>` field. For example: *https://www.your-e-card.com/balance/2909680989632389* For details, see the Card Generation Interface Specifications.	Optional	Omit
<WebServiceResult>	AN			Parameter group describing the result of the Web Service call. Only has values if the current create card request returns an action code of *868 Duplicate WSID*. See WebServiceResult.	Omit	Mandatory
<OOBAppURL>	AN	1	2048	Out Of Band app URL used in a 3D Secure authentication session. The Card Scheme (e.g., Mastercard) requires issuers using Out of Band/Biometric authentication to support the automatic redirection of cardholders from the merchant app to the authenticator app. OOBAppURL is the URL of this authenticator app.	Optional	Omit

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
  <soapenv:Header>
    <hyp:AuthSoapHeader>
      <hyp:strUserName>******</hyp:strUserName>
      <hyp:strPassword>******</hyp:strPassword>
    </hyp:AuthSoapHeader>
  </soapenv:Header>
  <soapenv:Body>
    <hyp:Ws_CreateCard>
      <hyp:WSID>2021123456789</hyp:WSID>
      <hyp:IssCode>PMT</hyp:IssCode>
      <hyp:TxnCode>10</hyp:TxnCode>
```

```
        <hyp:ClientCode></hyp:ClientCode>
        <hyp:Title>Mr</hyp:Title>
        <hyp:LastName>Bloggs</hyp:LastName>
        <hyp:MiddleName></hyp:MiddleName>
        <hyp:FirstName>Joe</hyp:FirstName>
        <hyp:Addrl1>Office 13, Telfords Yard</hyp:Addrl1>
        <hyp:Addrl2>6-8 The Highway, Wapping </hyp:Addrl2>
        <hyp:City>London</hyp:City>
        <hyp:PostCode>E1W 2BS</hyp:PostCode>
        <hyp:Country>826</hyp:Country>
        <hyp:Mobile></hyp:Mobile>
        <hyp:CardDesign>123</hyp:CardDesign>
        <hyp:ExternalRef></hyp:ExternalRef>
        <hyp:DOB></hyp:DOB>
        <hyp:LocDate>2021-01-01</hyp:LocDate>
        <hyp:LocTime>120000</hyp:LocTime>
        <hyp:TerminalID></hyp:TerminalID>
        <hyp:LoadValue>10</hyp:LoadValue>
        <hyp:CurCode>GBP</hyp:CurCode>
        <hyp:Reason></hyp:Reason>
        <hyp:AccCode>123456</hyp:AccCode>
        <hyp:ItemSrc>2</hyp:ItemSrc>
        <hyp:LoadFundsType>4</hyp:LoadFundsType>
        <hyp:LoadSrc>10</hyp:LoadSrc>
        <hyp:LoadFee>0.0</hyp:LoadFee>
        <hyp:LoadedBy>Admin</hyp:LoadedBy>
        <hyp:CreateImage>1</hyp:CreateImage>
        <hyp:CreateType>1</hyp:CreateType>
        <hyp:CustAccount></hyp:CustAccount>
        <hyp:ActivateNow>0</hyp:ActivateNow>
        <hyp:Source_desc></hyp:Source_desc>
        <hyp:ExpDate></hyp:ExpDate>
        <hyp:CardName>GIFT CARD</hyp:CardName>
        <hyp:LimitsGroup>PMT-VL-002</hyp:LimitsGroup>
        <hyp:MCCGroup></hyp:MCCGroup>
        <hyp:PERMSGroup>PMT-CU-002</hyp:PERMSGroup>
        <hyp:ProductRef></hyp:ProductRef>
        <hyp:CarrierType></hyp:CarrierType>
        <hyp:Fulfil1></hyp:Fulfil1>
        <hyp:Fulfil2></hyp:Fulfil2>
        <hyp:DelvMethod>0</hyp:DelvMethod>
        <hyp:ThermalLine1></hyp:ThermalLine1>
        <hyp:ThermalLine2></hyp:ThermalLine2>
        <hyp:EmbossLine4></hyp:EmbossLine4>
        <hyp:ImageId></hyp:ImageId>
        <hyp:LogoFrontId></hyp:LogoFrontId>
        <hyp:LogoBackId></hyp:LogoBackId>
        <hyp:FeeGroup></hyp:FeeGroup>
        <hyp:PrimaryToken></hyp:PrimaryToken>
        <hyp:Delv_AddrL1></hyp:Delv_AddrL1>
        <hyp:Delv_AddrL2></hyp:Delv_AddrL2>
        <hyp:Delv_AddrL3></hyp:Delv_AddrL3>
        <hyp:Delv_City></hyp:Delv_City>
        <hyp:Delv_County></hyp:Delv_County>
        <hyp:Delv_PostCode></hyp:Delv_PostCode>
        <hyp:Delv_Country></hyp:Delv_Country>
        <hyp:Sms_Required></hyp:Sms_Required>
        <hyp:SchedFeeGroup></hyp:SchedFeeGroup>
        <hyp:WSFeeGroup></hyp:WSFeeGroup>
        <hyp:CardManufacturer></hyp:CardManufacturer>
        <hyp:CoBrand>CB1</hyp:CoBrand>
        <hyp:ExternalAuth></hyp:ExternalAuth>
        <hyp:LinkageGroup></hyp:LinkageGroup>
        <hyp:VanityName>Dr Bloggs</hyp:VanityName>
        <hyp:PBlock></hyp:PBlock>
        <hyp:PINMailer></hyp:PINMailer>
        <hyp:FxGroup></hyp:FxGroup>
        <hyp:Email>joe.bloggs@google.com</hyp:Email>
        <hyp:MailOrSMS>1</hyp:MailOrSMS>
        <hyp:AuthCalendarGroup></hyp:AuthCalendarGroup>
        <hyp:Quantity>10</hyp:Quantity>
```

```
      <hyp:LoadToken>123456789</hyp:LoadToken>
      <hyp:FeeWaiver></hyp:FeeWaiver>
      <hyp:BlackList>Deny List</hyp:BlackList>
      <hyp:WhiteList></hyp:WhiteList>
      <hyp:PaymentTokenUsageGroup></hyp:PaymentTokenUsageGroup>
      <hyp:VirtualCardImage> </hyp:VirtualCardImage>
      <hyp:ImageSize></hyp:ImageSize>
      <hyp:IsSingleUse>false</hyp:IsSingleUse>
      <hyp:IsNonReloadable>false</hyp:IsNonReloadable>
      <hyp:Url>https://www.your-e-card.com/balance/7109680989634104</hyp:Url>
      <hyp:OOBAppURL>https://login.app.bank1.com/</hyp:OOBAppURL>
    </hyp:Ws_CreateCard>
  </soapenv:Body>
</soapenv:Envelope>
```

Response - Successful Card Create

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_CreateCardResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_CreateCardResult>
            <WSID>2021123456789</WSID>
            <IssCode>PMT</IssCode>
            <TxnCode>10</TxnCode>
            <PublicToken>123456789</PublicToken>
            <ExternalRef/>
            <LocDate>2021-01-01</LocDate>
            <LocTime>120000</LocTime>
            <ItemID>1234</ItemID>
            <ClientCode>0</ClientCode>
            <SysDate>2021-01-01</SysDate>
            <ActionCode>000</ActionCode>
            <LoadValue>10</LoadValue>
            <IsLive>false</IsLive>
            <StartDate>01/21</StartDate>
            <ExpDate>02/26</ExpDate>
            <CVV>123</CVV>
            <MaskedPAN>987654******0123</MaskedPAN>
            <WebServiceResult/>
         </Ws_CreateCardResult>
      </Ws_CreateCardResponse>
   </soap:Body>
</soap:Envelope>
```

Response - Duplicate Request Example

The response returns action code 868 for a duplicate create card request (where the same WSID is used).

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
soap:Body
 <Ws_CreateCardResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
    <Ws_CreateCardResult>
    <WSID>1234567889</WSID>
    <IssCode>PMT</IssCode>
    <TxnCode>10</TxnCode>
    <PublicToken>0</PublicToken>
    <ExternalRef/>
    <LocDate>2021:05:25</LocDate>
    <LocTime>14:41:45</LocTime>
    <ItemID>0</ItemID>
    <ClientCode/>
    <SysDate>2022-03-04</SysDate>
    <ActionCode>868</ActionCode>
    <LoadValue>0</LoadValue>
    <IsLive>false</IsLive>
    <StartDate/>
    <ExpDate/>
```

```
    <CVV/>
    <MaskedPAN/>
    <WebServiceResult>
        <WSID>1234567889</WSID>
        <IssCode>PMT</IssCode>
        <PublicToken>620137544</PublicToken>
        <Response>000</Response>
        <Description>Normal, approve</Description>
        <ActionCode>000</ActionCode>
    </WebServiceResult>
    </Ws_CreateCardResult>
  </Ws_CreateCardResponse>
 </soap:Body>
</soap:Envelope>
```

Card Bulk Create

API: Ws_BulkCreation

This web service creates a bulk number of virtual as well as physical cards in a single request. It takes an XML document as the input containing the information needed to create virtual or physical cards, and produces an XML document with the list of newly created virtual or physical cards as the response.

Card images are created in the web service directory when creating a virtual card.

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<doc>	XML	1	1024	XML document that contains details of the cards to be created, such as the customer details and the card design. See XML File Description below.	Mandatory	Omit
<CardsCreated>	N	1	5	Number of cards created.	Omit	Mandatory
<CardsNotCreated>	N	1	5	Number of cards failed to create.	Omit	Mandatory
<RequestWithError>	AN	1	100	Details of the fields in the request that caused the error in card creation. It is mandatory when an error occurs in card creation.	Omit	Conditional
<ActionCode>	AN	3	3	The action code for the response. See Action Codes.	Omit	Mandatory
<Cards>	-	-	-	An array of cards. See XML File Description below. Can occur multiple times within the message.	Omit	Optional

Card Response

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Omit	Mandatory
<PublicToken>	AN	1	9	The card's public token, Mandatory in request if <PAN> and <track2> are not present. Mandatory	Omit	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				in the response. In virtual card creation <PublicToken> is not present in the request.		
<ExternalRef>	AN	1	30	External reference code for the card. **Note**: Legacy field. Not used.	Omit	Conditional
<itemId>	AN	1	20	The unique item ID returned for this load.	Omit	Mandatory
<ClientCode>	AN	1	64	User ID of the customer using the service. Only applicable to systems using member logins. Returned in the response if present in the request. **Note**: Legacy field. Not used.	Omit	Conditional
<sysDate>	YYYY-MM-DD	10	10	The system processing date.	Omit	Mandatory
<actionCode>	AN	3	3	The action code for the response. See Action Codes.	Omit	Mandatory
<LoadValue>	D	1	20	Load value to put on the card. The amount can include up to four decimal places, depending on the currency exponent (e.g., 10.99 for EUR which has a currency exponent of 2). See Currency Codes.	Omit	Mandatory
<IsLive>	N	1	1	Specifies whether the card is active or not. 1 or True = Active; 0 or False = Not Active.	Omit	Mandatory
<StartDate>	AN	5	5	Physical start date printed on the card in the format *MM/YY*.	Omit	Mandatory
<EndDate>	AN	5	5	Physical end date printed on the card in the format *MM/YY*.	Omit	Mandatory
<ExpDate>	MM/YY	5	5	Card expiry date. If left blank, updates with the default expiry date, based on the Card Scheme's validity period in months, otherwise updates with the input value. The date returned of the actual physical expiry is in *MM/YY*.	Omit	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<CVV>	AN	3	3	Card Verification Value, the 3-digit code printed on the back of the card.	Omit	Mandatory
<MaskedPAN>	AN	14	19	Card number displayed as masked (e.g., 675926******1234). **Note**. The full PAN can be returned if you are PCI DSS compliant. Contact your Implementation Manager.	Omit	Mandatory

XML File Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<ClientCode>	AN	1	64	User ID of the customer using the service. Only applicable to systems using member logins. Returned in the response if present in the request. **Note**: Legacy field. Not used.	Optional	Omit
<Title>	AN	1	4	Cardholder's title. Also used as the card purchaser's title if no delivery address is supplied.	Optional	Omit
<LastName>	AN	1	30	Cardholder's last name. If no delivery address is supplied, this is the card purchaser's last name.	Conditional	Omit
<MiddleName>	AN	1	100	Cardholder's middle name. The <MiddleName> is not part of the <EmbossName> and therefore, does not check manufacture-approved characters. If a delivery address is not supplied, the cardholder's middle name will be the card purchaser's middle name.	Conditional	Omit
<FirstName>	AN	1	30	Cardholder's first name. Also used as the card purchaser's first name if no delivery address is supplied. Mandatory if <lastName> is present.	Conditional	Omit
<AddrL1>	AN	1	50	Cardholder's address line 1. Also used as the card purchaser's address line 1 if no delivery address is supplied. Mandatory if 'Address' fields are specified.	Conditional	Omit
<AddrL2>	AN	1	50	Cardholder's address line 2. Also	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				used as the card purchaser's address line 2 if no delivery address is supplied.		
<City>	AN	1	50	Cardholder's home city. Also used as the card purchaser's city if no delivery address is supplied. Mandatory if <addrL1> is present, and <postcode> is not present.	Conditional	Omit
<Postcode>	AN	1	10	Cardholder's home postcode. Also used as the card purchaser's postcode if no postcode is supplied. Mandatory if <addrL1> is present, and <city> is not present. See Postcode Permitted Characters.	Conditional	Omit
<Country>	AN	1	3	Cardholder's country of residence. This is represented as a 3 digit ISO country code (e.g. 826 for UK). Mandatory if <addrL1> is present.	Conditional	Omit
<Mobile>	AN	1	15	Cardholder's mobile phone number (including dialing code if applicable). See Processing of Telephone Numbers.	Optional	Omit
<CardDesign>	AN	1	8	The identifier of the card product, or Product ID, within Thredd. For details, check with your Implementation Manager. **Note**: this is not the same field as the **CrdDesign** or **ProductRef**.	Mandatory	Omit
<ExternalRef>	AN	1	30	External reference code for the card. **Note**: Legacy field. Not used.	Optional	Omit
<DOB>	YYYY-MM-DD	10	10	The cardholder's date of birth.	Optional	Omit
<AccCode>	AN	0	6	Access code or passcode for setting a code which is validated during activation (e.g. via the Thredd IVR system). If provided, must be 6 digits; leading zeroes are acceptable. Mandatory if the value of <AuthType> is '4'. Leave empty if not required.	Optional	Omit
<ExpDate>	YYYY-MM-DD	10	10	Card expiry date. If left blank, updates with the default expiry date, based on the Card Scheme's validity period in months, otherwise updates with the input value. The date returned of the actual physical expiry is in *MM/YY*.	Optional	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<TerminalID>	AN	1	15	Point of Sale (POS) or other terminal identifier, such as a hostname.	Optional	Omit
<LoadValue>	D	1	20	Load value to put on the card. The amount can include up to four decimal places, depending on the currency exponent (e.g., 10.99 for EUR which has a currency exponent of 2). See Currency Codes.	Mandatory	Mandatory
<CurCode>	AN	3	3	3-letter ISO currency code for the currency to load (e.g. EUR). This must match the card's currency or the action fails (**Note**: For a Multi-FX card, the card can be loaded in any of the card's currencies). If not provided, then the card uses its billing currency. See Currency Codes.	Conditional	Omit
<Reason>	AN	1	60	Reason for the card's status change. Overrides default of 'Card Activated' that is shown in the card processor. Text is shown in the Smart Client **Tracker** screen. On Thredd Portal, this information is captured in the Notes column in Transaction Search results.	Optional	Omit
<ItemSrc>	N	1	5	Source field to define alternate fees. Legacy field for information purposes only; see Item Source Types. Suggest using 0.	Mandatory	Omit
<LoadFundsType>	AN	1	3	Payment method for loading funds onto the card. See Load Fund Types.	Optional	Omit
<LoadSrc>	AN	1	3	The source of the load request for determining the fee of the load, if applicable. If omitted, defaults to 14 "Unknown". See Load Sources.	Optional	Omit
<LoadFee>	D	1	20	Fixed fee amount charged to the card purchaser for handling the card purchase and load. The amount can include up to four decimal places, depending on the currency exponent (e.g., 10.99 for EUR which has a currency exponent of 2). See Currency Codes. If no load fee is required, specify 0. The load fee does not affect the card balance. It is only reported in the XML.	Mandatory	Omit
<LoadedBy>	AN	1	30	User who loaded the card.	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<CreateImage>	N	1	1	Specifies whether to create a card image. 1= yes, 0 = No. Images are returned in the <Image> response parameter, encrypted by a pre-shared PGP encryption key.	Mandatory	Omit
<CreateType>	N	1	1	There are five possible values: 1 = Create a virtual card. Can be converted to a physical card at a later stage using the Convert Card web service. 2 = Create physical card. Also triggers the creation of a card file which is sent to the manufacturer. 3 = Create a virtual card. Works in the same way as option 1. 4 = Create a Master Virtual Card which is a deposit account that can be used to load other cards from. 5 = Create a virtual card and convert to a physical card. Triggers the creation of a card file which is sent to the manufacturer. **Note**: To use create type 5, the card must be created under a virtual product. **Note**: If the virtual card is activated then the physical card will also be active, so you should consider the security implications of this. Please speak to your implementation manager. Create types 3, 4 and 5 will not work if Quantity is greater than 1.	Mandatory	Omit
<CustAccount>	AN	1	25	Cardholder account number or reference number. You can use this reference to find the cards linked to a cardholder. Also displayed in Smart Client and in Thredd Portal as *Customer Reference*.	Optional	Omit
<ActivateOrNot>	N	1	1	Whether to activate the card. 1= Yes, 0=No. When <Quantity> is greater than 1 then creation of <Quantity> numbers of identical cards will trigger a batch process that starts within minutes of the request. If <ActivateOrNot> is 1 in such requests then the issued	Mandatory	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				tokens are sent to the customer already activated. This parameter only applies if the request is for a new card.		
<CardName>	AN	1	27	The embossed name on the card. If present in the request then the embossed name on the card should be the given value. If it is not available and <Firstname> and <Lastname> are available then <Title> + <Firstname> + <Lastname> is the embossed name. If all the above parameters are unavailable in the request then the default embossed name remains as the embossed name. If a blank embossed name is required, then pass a single space character. See Card Name Permitted Characters.	Optional	Omit
<LimitsGroup>	AN	1	10	Group code of the Limits Group. If this parameter is not supplied and this is a new card request, then the default group for the card's product is used. If the default group is not required, you can remove it by passing a space character ' '. **Note**: The Limits Group is set up and configured in Smart Client and in Thredd Portal.	Optional	Omit
<MCCGroup>	AN	1	10	Group code of the MCC Group. If this parameter is not supplied and this is a new card request then the default group for the cards product is used. If the default group is not required, you can remove it by passing a space character ' '. The MCC group allows the card to be linked to a list of Merchant Category Codes (MCCs) that the card is allowed to or conversely is NOT allowed to transact at. **Note**: The MCC Group is set up and configured in Smart Client and in Thredd Portal.	Optional	Omit
<PERMSGroup>	AN	1	10	Group code of the Usage Group. If this parameter is not supplied and this is a new card request then the default group for the card's product is used. If the default group is not required, you can remove it passing a space character ' '. **Note**: The Usage Group is set up and configured in Smart Client and in Thredd Portal.	Optional	Omit
<FeeGroup>	AN	1	10	Group code of the Fee Group. If	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				this parameter is not supplied and this is a new card request then the default group for the cards product is used. If the default group is not required, you can remove it by passing a space character ' '. **Note**: The Fee Group is set up and configured in Smart Client and in Thredd Portal.		
<SchedFeeGroup>	AN	1	10	Group code of the Scheduled Fee Group. If this parameter is not supplied and this is a new card request then the default group for the cards product is used. If the default group is not required, you remove it by passing a space character ' '.**Note**: The Scheduled Fee Group is set up and configured in Smart Client and in Thredd Portal.	Optional	Omit
<WSFeeGroup>	AN	1	10	Code of the Web Service Fee Group (). If this parameter is not supplied and this is a new card request then the default group for the cards product is used. If the default group is not required, you can remove it by passing a space character ' '. WSFeeGroup allows the card to be linked to a set of web service fees that are set up on the system. **Note**: The Web Service Fee Group is set up and configured in Smart Client and in Thredd Portal.	Optional	Omit
<ProductRef>	AN	1	50	The physical card design reference as used by the Card Manufacturer. Identifies the *PRODUCT_REF* field in the XML file sent to the card manufacturer.	Optional	Omit
<CarrierType>	AN	1	30	The Carrier Product design reference as used by the Card Manufacturer. This is the letter onto which the card is attached when sent to the cardholder. Identifies the Carrier Product type of the Card Manufacturer.	Optional	Omit
<Fulfil1>	AN	1	50	Free text field for transferring extra information to the card manufacturer, for example, to be printed on the Carrier. Identifies the *FULFIL1* field in the XML file sent to the card manufacturer.	Optional	Omit
<Fulfil2>	AN	1	50	Free text field for transferring extra information to the card manufacturer, for example, to be printed on the Carrier. Identifies the *FULFIL2* field in the XML file	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				sent to the card manufacturer.		
<DelvMethod>	AN	1	1	The delivery method for the card. Options include: 0 = Standard delivery; 1 = Registered mail; 2 = Direct delivery; 3 = Customized DelvMethod 1; 4 = Customized DelvMethod 2; 5 = Customized DelvMethod 3; 6= Customized DelvMethod 4; 7 = Customized DelvMethod 5; Default value is 0	Optional	Omit
<ThermalLine1>	AN	1	120	Free text field for transferring extra information to be printed on the card. For example, to add a customer service phone number.	Optional	Omit
<ThermalLine2>	AN	1	70	Free text field for transferring extra information to be printed on the card. For example, to add a link to your service terms and conditions.	Optional	Omit
<Lang>	AN	1	2	Two digit ISO 639-1 Language code for card mailers (e.g., En = English; Fr = French). **Note**: The available languages depend on the card manufacturer support. Also used if bespoke SMS templates are set up.	Optional	Omit
<EmbossLine4>	AN	1	27	The card's embossed line 4 on the front of the card. Could be used for example, to add an account number or sort code.	Optional	Omit
<ImageId>	AN	1	16	Reference which identifies the card manufacturer's image file that is printed on the face of the card.	Optional	Omit
<LogoFrontId>	AN	1	30	Reference which identifies the card manufacturer's logo file that is printed on the face of the card.	Optional	Omit
<LogoBackId>	AN	1	30	Reference which identifies the card manufacturer's logo file that is printed on the back of the card, if supported.	Optional	Omit
<PrimaryToken>	AN	1	9	The primary card's public token. If it is blank then the newly created card is a primary card, otherwise it is the secondary card in a	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				primary/secondary relationship. Cannot be the token of a card that is already linked as a secondary card.		
<Delv_AddrL1>	AN	1	50	Card purchaser's /delivery address line 1. Mandatory if 'Delivery Address' fields are specified.	Optional	Omit
<Delv_AddrL2>	AN	1	50	Card purchaser's/delivery address line 2.	Optional	Omit
<Delv_AddrL3>	AN	1	50	Card purchaser's /delivery address line 3.	Optional	Omit
<Delv_City>	AN	1	50	Card purchaser's /delivery address delivery city. Mandatory if <Delv_AddrL1> is present, and <Delv_PostCode> is not present.	Optional	Omit
<Delv_Postcode>	AN	1	10	The delivery code for the card. If specified, the card manufacturer sends all cards with the same delivery code to the specified delivery address.	Optional	Omit
<Delv_County>	AN	1	20	Card purchaser's /delivery address county.	Optional	Omit
<Delv_Country>	AN	1	3	Card purchaser's /delivery address country 3-digit ISO country code (e.g., 826 for UK). Mandatory if <Delv_AddrL1> is present.	Optional	Omit
<Delv_Code>	AN	1	12	The delivery code for the card. If specified, the card manufacturer sends all cards with the same delivery code to the specified delivery address.	Optional	Omit
<Sms_Required>	AN	1	1	Whether an SMS is sent to the cardholder with the card's CVV. 1 = yes; 0 =No. The default is '0'. The SMS is configurable.	Optional	Omit
<CardManufacturer>	AN	1	50	The manufacturer to send the card generation request to. For example: *TCT*, *AllPay*, *GNC*, *Gemalto*, *Nitecrest* and *Exceet*. For a full list, see Card Manufacturers. If omitted, the default for the Card Scheme (payment network) will be used.	Optional	Omit
<CoBrand>	AN	1	6	The Co-Brand code for the card. If supplied it replaces the *PROGRAMID* field in the *Balance XML* file.	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<PublicToken>	AN	1	9	The card's public token. The response always returns the public token of the newly-created card.	Omit	Mandatory
<ExternalAuth>	AN	1	1	External Authorisation flag. Possible values are: 0 = Do not set External Authorisation on; 1 = Set External Authorisation. Empty value defaults to 0. **Note**: For legacy use only. Not applicable if using EHI.	Optional	Omit
<LinkageGroup>	AN	1	10	Group code of the Card Linkage Group. If this parameter is not supplied and this is a new card request then the default group for the cards product will be used. If the default group is not required, you can remove it by passing a space character ' '. **Note**: The Card Linkage Group is set up and configured via Smart Client.	Optional	Omit
<VanityName>	AN	1	32	Enables you to add an additional alternative form of title to the card, e.g. "Company Director". Can appear on *Embossed Line 4*, or *Thermal Line 1* and *Thermal Line 2*, if configured in Smart Client, and be recorded in the card purchaser details.	Optional	Omit
<PBlock>	AN	4	12	Initial value of the card PIN.	Optional	Omit
<PINMailer>	AN	1	1	Whether to send a PIN Mailer: 0 = No (default); 1 = Yes. If 1, Thredd sends instructions in the file to the manufacturer for them to create a PIN Mailer letter.	Optional	Omit
<FXGroup>	AN	1	10	Group code of the FX Fee Group. If this parameter is not supplied and this is a new card request then the default group for the cards product is used. If the default group is not required, you can remove it by passing a space character ' '.**Note**: The FX Fee Group is set up and configured via Smart Client.	Optional	Omit
<Email>	AN	1	50	Email address of the cardholder.	Optional	Omit
<MailOrSMS>	AN	1	1	The cardholder's preferred contact method. 0 = SMS; 1 = email. 2 = SMS and email. Default value is '0'.	Optional	Omit
<AuthCalendarGroup>.	AN	1	10	Group code of the Card Auth Calender Group (controls the	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				time when a card can be used). If this parameter is not supplied and this is a new card request then the default group for the cards product will be used. If the default group is not desired, it can be removed by passing a space character ‘ ‘.		
<BlackList>	AN	1	10	Group code of the card acceptor Deny list. See Card Acceptor Deny list.	Optional	Omit
<WhiteList>	AN	1	10	Group code of the card acceptor Allow list. See Card Acceptor Allow list.	Optional	Omit
<PaymentTokenUsageGroup>	AN	1	10	Payment token usage group code. Defines configuration options specific to the provisioning of a digital payment token. For details, see the *Tokenisation Guide*. This is a numeric value; only digits 0-9 are valid. Leave empty if no usage group is required.	Optional	Omit
<IsSingleUse>	AN	1	5	Enables you to specify whether the card is single use only. Boolean values of either 1, 0 or *true*, *false* are accepted. (1= true, 0 = false). If not specified, then the default value from the card Product is used.	Optional	Omit
<IsNonReloadable>	AN	1	5	Enables you to specify whether the card is non-reloadable. Boolean values of either 1, 0 or *true*, *false* are accepted. (1= true, 0 = false). If not specified, then the default value from the card Product is used.	Optional	Omit
<Url>	AN	1	100	This value is included in the Thredd Card Generation file, in the <QRCode> field. For example: *https://www.your-e-card.com/balance/2909680989632389* For details, see the Card Generation Interface Specifications.	Optional	Omit
<OOBAppURL>	AN	1	2048	Out Of Band app URL used in a 3D Secure authentication session. The Card Scheme (e.g., Mastercard) requires issuers using Out of Band/Biometric authentication to support the	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				automatic redirection of cardholders from the merchant app to the authenticator app. OOBAppURL is the URL of this authenticator app.		

Note: You must supply all tags that are marked as mandatory in the XML input document. In some circumstances, tags marked as conditional are also mandatory. You must always include the conditional tags in your request, even if the value is empty. For example: <FirstName></FirstName>. Tags marked as optional do not need to be included.

Request

```
<soapenv:Envelope xmlns:soapenv=”http://schemas.xmlsoap.org/soap/envelope/” xmlns:hyp=”ht-
tp://www.globalprocessing.ae/HyperionWeb”>
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_BulkCreation>
         <hyp:doc>
            <CRDREQ>
    <CARD>
        <IssCode>PMT</IssCode>
        <ClientCode></ClientCode>
        <Title>Mr</Title>
        <LastName>Bloggs</LastName>
        <MiddleName>Chris</MiddleName>
        <FirstName>Joe</FirstName>
        <Addrl1>25</Addrl1>
        <Addrl2>Tester Street</Addrl2>
        <City>London</City>
        <PostCode>E1W 2BS</PostCode>
        <Country>826</Country>
        <Mobile>07721123456</Mobile>
        <CardDesign>123</CardDesign>
        <ExternalRef></ExternalRef>
        <DOB></DOB>
         <TerminalID>1234</TerminalID>
        <LoadValue>10</LoadValue>
        <CurCode>GBP</CurCode>
        <Reason></Reason>
         <AccCode>123456</AccCode>
        <ItemSrc>2</ItemSrc>
        <LoadFundsType>4</LoadFundsType>
        <LoadSrc>10</LoadSrc>
        <LoadFee>0.0</LoadFee>
        <LoadedBy>Admin</LoadedBy>
        <CreateImage>1</CreateImage>
        <CreateType>1</CreateType>
        <CustAccount></CustAccount>
        <ActivateOrNot>0</ActivateOrNot>
        <ExpDate></ExpDate>
        <CardName>GIFT CARD</CardName>
        <LimitsGroup>PMT-VL-002</LimitsGroup>
        <MCCGroup></MCCGroup>
        <PERMSGroup>PMT-CU-002</PERMSGroup>
             <ProductRef></ProductRef>
             <CarrierType></CarrierType>
             <Fulfil1></Fulfil1>
             <Fulfil2></Fulfil2>
```

```
            <DelvMethod>0</DelvMethod>
            <ThermalLine1></ThermalLine1>
           <ThermalLine2></ThermalLine2>
           <EmbossLine4></EmbossLine4>
            <ImageId></ImageId>
            <LogoFrontId></LogoFrontId>
            <LogoBackId></LogoBackId>
        <FeeGroup></FeeGroup>
        <PrimaryToken>123456789</PrimaryToken>
        <Delv_AddrL1></Delv_AddrL1>
        <Delv_AddrL2></Delv_AddrL2>
    <Delv_AddrL3></Delv_AddrL3>
    <Delv_City></Delv_City>
    <Delv_PostCode> </Delv_PostCode>
    <Delv_County></Delv_County>
    <Delv_Country></Delv_Country>
    <Sms_Required>1</Sms_Required>
    <SchedFeeGroup></SchedFeeGroup>
    <WSFeeGroup></WSFeeGroup>
    <CardManufacturer></CardManufacturer>
    <CoBrand></CoBrand>
    <ExternalAuth>0</ExternalAuth>
    <LinkageGroup></LinkageGroup>
    <VanityName></VanityName>
    <PBlock></PBlock>
    <PINMailer>1</PINMailer>
    <FxGroup></FxGroup>
    <Email>joe.bloggs@gmail.com</Email>
    <MailOrSMS>1</MailOrSMS>
    <AuthCalendarGroup></AuthCalendarGroup>
    <BlackList></BlackList>
    <WhiteList>]</WhiteList>
    <PaymentTokenUsageGroup></PaymentTokenUsageGroup>
    <IsSingleUse>false</IsSingleUse>
    <IsNonReloadable>false</IsNonReloadable>
    <Url>https://www.your-e-card.com/balance/8109680989834104</Url>
    </CARD>
    <CARD>
        <IssCode>PMT</IssCode>
        <ClientCode></ClientCode>
        <Title>Mrs</Title>
        <LastName>Doe</LastName>
        <MiddleName>Elizabeth</MiddleName>
        <FirstName>Jane</FirstName>
        <Addrl1>25</Addrl1>
        <Addrl2>Deer Street</Addrl2>
        <City>London</City>
        <PostCode>ABW 2BS</PostCode>
        <Country>826</Country>
        <Mobile>07731423446</Mobile>
        <CardDesign>123</CardDesign>
        <ExternalRef></ExternalRef>
        <DOB></DOB>
         <TerminalID>1234</TerminalID>
        <LoadValue>10</LoadValue>
        <CurCode>GBP</CurCode>
        <Reason></Reason>
         <AccCode>123456</AccCode>
        <ItemSrc>2</ItemSrc>
        <LoadFundsType>4</LoadFundsType>
        <LoadSrc>10</LoadSrc>
        <LoadFee>0.0</LoadFee>
        <LoadedBy>Admin</LoadedBy>
        <CreateImage>1</CreateImage>
        <CreateType>1</CreateType>
        <CustAccount></CustAccount>
        <ActivateOrNot>0</ActivateOrNot>
        <ExpDate></ExpDate>
        <CardName>GIFT CARD</CardName>
        <LimitsGroup>PMT-VL-002</LimitsGroup>
        <MCCGroup></MCCGroup>
```

```
        <PERMSGroup>PMT-CU-002</PERMSGroup>
             <ProductRef></ProductRef>
             <CarrierType></CarrierType>
             <Fulfil1></Fulfil1>
             <Fulfil2></Fulfil2>
              <DelvMethod>0</DelvMethod>
              <ThermalLine1></ThermalLine1>
             <ThermalLine2></ThermalLine2>
             <EmbossLine4></EmbossLine4>
              <ImageId></ImageId>
              <LogoFrontId></LogoFrontId>
              <LogoBackId></LogoBackId>
        <FeeGroup></FeeGroup>
        <PrimaryToken>243456789</PrimaryToken>
        <Delv_AddrL1></Delv_AddrL1>
        <Delv_AddrL2></Delv_AddrL2>
    <Delv_AddrL3></Delv_AddrL3>
    <Delv_City></Delv_City>
    <Delv_PostCode> </Delv_PostCode>
    <Delv_County></Delv_County>
    <Delv_Country></Delv_Country>
    <Sms_Required>1</Sms_Required>
    <SchedFeeGroup></SchedFeeGroup>
    <WSFeeGroup></WSFeeGroup>
    <CardManufacturer></CardManufacturer>
    <CoBrand></CoBrand>
    <ExternalAuth>0</ExternalAuth>
    <LinkageGroup></LinkageGroup>
    <VanityName></VanityName>
    <PBlock></PBlock>
    <PINMailer>1</PINMailer>
    <FxGroup></FxGroup>
    <Email>jane.doe@gmail.com</Email>
    <MailOrSMS>1</MailOrSMS>
    <AuthCalendarGroup></AuthCalendarGroup>
    <BlackList></BlackList>
    <WhiteList>]</WhiteList>
    <PaymentTokenUsageGroup></PaymentTokenUsageGroup>
    <IsSingleUse>false</IsSingleUse>
    <IsNonReloadable>false</IsNonReloadable>
    <Url>https://www.your-e-card.com/balance/7109680989634104</Url>
    <OOBAppURL>https://login.app.bank1.com/</OOBAppURL>
     </CARD>
            </CRDREQ>
         </hyp:doc>
      </hyp:Ws_BulkCreation>
   </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap=”http://schemas.xmlsoap.org/soap/envelope/” xmlns:xsi=”http://www.w3.org/2001/XMLSchema-instance”
xmlns:xsd=”http://www.w3.org/2001/XMLSchema”>
   <soap:Body>
      <Ws_BulkCreationResponse xmlns=”http://www.globalprocessing.ae/HyperionWeb”>
         <Ws_BulkCreationResult>
            <CardsCreated>2</CardsCreated>
            <CardsNotCreated>2</CardsNotCreated>
            <ActionCode>000</ActionCode>
            <RequestWithError> </RequestWithError>
            <CARDS xmlns=””>
               <CARD>
                  <IssCode>PMT</IssCode>
                  <PublicToken>123456889</PublicToken>
                  <ExternalRef></ExternalRef>
                  <ItemID>1234</ItemID>
                  <ClientCode>0</ClientCode>
                  <SysDate>2021-01-01</SysDate>
                  <ActionCode>000</ActionCode>
                  <LoadValue>10</LoadValue>
```

```
                  <IsLive>false</IsLive>
                  <ExpDate>03/25</ExpDate>
                  <CVV>123</CVV>
                  <MaskedPAN>987654******0123</MaskedPAN>
               </CARD>
               <CARD>
                  <IssCode>PMT</IssCode>
                  <PublicToken>234456889</PublicToken>
                  <ExternalRef></ExternalRef>
                  <ItemID>1234</ItemID>
                  <ClientCode>0</ClientCode>
                  <SysDate>2021-01-01</SysDate>
                  <ActionCode>000</ActionCode>
                  <LoadValue>10</LoadValue>
                  <IsLive>false</IsLive>
                  <ExpDate>03/25</ExpDate>
                  <CVV>123</CVV>
                  <MaskedPAN>987655******0124</MaskedPAN>
               </CARD>
            </CARDS>
         </Ws_BulkCreationResult>
      </Ws_BulkCreationResponse>
   </soap:Body>
</soap:Envelope>
```

Card Activate

API: Ws_Activate

This web service sets the status of the card to *active* to enable Mastercard or Visa network transactions. It is used to activate cards issued in an *inactive* state.

Note: When converting from a virtual to a physical card, further activation is required on the physical card to ensure the converted details are updated on the Thredd host.

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every web service request sent. For details, see the FAQs.**Tip**: You could use a number based on the current date and time, as long as it is unique (e.g., *20201217145006*).	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<TxnCode>	AN	1	2	The Transaction Code. See Transaction Codes. Default value is 10.	Mandatory	Mandatory
<ClientCode>	AN	1	64	User ID of the customer using the service. Only applicable to systems using member logins. Returned in the response if present in the request. **Note**: Legacy field. Not used.	Optional	Conditional
<Title>	AN	1	4	Cardholder's title. Also used as the card purchaser's title if no delivery address is supplied.	Optional	Omit
<LastName>	AN	1	30	Cardholder's last name. If no delivery address is supplied, this is the card purchaser's last name.	Optional	Omit
<FirstName>	AN	1	30	Cardholder's first name. Also used as	Conditional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				the card purchaser's first name if no delivery address is supplied. Mandatory if <lastName> is present.		
<Addrl1>	AN	1	50	Cardholder's address line 1. Also used as the card purchaser's address line 1 if no delivery address is supplied. Mandatory if 'Address' fields are specified.	Conditional	Omit
<Addrl2>	AN	1	50	Cardholder's address line 2. Also used as the card purchaser's address line 2 if no delivery address is supplied.	Optional	Omit
<City>	AN	1	50	Cardholder's home city. Also used as the card purchaser's city if no delivery address is supplied. Mandatory if <addrL1> is present, and <postcode> is not present.	Conditional	Omit
<PostCode>	AN	1	10	Cardholder's home postcode. Also used as the card purchaser's postcode if no postcode is supplied. Mandatory if <addrL1> is present, and <city> is not present. See Postcode Permitted Characters.	Conditional	Omit
<Country>	AN	1	3	Cardholder's country of residence. This is represented as a 3 digit ISO country code (e.g. 826 for UK). Mandatory if <addrL1> is present.	Conditional	Omit
<ActMethod>	AN	1	1	Method used for card activation. See Activation Methods.	Mandatory	Omit
<PAN>	AN	14	19	Card Number. Unique card identifier. Mandatory in request if <track2>	Conditional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				and <PublicToken> are not present.		
<Track2>	AN	1	40	The card's Track 2. Mandatory in request if <PAN> and <PublicToken> are not present, when the value of <AuthType> is '7' or when the value of <actMethod> is '4'. In virtual card creation <track2> is not present in the request.	Conditional	Omit
<PublicToken>	AN	1	9	The card's public token. Mandatory in request if <PAN> and <Track2> are not present. In virtual card creation <PublicToken> is not required in the request. Mandatory in the response.	Conditional	Mandatory
<DOB>	YYYY-MM-DD	10	10	The cardholder's date of birth.	Conditional	Omit
<CVV>	AN	3	3	Card Verification Value, the 3-digit code printed on the back of the card. Mandatory if the value of <ActMethod> is '2'.	Conditional	Omit
<AccCode>	AN	0	6	Access code or passcode for setting a code which is validated during activation (e.g. via the Thredd IVR system). If provided, must be 6 digits; leading zeroes are acceptable. Mandatory if the value of <AuthType> is '4'. Leave empty if not required. Mandatory if the value of <ActMethod> is '3'. If <ActMethod> is '3', the provided access code is used for activation only; the Thredd stored value will not be updated. Leave empty if not required.	Conditional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<ExpDate>	YYYY-MM-DD	10	10	Expiry date. You can use this field to update the internal card record expiry date if you want to specify a shorter expiry date than the card expiry date that was set when the card was issued. This will not change the expiry date that was set when the card was issued (which is shown on the printed card or card image). If not specified, then the expiry date that was set when the card was issued will be used. **Note**: You cannot specify an expiry date that is later than the card issue expiry date.	Optional	Omit
<LocDate>	YYYY-MM-DD	10	10	The local current date in *year-month-date* format.	Mandatory	Mandatory
<LocTime>	HHMMSS	6	6	The local current time, in *hour-minute-second* format.	Mandatory	Mandatory
<Reason>	AN	1	60	Reason for the card's status change. Overrides default of 'Card Activated' that is shown in the card processor. Text is shown in the Smart Client **Tracker** screen. On Thredd Portal, this information is captured in the Notes column in Transaction Search results.	Optional	Omit
<ItemSrc>	N	1	2	Source field to define alternate fees. Legacy field for information purposes only; see Item Source Types. Suggest using 0.	Mandatory	Omit
<SMSBalance>	N	1	1	Whether to send an SMS regarding the details of transaction amount and available balance to	Mandatory	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				the customer after each card use. 0 or False = Do not send; 1 or True = Send; 2 = Do not change current value.		
<IsLive>	N	1	1	Specifies whether the card is active or not. 1 or True = Active; 0 or False = Not Active.	Omit	Mandatory
<SysDate>	YYYY-MM-DD	10	10	The system processing date.	Omit	Mandatory
<ActionCode>	AN	3	3	The action code for the response. See Action Codes.	Omit	Mandatory
<WebServiceResult>	AN			Parameter group describing the result of the Web Service call. Only has values if the current request returns an action code of *868 Duplicate WSID*. See WebServiceResult.	Omit	Mandatory

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_Activate>
         <hyp:WSID>2021123456789</hyp:WSID>
         <hyp:IssCode>PMT</hyp:IssCode>
         <hyp:TxnCode>0</hyp:TxnCode>
         <hyp:ClientCode></hyp:ClientCode>
         <hyp:Title>Mr</hyp:Title>
         <hyp:LastName>Lastname</hyp:LastName>
         <hyp:FirstName>Firstname</hyp:FirstName>
         <hyp:Addrl1>Office 13, Telfords Yard </hyp:Addrl1>
         <hyp:Addrl2>6-8 The Highway, Wapping</hyp:Addrl2>
         <hyp:City>London</hyp:City>
         <hyp:PostCode>E1W 2BS</hyp:PostCode>
         <hyp:Country>826</hyp:Country>
         <hyp:ActMethod>6</hyp:ActMethod>
         <hyp:PAN></hyp:PAN>
         <hyp:Track2></hyp:Track2>
         <hyp:PublicToken>123456789</hyp:PublicToken>
         <hyp:DOB></hyp:DOB>
         <hyp:CVV></hyp:CVV>
         <hyp:AccCode></hyp:AccCode>
         <hyp:ExpDate></hyp:ExpDate>
         <hyp:LocDate>2021-01-01</hyp:LocDate>
         <hyp:LocTime>120000</hyp:LocTime>
```

```
         <hyp:Reason></hyp:Reason>
         <hyp:ItemSrc>2</hyp:ItemSrc>
         <hyp:SMSBalance>0</hyp:SMSBalance>
      </hyp:Ws_Activate>
   </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_ActivateResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_ActivateResult>
            <WSID>2021123456789</WSID>
            <IssCode>PMT</IssCode>
            <TxnCode>0</TxnCode>
            <PublicToken>123456789</PublicToken>
            <LocDate>2021-01-01</LocDate>
            <LocTime>120000</LocTime>
            <ClientCode/>
            <SysDate>2013-01-01</SysDate>
            <ActionCode>000</ActionCode>
            <IsLive>true</IsLive>
            <WebServiceResult/>
         </Ws_ActivateResult>
      </Ws_ActivateResponse>
   </soap:Body>
```

Card Phone Activation

API: Ws_Phone_Activation

This web service enables activation of a card by phone. It also returns the PIN and the PIN status of that card.

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<PAN>	AN	14	19	Card Number. Unique card identifier. Mandatory in request if <track2> and <PublicToken> are not present.	Conditional	Omit
<PublicToken>	AN	1	9	The card's public token. Mandatory in request if <PAN> and <Track2> are not present. In virtual card creation <PublicToken> is not required in the request. Mandatory in the response.	Conditional	Mandatory
<SecurityCode>	N	6	6	The card's 6 digit security code. Mandatory when <AuthType> is 4.	Mandatory	Omit
<ActivateIfNot>	N	1	1	If set to 1, then returns the PIN number of the card and activates the card if not already activated.	Mandatory	Omit
<AuthType>	AN	1	1	Parameter to specify how the card is authenticated. See Authentication Methods.	Mandatory	Omit
<ActionCode>	AN	3	3	The action code for the response. See Action Codes.	Omit	Mandatory
<IsLive>	N	1	1	Specifies whether the card is active or not. 1 or True = Active; 0 or False = Not Active.	Omit	Mandatory
<PinBlock>	AN	4	12	Current PIN number of the card, represented as a 4-12 digit PIN block.	Omit	Mandatory
<PINStatus>	N	1	1	Indicates whether the allowed number of card PIN tries has been exceeded. 0 = No; 1 = Yes.	Omit	Mandatory

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_Phone_Activation>
         <hyp:PAN></hyp:PAN>
         <hyp:PublicToken>123456789</hyp:PublicToken>
         <hyp:SecurityCode>0</hyp:SecurityCode>
         <hyp:ActivateIfNot>0</hyp:ActivateIfNot>
         <hyp:AuthType>1</hyp:AuthType>
      </hyp:Ws_Phone_Activation>
   </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_Phone_ActivationResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_Phone_ActivationResult>
            <PublicToken>123456789</PublicToken>
            <ActionCode>000</ActionCode>
            <IsLive>true</IsLive>
            <PinBlock>1234</PinBlock>
            <PINStatus>0</PINStatus>
         </Ws_Phone_ActivationResult>
      </Ws_Phone_ActivationResponse>
   </soap:Body>
</soap:Envelope>
```

Card Activate and Load

API: Ws_Activate_Load

This web service allows simultaneous load and activation of cards. This is a common requirement for cards sold from kiosks or from retail stores. For cards ordered over the internet, delayed activation provides added security by ensuring that any card stolen or lost in the post cannot be used.

Note: If the card already has a balance, then you cannot load again as part of activate load. In this case, use Ws_Activate and Ws_Load separately.

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every web service request sent. For details, see the FAQs.**Tip**: You could use a number based on the current date and time, as long as it is unique (e.g., *20201217145006*).	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<TxnCode>	AN	1	2	The Transaction Code. See Transaction Codes. Default value is 10.	Mandatory	Mandatory
<ClientCode>	AN	1	64	User ID of the customer using the service. Only applicable to systems using member logins. Returned in the response if present in the request. **Note**: Legacy field. Not used.	Optional	Conditional
<Title>	AN	1	4	The cardholder's title.	Optional	Omit
<LastName>	AN	1	30	The cardholder's last name. Mandatory if the value of <AuthType> is '6'.	Conditional	Omit
<FirstName>	AN	1	30	The cardholder's first name. Mandatory if <lastName> is present and the value of <AuthType>	Conditional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				is not ‘6’.		
<Addrl1>	AN	1	50	Address line 1. Mandatory if ‘Address’ fields are being specified.	Conditional	Omit
<Addrl2>	AN	1	50	Cardholder's address line 2. Also used as the card purchaser's address line 2 if no delivery address is supplied.	Optional	Omit
<City>	AN	1	50	Cardholder's home city. Also used as the card purchaser's city if no delivery address is supplied. Mandatory if <addrL1> is present, and <postcode> is not present.	Conditional	Omit
<PostCode>	AN	1	10	Cardholder's home postcode. Also used as the card purchaser's postcode if no postcode is supplied. Mandatory if <addrL1> is present, and <city> is not present. See Postcode Permitted Characters.	Conditional	Omit
<Country>	AN	1	3	Cardholder’s country of residence. This is represented as a 3 digit ISO country code (e.g. 826 for UK). Mandatory if <addrL1> is present.	Conditional	Omit
<ActMethod>	AN	1	1	Method used for card activation. See Activation Methods.	Mandatory	Omit
<AuthType>	AN	1	1	Parameter to specify how the card is authenticated. See Authentication Methods.	Mandatory	Omit
<PAN>	AN	14	19	Card Number. Unique card identifier. In virtual card creation PAN is not present in the request. Mandatory in the response if <PANorToken> is 1.	Conditional	Conditional

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<Track2>	AN	1	40	The card's Track 2. Mandatory in request if <PAN> and <PublicToken> are not present, when the value of <AuthType> is '7' or when the value of <actMethod> is '4'. In virtual card creation <track2> is not present in the request.	Conditional	Omit
<PublicToken>	AN	1	9	The card's public token. Mandatory in request if <PAN> and <Track2> are not present. In virtual card creation <PublicToken> is not required in the request. Mandatory in the response.	Conditional	Mandatory
<ExternalRef>	AN	1	30	External reference code for the card. **Note**: Legacy field. Not used.	Optional	Conditional
<DOB>	YYYY-MM-DD	10	10	The cardholder's date of birth. Mandatory if the value of <actMethod> is '1' or <AuthType> is '2' or '6'. Otherwise, may be supplied for informational purposes or as part of cardholder registration.	Conditional	Omit
<CVV>	AN	3	3	Card Verification Value, the 3-digit code printed on the back of the card. Mandatory if the value of <actMethod> is '2' or <AuthType> is '3'.	Conditional	Mandatory
<AccCode>	AN	0	6	Access code or passcode for setting a code which is validated during activation (e.g. via the Thredd IVR system). If provided, must be 6 digits; leading zeroes are acceptable. Mandatory if the value of <AuthType>	Conditional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				is ‘4’. Leave empty if not required. Mandatory if the value of <actMethod> is ‘3’ or <AuthType> is ‘4’. If <actMethod> is ‘3’, the access code is used for activation only and the stored value will not be updated. When used for authentication, the provided access code cannot be used to update the stored value.		
<LocDate>	YYYY-MM-DD	10	10	The local current date in *year-month-date* format.	Mandatory	Mandatory
<LocTime>	HHMMSS	6	6	The local current time, in *hour-minute-second* format.	Mandatory	Mandatory
<TerminalID>	AN	1	15	Point of Sale (POS) or other terminal identifier, such as a hostname.	Optional	Omit
<LoadValue>	D	1	20	Load value to put on the card. The amount can include up to four decimal places, depending on the currency exponent (e.g., 10.99 for EUR which has a currency exponent of 2). See Currency Codes.	Mandatory	Mandatory
<CurCode>	AN	3	3	3-letter ISO currency code for the currency to load (e.g. EUR). This must match the card’s currency or the action fails (**Note**: For a Multi-FX card, the card can be loaded in any of the card's currencies). If not provided, then the card uses its billing currency. See Currency Codes.	Optional	Omit
<Reason>	AN	1	60	Reason for the card's status change. Overrides	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				default of 'Card Activated' that is shown in the card processor. Text is shown in the Smart Client **Tracker** screen. On Thredd Portal, this information is captured in the Notes column in Transaction Search results.		
<ExpDate>	YYYY-MM_DD	10	10	Expiry date. You can use this field to update the internal card record expiry date if you want to specify a shorter expiry date than the card expiry date that was set when the card was issued. This will not change the expiry date that was set when the card was issued (which is shown on the printed card or card image). If not specified, then the expiry date that was set when the card was issued will be used. **Note**: You cannot specify an expiry date that is later than the card issue expiry date.	Conditional	Mandatory
<ItemSrc>	N	1	5	Source field to define alternate fees. Legacy field for information purposes only; see Item Source Types. Suggest using 0.	Mandatory	Omit
<LoadFundsType>	AN	1	3	Payment method for loading funds onto the card. See Load Fund Types.	Optional	Omit
<LoadSrc>	AN	1	3	The source of the load request for determining the fee of the load, if applicable. If omitted, defaults to 14 "Unknown". See Load Sources.	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<LoadFee>	D	1	20	Fixed fee amount charged to the card purchaser for handling the card purchase and load. The amount can include up to four decimal places, depending on the currency exponent (e.g., 10.99 for EUR which has a currency exponent of 2). See Currency Codes. If no load fee is required, specify 0. The load fee does not affect the card balance. It is only reported in the XML.	Mandatory	Omit
<LoadedBy>	AN	1	30	User who loaded the card.	Optional	Omit
<ActivateOrNot>	N	1	1	Whether to activate the card while loading. 1 = activate and load; 0 = load only.	Mandatory	Omit
<PANorToken>	N	1	1	Whether to return the PAN with the public token. 1 = return PAN and token. 0 = public token only.	Mandatory	Omit
<CustAccount>	AN	1	25	Cardholder account number or reference number. You can use this reference to find the cards linked to a cardholder. Also displayed in Smart Client and in Thredd Portal as *Customer Reference*.	Optional	Omit
<SMSBalance>	N	1	1	Whether to send an SMS regarding the details of transaction amount and available balance to the customer after each card use. 0 or False = Do not send; 1 or True = Send; 2 = Do not change current value.	Mandatory	Omit
<SysDate>	YYYY-MM-DD	10	10	The system processing date.	Omit	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<ItemID>	AN	1	20	The unique item ID returned for this load.	Omit	Mandatory
<IsLive>	N	1	1	Specifies whether the card is active or not. 1 or True = Active; 0 or False = Not Active.	Omit	Mandatory
<ActionCode>	AN	3	3	The action code for the response. See Action Codes.	Omit	Mandatory
<Description>	AN**	1	150	Description of the load. If supplied, appears in the <description> tag of a response to a card or account query. See Card Statement (V1).	Optional	Omit
<BrnCode>	AN	8	8	Branch code (or Agent code) with which the card is associated. If supplied, it is exported in the XML in **CardLoadUnload > Card > branchcode**.	Optional	Omit

** Some formatting may be done on this string, see String Cleaning and Approved Characters.

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_Activate_Load>
         <hyp:WSID>2021123456789</hyp:WSID>
         <hyp:IssCode>PMT</hyp:IssCode>
         <hyp:TxnCode>10</hyp:TxnCode>
         <hyp:ClientCode></hyp:ClientCode>
         <hyp:Title></hyp:Title>
         <hyp:LastName>Lastname</hyp:LastName>
         <hyp:FirstName>Firstname</hyp:FirstName>
         <hyp:Addrl1>Office 13, Telfords Yard</hyp:Addrl1>
         <hyp:Addrl2>6-8 The Highway, Wapping</hyp:Addrl2>
         <hyp:City>London</hyp:City>
         <hyp:PostCode>E1W 2BS</hyp:PostCode>
         <hyp:Country>826</hyp:Country>
         <hyp:ActMethod>6</hyp:ActMethod>
         <hyp:AuthType>1</hyp:AuthType>
         <hyp:PAN></hyp:PAN>
         <hyp:Track2></hyp:Track2>
         <hyp:PublicToken>123456789</hyp:PublicToken>
         <hyp:ExternalRef></hyp:ExternalRef>
```

```
            <hyp:DOB></hyp:DOB>
            <hyp:CVV></hyp:CVV>
            <hyp:AccCode></hyp:AccCode>
            <hyp:LocDate>2021-01-01</hyp:LocDate>
            <hyp:LocTime>120000</hyp:LocTime>
            <hyp:TerminalID></hyp:TerminalID>
            <hyp:LoadValue>10</hyp:LoadValue>
            <hyp:CurCode>GBP</hyp:CurCode>
            <hyp:Reason></hyp:Reason>
            <hyp:ExpDate></hyp:ExpDate>
            <hyp:ItemSrc>2</hyp:ItemSrc>
            <hyp:LoadFundsType>4</hyp:LoadFundsType>
            <hyp:LoadSrc>10</hyp:LoadSrc>
            <hyp:LoadFee>0.0</hyp:LoadFee>
            <hyp:LoadedBy></hyp:LoadedBy>
            <hyp:ActivateOrNot>1</hyp:ActivateOrNot>
            <hyp:PANorToken>1</hyp:PANorToken>
            <hyp:CustAccount></hyp:CustAccount>
            <hyp:SMSBalance>0</hyp:SMSBalance>
            <hyp:BrnCode>Branch 12</hyp:BrnCode >
         </hyp:Ws_Activate_Load>
      </soapenv:Body>
   </soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_Activate_LoadResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_Activate_LoadResult>
            <WSID>2021123456789</WSID>
            <IssCode>PMT</IssCode>
            <TxnCode>10</TxnCode>
            <PAN>1234567891234567</PAN>
            <PublicToken>123456789</PublicToken>
            <CVV>194</CVV>
            <ExternalRef/>
            <LocDate>2021-01-01</LocDate>
            <LocTime>120000</LocTime>
            <ItemID>0</ItemID>
            <ClientCode/>
            <SysDate>2021-01-01</SysDate>
            <ActionCode>000</ActionCode>
            <ExpDate>2015-03-31<ExpDate>
            <LoadValue>10</LoadValue>
            <IsLive>true</IsLive>
         </Ws_Activate_LoadResult>
      </Ws_Activate_LoadResponse>
   </soap:Body>
</soap:Envelope>
```

Card Load

API: Ws_Load

This web service loads or re-loads a card with a specified amount.

Note: The following card statuses prevent the ability to load a card with funds: 04 (Capture Card), 14 (Invalid), 33 (Expired Card), 36 (Restricted Card), 37 (Card acceptor call acquirer security), 41 (Lost), 43 (Stolen), 54 (Expired), 62 (Restricted), 67 (Card to be picked up at ATM), 83 (Destroyed) and G9 (IVR Lost/Stolen Block (like 41 Lost)).

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every web service request sent. For details, see the FAQs.**Tip**: You could use a number based on the current date and time, as long as it is unique (e.g., *20201217145006*).	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<TxnCode>	AN	1	2	The Transaction Code. See Transaction Codes. Default value is 1 for the initial load and 20 for any subsequent load.	Mandatory	Mandatory
<ClientCode>	AN	1	64	User ID of the customer using the service. Only applicable to systems using member logins. Returned in the response if present in the request. **Note**: Legacy field. Not used.	Optional	Conditional
<AuthType>	AN	1	1	Parameter to specify how the card is authenticated. See Authentication Methods.	Mandatory	Omit
<PAN>	AN	14	19	Card Number. Unique card identifier. Mandatory in request if <track2> and <PublicToken> are not present.	Conditional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<Track2>	AN	1	40	The card's Track 2. Mandatory in request if <PAN> and <PublicToken> are not present, when the value of <AuthType> is '7' or when the value of <actMethod> is '4'. In virtual card creation <track2> is not present in the request.	Conditional	Omit
<PublicToken>	AN	1	9	The card's public token. Mandatory in request if <PAN> and <Track2> are not present. In virtual card creation <PublicToken> is not required in the request. Mandatory in the response.	Conditional	Mandatory
<DOB>	YYYY-MM-DD	10	10	The cardholder's date of birth. Mandatory if the value of <AuthType> is '2' or '6'.	Conditional	Omit
<CVV>	AN	3	3	Card Verification Value, the 3-digit code printed on the back of the card.	Conditional	Omit
<AccCode>	AN	0	6	Access code or passcode. If provided, must be 6 digits, leading zeroes are acceptable. Leave empty if not required.	Conditional	Omit
<LastName>	AN	1	20	Cardholder's last name. If no delivery address is supplied, this is the card purchaser's last name. Mandatory if the value of <AuthType> is '6'.	Conditional	Omit
<LocDate>	YYYY-MM-DD	10	10	The local current date in *year-month-date* format.	Mandatory	Mandatory
<LocTime>	HHMMSS	6	6	The local current time, in *hour-minute-second* format.	Mandatory	Mandatory
<TerminalID>	AN	1	15	Point of Sale (POS) or other terminal identifier, such as a	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				hostname.		
<LoadValue>	D	1	20	Load value to put on the card. The amount can include up to four decimal places, depending on the currency exponent (e.g., 10.99 for EUR which has a currency exponent of 2). See Currency Codes.	Mandatory	Omit
<CurrCode>	AN	3	3	3-letter ISO currency code for the currency to load (e.g. EUR). Mandatory only when specifying a LoadValue that is not zero. This must match the card's currency or the action will fail (**Note**: For a Multi-FX card, the card can be loaded in any of the card's currencies).	Mandatory	Omit
<LoadFundsType>	AN	1	3	Payment method of funds for the load. See Load Fund Types.	Optional	Omit
<LoadSrc>	AN	1	3	The source of the load request for determining the fee of the load, if applicable. If omitted, defaults to 14 "Unknown". See Load Sources.	Optional	Omit
<LoadFee>	D	1	20	Fixed fee amount charged to the card purchaser for handling the card purchase and load. The amount can include up to four decimal places, depending on the currency exponent (e.g., 10.99 for EUR which has a currency exponent of 2). See Currency Codes. If no load fee is required, specify 0. The load fee does not affect the card balance. It is only	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				reported in the XML.		
<LoadedBy>	AN	1	30	User who loaded the card.	Optional	Omit
<Description>	AN**	1	150	Description of the load. If supplied, appears in the <description> tag of a response to a card or account query. See Card Statement (V1).	Optional	Omit
<BrnCode>	AN	8	8	Branch code (or Agent code) with which the card is associated. If supplied, it is exported in the XML in **CardLoadUnload > Card > branchcode**.	Optional	Omit
<Sms_Required>	AN	1	1	Whether an SMS is sent to the cardholder with the card's CVV. 1 = yes; 0 =No. The default is '0'. The SMS is configurable.	Optional	Omit
<Note>	AN	1	256	Add a note. The text is displayed in the Smart Client **notes** field for the transaction.	Optional	Optional
<SysDate>	YYYY-MM-DD	10	10	The system processing date.	Omit	Mandatory
<ItemId>	AN	1	20	The unique item ID returned for this load.	Omit	Mandatory
<ActionCode>	AN	3	3	The action code for the response. See Action Codes.	Omit	Mandatory
<WebServiceResult>	AN			Parameter group describing the result of the Web Service call. Only has values if the current request returns an action code of *868 Duplicate WSID*. See WebServiceResult.	Omit	Mandatory

** Some formatting may be done on this string, see String Cleaning and Approved Characters.

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_Load>
         <hyp:WSID>2021123456789</hyp:WSID>
         <hyp:IssCode>PMT</hyp:IssCode>
         <hyp:TxnCode>1</hyp:TxnCode>
         <hyp:ClientCode></hyp:ClientCode>
         <hyp:AuthType>1</hyp:AuthType>
         <hyp:PAN></hyp:PAN>
         <hyp:Track2></hyp:Track2>
         <hyp:PublicToken>123456789</hyp:PublicToken>
         <hyp:DOB></hyp:DOB>
         <hyp:CVV></hyp:CVV>
         <hyp:AccCode></hyp:AccCode>
         <hyp:LastName></hyp:LastName>
         <hyp:LocDate>2021-01-01</hyp:LocDate>
         <hyp:LocTime>120000</hyp:LocTime>
         <hyp:TerminalID></hyp:TerminalID>
         <hyp:LoadValue>10</hyp:LoadValue>
         <hyp:CurrCode>GBP</hyp:CurrCode>
         <hyp:LoadFundsType>4</hyp:LoadFundsType>
         <hyp:LoadSrc>10</hyp:LoadSrc>
         <hyp:LoadFee>0.0</hyp:LoadFee>
         <hyp:LoadedBy>Admin</hyp:LoadedBy>
         <hyp:Description>Test Load</hyp:Description>
         <hyp:Sms_Required>0</hyp:Sms_Required>
         <hyp:BrnCode>Branch 12</hyp:BrnCode>
         <hyp:Note>Test load</hyp:Sms_Required>
      </hyp:Ws_Load>
   </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_LoadResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_LoadResult>
            <WSID>2021123456789</WSID>
            <IssCode>PMT</IssCode>
            <TxnCode>1</TxnCode>
            <PublicToken>123456789</PublicToken>
            <LocDate>2021-01-01</LocDate>
            <LocTime>120000</LocTime>
            <ItemID>123</ItemID>
            <ClientCode/>
            <SysDate>2021-01-01</SysDate>
            <ActionCode>000</ActionCode>
            <WebServiceResult/>
         </Ws_LoadResult>
      </Ws_LoadResponse>
   </soap:Body>
</soap:Envelope>
```

Card Unload

API: Ws_UnLoad

This web service unloads a card. Note that any outstanding, unsettled authorisations on the card could result in the card going into a negative balance.

Note: This service is only applicable for EHI Modes 2 (Cooperative Processing) or 3 (Full Service Processing).

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every web service request sent. For details, see the FAQs.**Tip**: You could use a number based on the current date and time, as long as it is unique (e.g., *20201217145006*).	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<TxnCode>	AN	1	2	The Transaction Code. The default value is '8'. See Transaction Codes.	Mandatory	Mandatory
<ClientCode>	AN	1	64	User ID of the customer using the service. Only applicable to systems using member logins. Returned in the response if present in the request. **Note**: Legacy field. Not used.Mandatory if the value of <AuthType> is '5'.	Optional	Conditional
<AuthType>	AN	1	1	Parameter to specify how the card is authenticated. See Authentication Methods.	Mandatory	Omit
<PAN>	AN	14	19	Card Number. Unique card identifier. Mandatory in request if <track2> and <PublicToken> are not present.	Conditional	Omit
<Track2>	AN	1	40	The card's Track 2. Mandatory in request	Conditional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				if <PAN> and <PublicToken> are not present or when <AuthType> is ‘7’.		
<PublicToken>	AN	1	9	The card’s public token, Mandatory in request if <PAN> and <Track2> are not present. Mandatory in the response.	Conditional	Mandatory
<DOB>	YYYY-MM-DD	10	10	Date of Birth. Mandatory if value of <AuthType> is ‘2’ or ‘6’.	Conditional	Omit
<CVV>	AN	3	3	Card Verification Value, the 3-digit code printed on the back of the card. Mandatory if the value of <AuthType> is ‘3’.	Conditional	Omit
<AccCode>	AN	0	6	Access code or passcode. If provided, must be 6 digits, leading zeroes are acceptable. Leave empty if not required. Mandatory if the value of <AuthType> is ‘4’.	Conditional	Omit
<LastName>	AN	1	20	Cardholder's last name for authenticating the cardholder if the value of <AuthType> is ‘6’.	Conditional	Omit
<LocDate>	YYYY-MM-DD	10	10	The local current date in *year-month-date* format.	Mandatory	Mandatory
<LocTime>	HHMMSS	6	6	The local current time, in *hour-minute-second* format.	Mandatory	Mandatory
<TerminalID>	AN	1	15	Point of Sale (POS) or other terminal identifier, such as a hostname.	Optional	Omit
<LoadFundsType>	AN	1	3	Payment method for loading funds onto the card. See Load Fund Types.	Optional	Omit
<LoadSrc>	AN	1	3	The source of the load request for	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				determining the fee of the load, if applicable. If omitted, defaults to 14 “Unknown”. See Load Sources.		
<AmtUnLoad>	D	1	20	The requested amount to unload. The amount can include up to four decimal places, depending on the currency exponent (e.g., 10.99 for EUR which has a currency exponent of 2). See Currency Codes. If 0 will unload the whole amount remaining on the card. If the amount is specified, this amount is returned in the response. Otherwise, the actual amount unloaded (net of fees) is returned.	Mandatory	Mandatory
<CurCode>	AN	3	3	3-letter ISO currency code for the currency (e.g. EUR). If supplied, it will be validated against the cards billing currency.	Optional	Mandatory
<LoadedBy>	AN	1	30	User who loaded the card.	Optional	Omit
<Description>	AN**	1	150	Description of the load. If supplied, appears in the <description> tag of a response to a card or account query. See Card Statement (V1).	Optional	Omit
<Note>	AN	1	256	Add a note. The text is displayed in the Smart Client **notes** field for the transaction.	Optional	Optional
<AvlBal>	D	1	20	The current balance on the card account. This includes all financial transactions and outstanding authorisations. The balance amount can include up to four	Omit	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				decimal places, depending on the currency exponent (e.g., 10.99 for EUR which has a currency exponent of 2). See Currency Codes.		
<BlkAmt>	D	1	20	Amount of funds blocked on the card account as a result of all outstanding authorisations. The balance amount can include up to four decimal places, depending on the currency exponent (e.g., 10.99 for EUR which has a currency exponent of 2). See Currency Codes.	Omit	Mandatory
<ItemId>	AN	1	20	The unique item ID returned for this load.	Omit	Mandatory
<ActionCode>	AN	3	3	The action code for the response. See Action Codes.	Omit	Mandatory
<SysDate>	YYYY-MM-DD	10	10	The system processing date.	Omit	Mandatory
<WebServiceResult>	AN			Parameter group describing the result of the Web Service call. Only has values if the current request returns an action code of *868 Duplicate WSID*. See WebServiceResult.	Omit	Mandatory

** Some formatting may be done on this string, see String Cleaning and Approved Characters.

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_UnLoad>
         <hyp:WSID>2021123456789</hyp:WSID>
         <hyp:IssCode>PMT</hyp:IssCode>
         <hyp:TxnCode>8</hyp:TxnCode>
         <hyp:ClientCode></hyp:ClientCode>
         <hyp:AuthType>1</hyp:AuthType>
         <hyp:PAN></hyp:PAN>
         <hyp:Track2></hyp:Track2>
```

```
         <hyp:PublicToken>123456789</hyp:PublicToken>
         <hyp:DOB></hyp:DOB>
         <hyp:CVV></hyp:CVV>
         <hyp:AccCode></hyp:AccCode>
         <hyp:LastName></hyp:LastName>
         <hyp:LocDate>2021-01-01</hyp:LocDate>
         <hyp:LocTime>120000</hyp:LocTime>
         <hyp:TerminalID></hyp:TerminalID>
         <hyp:LoadFundsType>4</hyp:LoadFundsType>
         <hyp:LoadSrc>10</hyp:LoadSrc>
         <hyp:AmtUnLoad>10</hyp:AmtUnLoad>
         <hyp:LoadedBy> </hyp:LoadedBy>
         <hyp:Note>Test unload</hyp:Sms_Required>
      </hyp:Ws_UnLoad>
   </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_UnLoadResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_UnLoadResult>
            <WSID>2021123456789</WSID>
            <IssCode>PMT</IssCode>
            <TxnCode>8</TxnCode>
            <PublicToken>123456789</PublicToken>
            <LocDate>2021-01-01</LocDate>
            <LocTime>120000</LocTime>
            <AmtUnLoad>10</AmtUnLoad>
            <ClientCode/>
            <SysDate>2021-01-01</SysDate>
            <ActionCode>000</ActionCode>
            <AvlBal>3</AvlBal>
            <BlkAmt>1</BlkAmt>
            <ItemID>1234</ItemID>
            <CurCode>GBP</CurCode>
            <WebServiceResult/>
         </Ws_UnLoadResult>
      </Ws_UnLoadResponse>
   </soap:Body>
</soap:Envelope>
```

MVC Card Activation and Load

API: Ws_Activate_MVCLoad

This web service allows simultaneous load and activation of a Master Virtual Cards (MVC). It combines the functions of Ws_BalanceTransfer and Ws_Activate for clients that are using MVCs.

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every web service request sent. For details, see the FAQs.**Tip**: You could use a number based on the current date and time, as long as it is unique (e.g., *20201217145006*).	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<TxnCode>	AN	1	2	The Transaction Code. See Transaction Codes. Default value is 10.	Mandatory	Mandatory
<Title>	AN	1	4	Cardholder’s title. Also used as the card purchaser's title if no delivery address is supplied.	Optional	Omit
<LastName>	AN	1	30	Cardholder's last name. If no delivery address is supplied, this is the card purchaser’s last name.	Optional	Omit
<FirstName>	AN	1	30	Member’s first name Mandatory if <LastName> is present and the value of <ActMethod> is not ‘6’.	Conditional	Omit
<Addrl1>	AN	1	50	Address Line 1 Mandatory if ‘Address’ fields are being specified	Conditional	Omit
<Addrl2>	AN	1	50	Address line 2	Optional	Omit
<City>	AN	1	50	Cardholder's home city. Also used as the	Conditional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				card purchaser's city if no delivery address is supplied. Mandatory if <addrL1> is present, and <postcode> is not present.		
<Postcode>	AN	1	10	Cardholder's home postcode. Also used as the card purchaser's postcode if no postcode is supplied. Mandatory if <addrL1> is present, and <city> is not present. See Postcode Permitted Characters.	Conditional	Omit
<Country>	AN	1	3	Cardholder's country of residence. This is represented as a 3 digit ISO country code (e.g. 826 for UK). Mandatory if <addrL1> is present.	Conditional	Omit
<ActMethod>	AN	1	1	Method used for card activation. See Activation Methods.	Mandatory	Omit
<AuthType>	AN	1	1	Parameter to specify how the card is authenticated. See Authentication Methods.	Mandatory	Omit
<PAN>	AN	14	19	Card Number. Unique card identifier. Mandatory in request if <track2> and <PublicToken> are not present.	Conditional	Omit
<PublicToken>	AN	1	9	The card's public token, Mandatory in request if <PAN> is not present. Mandatory in the response.	Conditional	Mandatory
<DOB>	YYYY-MM-DD	10	10	The cardholder's date of birth. Mandatory if the value of <AuthType> is '2' or '6'.	Conditional	Omit
<CVV>	AN	3	3	Card Verification Value, the 3-digit code printed on the	Conditional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				back of the card. Mandatory if the value of <AuthType> is '3'.		
<AccCode>	AN	0	6	Access code or passcode for setting a code which is validated during activation (e.g. via the Thredd IVR system). If provided, must be 6 digits; leading zeroes are acceptable. Mandatory if the value of <AuthType> is '4'. Leave empty if not required.	Conditional	Omit
<LocDate>	YYYY-MM-DD	10	10	The local current date in *year-month-date* format.	Mandatory	Mandatory
<LocTime>	HHMMSS	6	6	The local current time, in *hour-minute-second* format.	Mandatory	Mandatory
<MVCPAN>	AN	16	19	MVC card unique identifier. Mandatory if <MVCToken> is not present in the request.	Conditional	Omit
<MVCToken>	AN	16	19	The MVC card's public token.	Conditional	Mandatory
<AmtTxn>	D	1	20	The requested amount to transfer. If not specified, the full card balance is transferred.The actual amount transferred is returned in the response. The amount can include up to four decimal places, depending on the currency exponent (e.g., 10.99 for EUR which has a currency exponent of 2). See Currency Codes.	Mandatory	Mandatory
<CurCode>	AN	3	3	3-letter ISO currency code for the currency to load (e.g. EUR).	Conditional	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				This must match the card's currency or the action fails (**Note**: For a Multi-FX card, the card can be loaded in any of the card's currencies). If not provided, then the card uses its billing currency. See Currency Codes.		
<LoadSrc>	AN	1	3	The source of the load request is used to determine the fee for the load, if applicable. For transfers between Primary and Secondary cards, the value must be 68. If omitted, defaults to *14 - Unknown* for normal transfers, but 68 for Primary-Secondary card transfers.See Load Sources.	Optional	Omit
<LoadedBy>	AN	1	30	User who loaded the card.	Optional	Omit
<Description>	AN**	1	150	Description of the load. If supplied, appears in the <description> tag of a response to a card or account query. See Card Statement (V1).	Optional	Omit
<FeeWaiver>	N	1	1	Indicates whether to waive any web service fee set up on the system: 0 = No, 1 = Yes, 2 = Waive the fee on the "from" card only, 3= Waive the fee on the "to" card only. Default is 0.	Optional	Omit
<BrnCode>	AN	8	8	Branch code (or Agent code) with which the card is associated. If supplied, it is exported in the XML in **CardLoadUnload > Card > branchcode**.	Optional	Omit
<ActivateOrNot>	N	1	1	Whether to activate the card while loading. 1 = activate and load; 0 = load	Mandatory	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				only.		
<ExpDate>	YYYY-MM-DD	10	10	Card expiry date. If left blank, updates with the default expiry date, based on the Card Scheme's validity period in months, otherwise updates with the input value. The date returned of the actual physical expiry is in *MM/YY*.	Optional	Omit
<ItemSrc>	N	1	2	Source field to define alternate fees. Legacy field for information purposes only; see Item Source Types. Suggest using 0.	Mandatory	Omit
<SmsBalance>	N	1	1	Whether to send an SMS regarding the details of transaction amount and available balance to the customer after each card use. 0 or False = Do not send; 1 or True = Send; 2 = Do not change current value.	Optional	Omit
<IsLive>	N	1	1	Specifies whether the card is active or not. 1 or True = Active; 0 or False = Not Active.	Omit	Mandatory
<AvlBal>	D	1	20	The current balance on the card account. This includes all financial transactions and outstanding authorisations. The balance amount can include up to four decimal places, depending on the currency exponent (e.g., 10.99 for EUR which has a currency exponent of 2). See Currency Codes.	Omit	Mandatory
<BlkAmt>	D	1	20	Amount of funds blocked on the card account as a result of all outstanding authorisations. The balance amount can	Omit	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				include up to four decimal places, depending on the currency exponent (e.g., 10.99 for EUR which has a currency exponent of 2). See Currency Codes.		
<ItemId>	AN	1	20	The unique item ID for this Card Transfer. The ID returned is the ID relating to the 'unload' leg of the transfer, that is, the unload from the MVC.	Omit	Mandatory
<SysDate>	YYYY-MM-DD	10	10	The system processing date.	Omit	Mandatory
<ActionCode>	AN	3	3	The action code for the response. See MVC Action Codes.	Omit	Mandatory

** Some formatting may be done on this string, see String Cleaning and Approved Characters.

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_Activate_MVCLoad>
         <hyp:WSID>2021123456789</hyp:WSID>
         <hyp:IssCode>PMT</hyp:IssCode>
         <hyp:TxnCode>10</hyp:TxnCode>
         <hyp:Title></hyp:Title>
         <hyp:LastName></hyp:LastName>
         <hyp:FirstName></hyp:FirstName>
         <hyp:Addrl1></hyp:Addrl1>
         <hyp:Addrl2></hyp:Addrl2>
         <hyp:City></hyp:City>
         <hyp:PostCode></hyp:PostCode>
         <hyp:Country></hyp:Country>
         <hyp:ActMethod>6</hyp:ActMethod>
         <hyp:AuthType>1</hyp:AuthType>
         <hyp:PAN></hyp:PAN>
         <hyp:PublicToken>670240217</hyp:PublicToken>
         <hyp:DOB></hyp:DOB>
         <hyp:CVV></hyp:CVV>
         <hyp:AccCode></hyp:AccCode>
         <hyp:LocDate>2021-08-12</hyp:LocDate>
         <hyp:LocTime>181818</hyp:LocTime>
         <hyp:MVCPAN></hyp:MVCPAN>
         <hyp:MVCToken>669773806</hyp:MVCToken>
         <hyp:AmtTxn>10</hyp:AmtTxn>
         <hyp:CurCode>USD</hyp:CurCode>
         <hyp:LoadSrc>7</hyp:LoadSrc>
```

```
         <hyp:LoadedBy>Mathews</hyp:LoadedBy>
         <hyp:Description>Activation and MVC Load</hyp:Description>
         <hyp:FeeWaiver></hyp:FeeWaiver>
         <hyp:BrnCode></hyp:BrnCode>
         <hyp:ActivateOrNot>1</hyp:ActivateOrNot>
         <hyp:ExpDate></hyp:ExpDate>
         <hyp:ItemSrc>0</hyp:ItemSrc>
         <hyp:SMSBalance></hyp:SMSBalance>
      </hyp:Ws_Activate_MVCLoad>
   </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_Activate_MVCLoadResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_Activate_MVCLoadResult>
            <WSID>72905335903392563 20</WSID>
            <IssCode>PMT</IssCode>
            <TxnCode>10</TxnCode>
            <PublicToken>670240217</PublicToken>
            <MVCToken>669773806</MVCToken>
            <LocDate>2021-08-12</LocDate>
            <LocTime>120000</LocTime>
            <AmtTxn>10</AmtTxn>
            <CurCode>USD</CurCode>
            <IsLive>true</IsLive>
            <AvlBal>10</AvlBal>
            <BlkAmt>0</BlkAmt>
            <ItemID>123456</ItemID>
            <SysDate>2021-08-12</SysDate>
            <ActionCode>124</ActionCode>
         </Ws_Activate_MVCLoadResult>
      </Ws_Activate_MVCLoadResponse>
   </soap:Body>
</soap:Envelope>
```

MVC Load

API: Ws_MVCLoad

This web service loads funds from Master Virtual Cards (MVC) only. This is similar to a balance transfer, however, the only difference is that the source is always an MVC token.

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<MVCToken>	N	1	9	The MVC card's public token.	Mandatory	Mandatory
<NewToken>	N	1	9	The public token to where funds should be transferred to.	Mandatory	Mandatory
<AmtTxn>	D	1	20	The requested amount to transfer. If not specified, the full card balance is transferred.The actual amount transferred is returned in the response. The amount can include up to four decimal places, depending on the currency exponent (e.g., 10.99 for EUR which has a currency exponent of 2). See Currency Codes.	Conditional	Mandatory
<CurCode>	AN	3	3	3-letter ISO currency code for the currency to load (e.g. EUR). This must match the card's currency or the action fails (**Note**: For a Multi-FX card, the card can be loaded in any of the card's currencies). If not provided, then the card uses its billing currency. See Currency Codes. Must be supplied in the request if an <AmtTxn> is specified.	Conditional	Mandatory
<LoadedBy>	AN	1	30	User who loaded the card.	Optional	Omit
<SysDate>	YYYY-MM-DD	10	10	The system processing date.	Omit	Mandatory
<AvlBal>	D	1	20	The current balance on the card account. This	Omit	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				includes all financial transactions and outstanding authorisations. The balance amount can include up to four decimal places, depending on the currency exponent (e.g., 10.99 for EUR which has a currency exponent of 2). See Currency Codes.		
<BlkAmt>	D	1	20	Amount of funds blocked on the card account as a result of all outstanding authorisations. The balance amount can include up to four decimal places, depending on the currency exponent (e.g., 10.99 for EUR which has a currency exponent of 2). See Currency Codes.	Omit	Mandatory
<ItemID>	AN	1	20	The unique item ID for this Card Transfer. The ID returned is the ID relating to the 'unload' leg of the transfer, that is, the unload from the MVC..	Omit	Mandatory
<ActionCode>	AN	3	3	The action code for the response. See MVC Action Codes.	Omit	Mandatory
<Description>	AN**	1	150	Description of the load. If supplied, appears in the <description> tag of a response to a card or account query. See Card Statement (V1).	Optional	Omit

** Some formatting may be done on this string, see String Cleaning and Approved Characters.

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_MVCLoad>
         <hyp:IssCode>PMT</hyp:IssCode>
         <hyp:MVCToken>102530687</hyp:MVCToken>
         <hyp:NewToken>102531699</hyp:NewToken>
```

```
         <hyp:AmtTxn>10</hyp:AmtTxn>
         <hyp:CurCode>GBP</hyp:CurCode>
         <hyp:LoadedBy><span class="General.BrandName mc-variable">Thredd</span> USER</hyp:LoadedBy>
      </hyp:Ws_MVCLoad>
   </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_MVCLoadResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_MVCLoadResult>
            <IssCode>PMT</IssCode>
            <MVCToken>102530687</MVCToken>
            <NewToken>102531699</NewToken>
            <SysDate>2021-02-27</SysDate>
            <ActionCode>000</ActionCode>
            <AvlBal>58</AvlBal>
            <BlkAmt>0</BlkAmt>
            <AmtTxn>10</AmtTxn>
            <CurCode>GBP</CurCode>
            <ItemID>2291733350</ItemID>
         </Ws_MVCLoadResult>
      </Ws_MVCLoadResponse>
   </soap:Body>
</soap:Envelope>
```

MVC Unload

API: Ws_MVCUnload

This web service allows customers to unload back to a Master Virtual Cards (MVC) only.

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<MVCToken>	N	1	9	The MVC card's public token.	Mandatory	Mandatory
<NewToken>	N	1	9	The public token to where funds should be transferred to.	Mandatory	Mandatory
<AmtTxn>	D	1	20	The requested amount to transfer. If not specified, the full card balance is transferred.The actual amount transferred is returned in the response. The amount can include up to four decimal places, depending on the currency exponent (e.g., 10.99 for EUR which has a currency exponent of 2). See Currency Codes.	Com	Mandatory
<CurCode>	AN	3	3	3-letter ISO currency code for the currency to load (e.g. EUR). This must match the card's currency or the action fails (**Note**: For a Multi-FX card, the card can be loaded in any of the card's currencies). If not provided, then the card uses its billing currency. See Currency Codes. Must be supplied in the request if an <AmtTxn> is specified.	Conditional	Mandatory
<LoadedBy>	AN	1	30	User who loaded the card.	Optional	Omit
<LoadSrc>	AN	1	3	The source of the load request for determining the fee of the load, if applicable. If omitted, defaults to 14 "Unknown". See Load Sources.The source of	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				the transfer request. If omitted, defaults to 14 “Unknown”.		
<Description>	AN**	1	150	Description of the load. If supplied, appears in the <description> tag of a response to a card or account query. See Card Statement (V1).	Optional	Omit
<SysDate>	YYYY-MM-DD	10	10	The system processing date.	Omit	Mandatory
<AvlBal>	D	1	20	The current balance on the card account. This includes all financial transactions and outstanding authorisations. The balance amount can include up to four decimal places, depending on the currency exponent (e.g., 10.99 for EUR which has a currency exponent of 2). See Currency Codes.	Omit	Mandatory
<BlkAmt>	D	1	20	Amount of funds blocked on the card account as a result of all outstanding authorisations. The balance amount can include up to four decimal places, depending on the currency exponent (e.g., 10.99 for EUR which has a currency exponent of 2). See Currency Codes.	Omit	Mandatory
<ItemID>	AN	1	20	The unique item ID for this Card Transfer. The ID returned is the ID relating to the ‘unload’ leg of the transfer, that is, the unload from the MVC..	Omit	Mandatory
<ActionCode>	AN	3	3	The action code for the response. See MVC Action Codes.	Omit	Mandatory

** Some formatting may be done on this string, see String Cleaning and Approved Characters.

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_MVCUnload>
         <hyp:IssCode>PMT</hyp:IssCode>
         <hyp:MVCToken>102530687</hyp:MVCToken>
         <hyp:NewToken>102531699</hyp:NewToken>
         <hyp:AmtTxn>10</hyp:AmtTxn>
         <hyp:CurCode>GBP</hyp:CurCode>
         <hyp:LoadedBy><span class="General.BrandName mc-variable">Thredd</span> USER</hyp:LoadedBy>
         <hyp:LoadSrc></hyp:LoadSrc>
      </hyp:Ws_MVCUnload>
   </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_MVCUnloadResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_MVCUnloadResult>
            <IssCode>PMT</IssCode>
            <MVCToken>102530687</MVCToken>
            <NewToken>102531699</NewToken>
            <SysDate>2021-02-27</SysDate>
            <ActionCode>000</ActionCode>
            <AvlBal>68</AvlBal>
            <BlkAmt>0</BlkAmt>
            <AmtTxn>10</AmtTxn>
            <CurCode>GBP</CurCode>
            <ItemID>2291733913</ItemID>
         </Ws_MVCUnloadResult>
      </Ws_MVCUnloadResponse>
   </soap:Body>
</soap:Envelope>
```

Card Change Status

API: Ws_StatusChange

This web service enables you to change the status of a card, for example to: *Do not honor*, *lost*, *stolen* and *Card destroyed*. For details see Status Codes.

Note: Changes made to the card's status will also update the status of any linked digital payment tokens if the option *dpan_over_fpan = "N"* is set for your cards. For details, see the Tokenisation Service Guide.

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every request. For details, see the FAQs.	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<TxnCode>	AN	1	2	The Transaction Code. See Transaction Codes. Default value 2.	Mandatory	Mandatory
<ClientCode>	AN	1	64	User ID of the customer using the service. Only applicable to systems using member logins. Returned in the response if present in the request. **Note**: Legacy field. Not used.	Optional	Conditional
<AuthType>	AN	1	1	Parameter to specify how the card is authenticated. See Authentication Methods.	Mandatory	Omit
<PAN>	AN	14	19	Card Number. Unique card identifier.	Conditional	Omit
<Track2>	AN	1	40	The card's Track 2. Mandatory in request if <PAN> and <PublicToken> are not present or when <AuthType> is '7'.	Conditional	Omit
<PublicToken>	AN	1	9	The card's public token, Mandatory in request if <PAN> and <Track2> are not present. Mandatory	Conditional	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				in the response.		
<DOB>	YYYY-MM-DD	10	10	Date of Birth. Mandatory if value of <AuthType> is ‘2’ or ‘6’.	Conditional	Omit
<CVV>	AN	3	3	Card Verification Value, the 3-digit code printed on the back of the card. Mandatory if the value of <AuthType> is ‘3’.	Conditional	Omit
<AccCode>	AN	0	6	Access code or passcode. If provided, must be 6 digits, leading zeroes are acceptable. Leave empty if not required. Mandatory if the value of <AuthType> is ‘4’.	Conditional	Omit
<LastName>	AN	1	20	Cardholder's last name for authenticating the cardholder if the value of <AuthType> is ‘6’.	Conditional	Omit
<LocDate>	YYYY-MM-DD	10	10	The local current date in *year-month-date* format.	Mandatory	Mandatory
<LocTime>	HHMMSS	6	6	The local current time, in *hour-minute-second* format.	Mandatory	Mandatory
<NewStatCode>	AN	2	2	New status code to change the card to. See Status Codes. **Note**: You cannot set an MFX card’s status to 98 or 99.	Mandatory	Omit
<Reason>	AN**	1	60	Reason for the status change.	Optional	Omit
<ItemSrc>	N	1	5	Source field which defines the item source type. See Item Source Types. If used, overrides any existing fees for using this web service.	Mandatory	Omit
<TerminalID>	AN**	1	15	Point of Sale (POS)	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				or other terminal identifier, such as a hostname.		
<SysDate>	YYYY-MM-DD	10	10	The system processing date.	Omit	Mandatory
<ActionCode>	AN	3	3	The action code for the response. See Action Codes.	Omit	Mandatory
<Sms_Required>	AN	1	1	Whether an SMS is sent to the cardholder with the card's CVV. 1 = yes; 0 =No. The default is '0'. The SMS is configurable.	Optional	Omit
<WebServiceResult>	AN			Parameter group describing the result of the Web Service call. Only has values if the current request returns an action code of *868 Duplicate WSID*. See WebServiceResult.	Omit	Mandatory

** Some formatting may be done on this string, see String Cleaning and Approved Characters.

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_StatusChange>
         <hyp:WSID>2021123456789</hyp:WSID>
         <hyp:IssCode>PMT</hyp:IssCode>
         <hyp:TxnCode>2</hyp:TxnCode>
         <hyp:ClientCode></hyp:ClientCode>
         <hyp:AuthType>1</hyp:AuthType>
         <hyp:PAN></hyp:PAN>
         <hyp:Track2></hyp:Track2>
         <hyp:PublicToken>123456789</hyp:PublicToken>
         <hyp:DOB></hyp:DOB>
         <hyp:CVV></hyp:CVV>
         <hyp:AccCode></hyp:AccCode>
         <hyp:LastName></hyp:LastName>
         <hyp:LocDate>2021-01-01</hyp:LocDate>
         <hyp:LocTime>120000</hyp:LocTime>
         <hyp:NewStatCode>00</hyp:NewStatCode>
         <hyp:Reason></hyp:Reason>
         <hyp:ItemSrc>2</hyp:ItemSrc>
         <hyp:TerminalID></hyp:TerminalID>
      </hyp:Ws_StatusChange>
   </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_StatusChangeResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_StatusChangeResult>
            <WSID>2021123456789</WSID>
            <IssCode>PMT</IssCode>
            <TxnCode>2</TxnCode>
            <PublicToken>123456789</PublicToken>
            <WebServiceResult/>
        </Ws_StatusChangeResult>
      </Ws_StatusChangeResponse>
  </soap:Body>
</soap:Envelope>
```

Card Unload and Change Status

API: Ws_UnLoad_StatusChange

This web service simultaneously unloads the card and changes the card status (for example to *expired*).

Note: if the option *dpan_over_fpan = "N"* is set for your cards, changing the card's status also updates the status of any linked digital payment tokens. For details, see the Tokenisation Service Guide.

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every web service request sent. For details, see the FAQs.**Tip**: You could use a number based on the current date and time, as long as it is unique (e.g., *20201217145006*).	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<TxnCode>	AN	1	2	The Transaction Code. See Transaction Codes. Default value is11.	Mandatory	Mandatory
<ClientCode>	AN	1	64	User ID of the customer using the service. Only applicable to systems using member logins. Returned in the response if present in the request. **Note**: Legacy field. Not used.Mandatory if the value of <AuthType> is '5'.	Conditional	Conditional
<AuthType>	AN	1	1	Parameter to specify how the card is authenticated. See Authentication Methods.	Mandatory	Omit
<PAN>	AN	14	19	Card Number. Unique card identifier. Mandatory in request if <track2> and <PublicToken> are not present.	Conditional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<Track2>	AN	1	40	The card's Track 2. Mandatory in request if <PAN> and <PublicToken> are not present or when <AuthType> is '7'.	Conditional	Omit
<PublicToken>	AN	1	9	The card's public token, Mandatory in request if <PAN> and <Track2> are not present. Mandatory in the response.	Conditional	Mandatory
<DOB>	YYYY-MM-DD	10	10	Date of Birth. Mandatory if value of <AuthType> is '2' or '6'.	Conditional	Omit
<CVV>	AN	3	3	Card Verification Value, the 3-digit code printed on the back of the card. Mandatory if the value of <AuthType> is '3'.	Conditional	Omit
<AccCode>	AN	0	6	Access code or passcode. If provided, must be 6 digits, leading zeroes are acceptable. Leave empty if not required. Mandatory if the value of <AuthType> is '4'.	Conditional	Omit
<LastName>	AN	1	20	Cardholder's last name for authenticating the cardholder if the value of <AuthType> is '6'.	Conditional	Omit
<LocDate>	YYYY-MM-DD	10	10	The local current date in *year-month-date* format.	Mandatory	Mandatory
<LocTime>	HHMMSS	6	6	The local current time, in *hour-minute-second* format.	Mandatory	Mandatory
<TerminalID>	AN	1	15	Point of Sale (POS) or other terminal identifier, such as a hostname.	Optional	Omit
<LoadFundsType>	AN	1	3	Payment method for loading funds onto the card. See Load Fund Types.	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<LoadSrc>	AN	1	3	The source of the load request for determining the fee of the load, if applicable. If omitted, defaults to 14 “Unknown”. See Load Sources.	Optional	Omit
<AmtUnLoad>	D	1	20	The requested amount to unload. The amount can include up to four decimal places, depending on the currency exponent (e.g., 10.99 for EUR which has a currency exponent of 2). See Currency Codes. If 0 will unload the whole amount remaining on the card. If the amount is specified, this amount is returned in the response. Otherwise, the actual amount unloaded (net of fees) is returned.	Mandatory	Mandatory
<CurCode>	AN	3	3	3-letter ISO currency code for the currency (e.g. EUR). If supplied, it will be validated against the cards billing currency.	Conditional	Mandatory
<AvlBal>	D	1	20	The current balance on the card account. This includes all financial transactions and outstanding authorisations. The balance amount can include up to four decimal places, depending on the currency exponent (e.g., 10.99 for EUR which has a currency exponent of 2). See Currency Codes.	Omit	Mandatory
<BlkAmt>	D	1	20	Amount of funds blocked on the card account as a result of all outstanding authorisations. The balance amount can include up to four decimal places,	Omit	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				depending on the currency exponent (e.g., 10.99 for EUR which has a currency exponent of 2). See Currency Codes.		
<StatCode>	AN	2	2	The card status to set the card to (e.g. Lost, Stolen and Destroyed). See Status Code. **Note**: You can't set an MFX card's status to 98 or 99.	Mandatory	Omit
<Reason>	AN	1	60	Reason for the status change.	Optional	Omit
<Note>	AN	1	256	Add a note. The text is displayed in the Smart Client **notes** field for the transaction.	Optional	Optional
<SysDate>	YYYY-MM-DD	10	10	The system processing date.	Omit	Mandatory
<ItemID>	AN	1	20	The unique item ID returned for this load.	Omit	Mandatory
<ItemSrc>	N	1	5	Source field to define alternate fees. It is used in conjunction with existing fee server Item. See Item Source Types.	Mandatory	Omit
<LoadedBy>	AN	1	30	User who unload amount from the card.	Optional	Omit
<ActionCode>	AN	3	3	The action code for the response. See Action Codes.	Omit	Mandatory
<WebServiceResult>	AN			Parameter group describing the result of the Web Service call. Only has values if the current request returns an action code of *868 Duplicate WSID*. See WebServiceResult.	Omit	Mandatory

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
```

```
<soapenv:Header>
   <hyp:AuthSoapHeader>
      <hyp:strUserName>******</hyp:strUserName>
      <hyp:strPassword>******</hyp:strPassword>
   </hyp:AuthSoapHeader>
</soapenv:Header>
<soapenv:Body>
   <hyp:Ws_UnLoad_StatusChange>
      <hyp:WSID>2021123456789</hyp:WSID>
      <hyp:IssCode>PMT</hyp:IssCode>
      <hyp:TxnCode>11</hyp:TxnCode>
      <hyp:ClientCode></hyp:ClientCode>
      <hyp:AuthType>1</hyp:AuthType>
      <hyp:PAN></hyp:PAN>
      <hyp:Track2></hyp:Track2>
      <hyp:PublicToken>123456789</hyp:PublicToken>
      <hyp:DOB></hyp:DOB>
      <hyp:CVV></hyp:CVV>
      <hyp:AccCode></hyp:AccCode>
      <hyp:LastName></hyp:LastName>
      <hyp:LocDate>2021-01-01</hyp:LocDate>
      <hyp:LocTime>120000</hyp:LocTime>
      <hyp:TerminalID></hyp:TerminalID>
      <hyp:LoadFundsType>4</hyp:LoadFundsType>
      <hyp:LoadSrc>10</hyp:LoadSrc>
      <hyp:AmtUnLoad>5</hyp:AmtUnLoad>
      <hyp:CurCode>GBP</hyp:CurCode>
      <hyp:StatCode>56</hyp:StatCode>
      <hyp:Reason>Unload and Status Change</hyp:Reason>
      <hyp:ItemSrc>2</hyp:ItemSrc>
      <hyp:LoadedBy>Admin</hyp:LoadedBy>
      <hyp:Note>Test unload and status change</hyp:Sms_Required>
   </hyp:Ws_UnLoad_StatusChange>
</soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_UnLoad_StatusChangeResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_UnLoad_StatusChangeResult>
            <WSID>2021123456789</WSID>
            <IssCode>PMT</IssCode>
            <TxnCode>11</TxnCode>
            <PublicToken>123456789</PublicToken>
            <LocDate>2021-01-01</LocDate>
            <LocTime>120000</LocTime>
            <AmtUnLoad>5</AmtUnLoad>
            <ClientCode/>
            <SysDate>2021-01-01</SysDate>
            <ActionCode>000</ActionCode>
            <AvlBal>17</AvlBal>
            <BlkAmt>1</BlkAmt>
            <ItemID>1234</ItemID>
            <CurCode>GBP</CurCode>
            <WebServiceResult/>
         </Ws_UnLoad_StatusChangeResult>
      </Ws_UnLoad_StatusChangeResponse>
   </soap:Body>
</soap:Envelope>
```

Card PIN Control

API: WS_PinControl

This web service enables you to set, retrieve, unblock and change the PIN associated with the card.

It also allows you to unblock the CVC2 of a card or mobile device token.

PIN field usage

The table below displays the conditions under which each of the PIN fields must be present in the request and response for each <function>. Y = the field must be present. Blank = the field must be left empty.

	currentPIN		newPIN		confirmPIN	
Function	Request	Response	Request	Response	Request	Response
00 - Set PIN	N	N	Y	N	Y	N
01 - Get PIN	N	Y	N	N	N	N
02 - Change PIN	Y	Y	Y	Y	Y	N
03 - Generate and Get PIN	N	Y	N	N	N	N
04 - Unblock PIN	N	Y	N	N	N	N
05 - Send PIN Mailer	N	Y	N	N	N	N
06 - Forward PIN request to external API	N	N	N	N	N	N
07 - Unblock CVC2	N	N	N	N	N	N
08 - Unblock PIN and CVC2	N	N	N	N	N	N

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every web service request sent. For details, see the FAQs.**Tip**: You could use a number based on the current date and time, as long as it is unique (e.g., *20201217145006*).	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<AuthType>	AN	1	1	Parameter to specify how the card is authenticated. See Authentication	Mandatory	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				Methods.		
<DOB>	YYYY-MM-DD	10	10	Date of Birth. Mandatory if value of <AuthType> is ‘2’ or ‘6’.	Conditional	Omit
<CVV>	AN	3	3	Card Verification Value, the 3-digit code printed on the back of the card. Mandatory if the value of <AuthType> is ‘3’.	Conditional	Omit
<AccCode>	AN	0	6	Access code or passcode. If provided, must be 6 digits, leading zeroes are acceptable. Leave empty if not required. Mandatory if the value of <AuthType> is ‘4’.	Conditional	Omit
<lastName>	AN	1	20	Cardholder's last name for authenticating the cardholder if the value of <AuthType> is ‘6’.	Optional	Omit
<locDate>	YYYY-MM-DD	10	10	The local current date in *year-month-date* format.	Mandatory	Mandatory
<locTime>	HHMMSS	6	6	The local current time, in *hour-minute-second* format.	Mandatory	Mandatory
<PAN>	AN	14	19	Card Number. Required in request if <AuthType> is ‘1’, ‘2’, ‘3’,‘4’ or ‘6’ and <PublicToken> not present.	Conditional	Omit
<PublicToken>	AN	1	9	The card’s public token. Mandatory in request if <PAN> is not present. Mandatory in the response.	Conditional	Mandatory
<ClientCode>	AN	1	64	User ID of the customer using the service. Only applicable to systems using	Conditional	Conditional

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				member logins. Returned in the response if present in the request. **Note**: Legacy field. Not used.		
<Func>	AN	1	2	PIN function requested: 00 = Set PIN 01 = Get PIN 02 = Change PIN 03 = Generate and Get PIN 04 =Unblock PIN 05 = Send PIN mailer 06= Forward PIN request to external API. See Forwarding a PIN request to an External API. 07 = Unblock CVC2 08 = Unblock PIN and CVC2	Mandatory	Omit
<CurrentPin>	AN	4	12	Current PIN. Represented as a 4-12 digit PIN block. Usage depends on the value of <func>.This field is mandatory in the request for function 02. For all other functions, this field is ignored. In the response, this field is mandatory for function 01 and 03. For all other functions, this field is omitted.	Conditional	Conditional
<NewPin>	AN	4	12	New PIN. Represented as a 4-12 digit PIN block. Usage depends on the value of <func>. This field is mandatory in the request for functions 00 and 02. For all other functions, this field is ignored. In the response, this field is omitted.	Conditional	Conditional
<ConfirmPin>	AN	4	12	Confirmation of new PIN. Represented as a 4-12 digit PIN	Conditional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				block. Usage depends on the value of <func>. This field is mandatory in the request for functions 00 and 02. For all other functions, this field is ignored. In the response, this field is omitted.		
<PINStatus>	N	1	1	Indicates whether the allowed number of card PIN tries has been exceeded. 0 = No; 1 = Yes.	Omit	Mandatory
<Sms_Required>	AN	1	1	Whether to send an SMS to the cardholder with the PIN. 0 = No; 1 = Yes. Default is '0'.	Optional	Omit
<FeeWaiver>	N	1	1	Indicates whether to waive any web service fee set up on the system: 0 = No, 1=Yes. Default is 0.	Optional	Omit
<ExtAPICardID>	AN	1	50	External API card ID if applicable. Follows the UUID canonical format: 'xxxxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxxxx' (with x a hexadecimal char 0->f). If not used, leave blank. Note: Legacy field. Not used.	Optional	Omit
<SysDate>	YYYY-MM-DD	10	10	The system processing date.	Omit	Mandatory
<ActionCode>	AN	3	3	The action code for the response. See Action Codes.	Omit	Mandatory

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
```

```
   </soapenv:Header>
   <soapenv:Body>
      <hyp:WS_PinControl>
         <hyp:WSID>2021123456789</hyp:WSID>
         <hyp:IssCode>PMT</hyp:IssCode>
         <hyp:AuthType>string</hyp:AuthType>
         <hyp:locDate>2021-01-01</hyp:locDate>
         <hyp:locTime>120000</hyp:locTime>
         <hyp:PAN></hyp:PAN>
         <hyp:PublicToken>123456789</hyp:PublicToken>
         <hyp:ClientCode></hyp:ClientCode>
         <hyp:Func>01</hyp:Func>
         <hyp:CurrentPin></hyp:CurrentPin>
         <hyp:NewPin></hyp:NewPin>
         <hyp:ConfirmPin></hyp:ConfirmPin>
         <hyp:Sms_Required>1</hyp:Sms_Required>
         <hyp:ExtAPICardID></hyp:ExtAPICardID>
      </hyp:WS_PinControl>
   </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <WS_PinControlResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <WS_PinControlResult>
            <WSID>2021123456789</WSID>
            <IssCode>PMT</IssCode>
            <PublicToken>123456789</PublicToken>
            <ClientCode/>
            <CurrentPin>1234</CurrentPin>
            <NewPin/>
            <LocDate>2021-01-01</LocDate>
            <LocTime>120000</LocTime>
            <SysDate>2021-01-01</SysDate>
            <ActionCode>000</ActionCode>
            <PINStatus>0</PINStatus>
         </WS_PinControlResult>
      </WS_PinControlResponse>
   </soap:Body>
</soap:Envelope>
```

Card Extend Expiry Date

API: Ws_ExtendExpiry

This web service enables you to change the Thredd expiry date of a card.

Note: The Thredd expiry refers to the expiry date held by Thredd, which is calculated based on the Thredd validity period from the ProductMaster. This web service does not allow you to change the physical expiry date embossed on the card. The calculation of this date is based on the card validity period from the SchemeMaster.

The use of this web service is primarily when a scheme operates a shorter validity period within Thredd than the embossed expiry validity period. In this case you can extend the cardholder's Thredd-held expiry period and potentially charge a fee.

Note: Changing the expiry date also updates the card status to '*00*' (*All Good*).

Note: You cannot extend the expiry date of a card which has been set to an irreversible status (such as *Stolen* or *Destroyed*); see Status Codes. If the card is in an irreversible status, this web service returns the Action Code 654.

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every request. For details, see the FAQs.	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<TxnCode>	AN	1	2	The Transaction Code. See Transaction Codes. Default value 17.	Mandatory	Mandatory
<ClientCode>	AN	1	64	User ID of the customer using the service. Only applicable to systems using member logins. Returned in the response if present in the request. **Note**: Legacy field. Not used.	Optional	Conditional
<LastName>	AN	1	20	Cardholder's last name.	Optional	Omit
<AuthType>	AN	1	1	Parameter to specify how the card is authenticated. See Authentication Methods.	Mandatory	Omit
<PAN>	AN	14	19	Card Number. Unique card identifier.	Conditional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<Track2>	AN	1	40	The card's Track 2. Mandatory in request and response if <PAN> and <PublicToken> are not present or when <AuthTyp> is '4'.	Conditional	Omit
<PublicToken>	AN	1	9	The card's public token, Mandatory in request if <PAN> and <Track2> are not present. Mandatory in the response.	Conditional	Mandatory
<DOB>	YYYY-MM-DD	10	10	The cardholder's date of birth. Mandatory if value of <AuthType> is '2'. Otherwise, may be supplied for informational purposes or as part of cardholder registration. If age-verification is configured and conditions are met, the <crdProduct> associated with the card is changed. Refer to the <crdProduct> field description in the Cardholder Update message for the impact of this change.	Conditional	Omit
<CVV>	AN	3	3	Card Verification Value, the 3-digit code printed on the back of the card. Mandatory if the value of <AuthType> is '3'.	Conditional	Omit
<AccCode>	AN	0	6	Access code or passcode for setting a code which is validated during activation (e.g. via the Thredd IVR system). If provided, must be 6 digits; leading zeroes are acceptable. Mandatory if the value of <AuthType> is '4'. Leave empty if not required. If	Conditional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				<AuthType> is '4', the provided access code is used for activation only; the Thredd stored value will not be updated.		
<ExpDate>	YYYY-MM-DD	10	10	New Thredd-held expiry date.	Mandatory	Mandatory
<LocDate>	YYYY-MM-DD	10	10	The local current date in *year-month-date* format.	Mandatory	Mandatory
<LocTime>	HHMMSS	6	6	The local current time, in *hour-minute-second* format.	Mandatory	Mandatory
<Reason>	AN	1	60	Reason for the status change.	Optional	Omit
<AvlBal>	D	1	20	The current balance on the card account. This includes all financial transactions and outstanding authorisations. The balance amount can include up to four decimal places, depending on the currency exponent (e.g., 10.99 for EUR which has a currency exponent of 2). See Currency Codes.	Omit	Mandatory
<BlkAmt>	D	1	20	Amount of funds blocked on the card account as a result of all outstanding authorisations. The balance amount can include up to four decimal places, depending on the currency exponent (e.g., 10.99 for EUR which has a currency exponent of 2). See Currency Codes.	Omit	Mandatory
<CurCode>	AN	3	3	3-letter ISO currency code for the currency (e.g.	Omit	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				EUR).		
<SysDate>	YYYY-MM-DD	10	10	The system processing date.	Omit	Mandatory
<ActionCode>	AN	3	3	The action code for the response. See Action Codes.	Omit	Mandatory

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_ExtendExpiry>
         <hyp:WSID>2021123456789</hyp:WSID>
         <hyp:IssCode>PMT</hyp:IssCode>
         <hyp:TxnCode>17</hyp:TxnCode>
         <hyp:ClientCode></hyp:ClientCode>
         <hyp:LastName></hyp:LastName>
         <hyp:AuthType>1</hyp:AuthType>
         <hyp:PAN></hyp:PAN>
         <hyp:Track2></hyp:Track2>
         <hyp:PublicToken>123456789</hyp:PublicToken>
         <hyp:DOB></hyp:DOB>
         <hyp:CVV></hyp:CVV>
         <hyp:AccCode></hyp:AccCode>
         <hyp:ExpDate>2025-03-31</hyp:ExpDate>
         <hyp:LocDate>2021-01-01</hyp:LocDate>
         <hyp:LocTime>120000</hyp:LocTime>
         <hyp:Reason></hyp:Reason>
      </hyp:Ws_ExtendExpiry>
   </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_ExtendExpiryResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_ExtendExpiryResult>
            <WSID>2021123456789</WSID>
            <IssCode>PMT</IssCode>
            <TxnCode>17</TxnCode>
            <PublicToken>123456789</PublicToken>
            <LocDate>2021-01-01</LocDate>
            <LocTime>120000</LocTime>
            <ExpDate>2025-03-31</ExpDate>
            <ClientCode/>
            <SysDate>2021-01-01</SysDate>
            <ActionCode>000</ActionCode>
            <AvlBal>17</AvlBal>
            <BlkAmt>1</BlkAmt>
            <CurCode>GBP</CurCode>
         </Ws_ExtendExpiryResult>
      </Ws_ExtendExpiryResponse>
   </soap:Body>
</soap:Envelope>
```

Card Renew

API: Ws_Renew_Card

This web service enables you to renew or replace a card. It combines the functionality of card replacement and card renewal. The replacement card has the same balance that the original card had at the time when the replacement card is activated. Any linked cards will still point to the correct card.

If you want to transfer the card balance immediately to the new card, and update any linked wallet/card payment tokens at the same time, then select one of the following Renew Options (<RenewOptions>): 18,19,20,21,26 & 28.

Note: If you are replacing the card with a physical card, then you need to activate the card. See Card Activate.

Note: When the new card is activated, Thredd changes the status of the old card to *62 restricted card*.

Note: When a card is renewed, if you have enrolled the old card with 3D Secure credentials, then the new card is automatically enrolled with the same 3D Secure credentials. For details, see the 3D Secure Guide.

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every request. For details, see the FAQs.	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<PAN>	AN	14	19	Card Number. Mandatory if <PublicToken> is not provided. Mandatory in response. Card number is displayed as masked (e.g., 675926******1234). If you are PCI compliant, the full PAN can be returned. Check with your Implementation Manager.	Conditional	Mandatory
<PublicToken>	AN	1	9	The card's public token. Mandatory in request if <PAN> is not present. Mandatory in the response.	Conditional	Mandatory
<RenewOptions>	N	1	8	See Renew Options below.	Mandatory	Omit
<ExpDate>	AN	10	10	Expiry Date in *YYYY-MM-DD* format; this is forced to the last day of the given month. Mandatory if <RenewOptions> is 8, 10, 12, 26 or 28.	Conditional	Mandatory
<NewProductID>	N	1	8	Thredd Product ID for the new card. Mandatory if <RenewOptions> is 4, 5, 12, 20, 21 or 28.	Conditional	Omit
<SendSMS>	N	1	1	Whether an SMS is sent to the cardholder with the card's CVV. 1 = yes; 0 =No. The default is '0'. The SMS is configurable.	Mandatory	Omit
<MailOrSMS>	AN	1	1	The cardholder's preferred contact method. 0 = SMS; 1 = email. 2 =	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				SMS and email. Default value is '0'.		
<CreateImage>	N	1	1	Specifies whether to create a card image. 1= yes, 0 = No. Images are returned in the <Image> response parameter, encrypted by a pre-shared PGP encryption key.	Optional	Omit
<FeeWaiver>	N	1	1	Indicates whether to waive any web service fee set up on the system: 0 = No, 1=Yes. Default is 0.	Optional	Omit
<ProductRef>	AN	1	50	The physical card design reference as used by the Card Manufacturer. Identifies the *PRODUCT_REF* field in the XML file sent to the card manufacturer.	Optional	Omit
<VirtualCardImage>	AN	1	16	The Image ID for the virtual image for the new card. You can set up Image IDs in Smart Client in the **Image Master** and **Virtual Card Images** screens.**Note**: If you do not provide an image ID, the default virtual card image for the product is used.	Optional	Omit
<ImageSize>	N	1	1	The size of the virtual image: 1 = 100%; 2 = 200%; 3 = 300%; 4 = 400%; 5 = 500%. Default is 1.	Optional	Omit
<DelvMethod>	AN	1	1	The delivery method for the card. Options include: 0 = Standard delivery; 1 = Registered mail; 2 = Direct delivery; 3 = Customized DelvMethod 1; 4 = Customized DelvMethod 2; 5 = Customized DelvMethod 3; 6= Customized DelvMethod 4; 7 = Customized DelvMethod 5; Default value is 0	Optional	Omit
< CarrierType>	AN	1	30	The Carrier Product design reference as used by the Card Manufacturer. This is the letter onto which the card is attached when sent to the cardholder. Identifies the Carrier Product type of the Card Manufacturer.	Optional	Omit
<Url>	AN	1	100	This value is included in the Thredd Card Generation file, in the <QRCode> field. For example: *https://www.your-e-card.com/balance/2909680989632389* For details, see the Card Generation Interface Specifications.	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<CVV>	AN	3	3	New card CVV.	Omit	Mandatory
<ActionCode>	AN	3	3	The action code for the response. See Action Codes.	Omit	Mandatory
<Image>	Base 64			PGP-encrypted image of the card. Requires configuration within Smart Client. Check with your Implementation Manager.	Omit	Conditional
EWALLETS				If you are renewing an eWallet, the response returns an EWALLET structure.	Omit	Conditional
<WebServiceResult>	AN			Parameter group describing the result of the Web Service call. Only has values if the current request returns an action code of *868 Duplicate WSID*. See WebServiceResult.	Omit	Mandatory

Renew Options

Description
0 = No options turned on, produce a card identical to the cardholder's current card (used for damaged card replacement) 1 = Calculate a new expiry date. 2 = Use a new card number with same expiry as the replaced card. 3 = Use a new card number with new expiry. 4 = Use a new product with same expiry as replaced card. 5 = Use a new product with new expiry. 8 = Override normal expiry date calculation. 10 = Use new card number and override normal expiry date calculation. 12 = Use new product and override normal expiry date calculation. 18 = Immediate balance transfer and use a new card number with same expiry as the replaced card. 19 = Immediate balance transfer and use a new card number with new expiry. 20 = Immediate balance transfer and use a new product with same expiry as replaced card. 21 = Immediate balance transfer and use a new product with new expiry. 26 = Immediate balance transfer and use new card number and override normal expiry date calculation. 28 = Immediate balance transfer and use new product and override normal expiry date calculation. **Note**: Do not choose Renew Options 0, 1 and 8 if the card status is 41, 43, 83, 98 or 99.

EWALLET Response Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<IDENTITY>	AN	1	9	The Thredd 16-digit public token. Mandatory in the response.	Omit	Mandatory
<CARDS>				See CARDS Description below.	Omit	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<ACCOUNTS>				See ACCOUNTS Description below; may occur multiple times.	Omit	Mandatory

CARDS Response Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<PAN>	AN	1	9	Card's physical PAN.	Omit	Mandatory
<CRDCURRCODE>	AN	3	3	3-digit Alpha currency code.	Omit	Mandatory
<CRDPRODUCT>	AN	1	50	Thredd product type.	Omit	Mandatory
<CUSTCODE>	AN	1	25	Customer account number. Mandatory in the response if present.	Omit	Conditional
<PRIMARY>	AN	1	1	Indicates if the card is the Primary card. Default value is 'Y'.	Omit	Mandatory
<PROGRAMID>	AN	1	50	Card's program ID.	Omit	Mandatory
<STATCODE>	AN	2	2	The status code of the card. See Status Codes.	Omit	Mandatory
<EXPDATE>	AN	10	10	Expiry date of the card in *YYYY-MM-DD* format.	Omit	Mandatory

ACCOUNTS Response Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<ACCNO>	AN	1	9	Account number of the card.	Omit	Mandatory
<ACCTYPE>	AN	2	2	Type of card account. See Account Types.	Omit	Mandatory
<CURRCODE>	AN	3	3	3-letter ISO currency code for the cardholder's account (billing) currency.	Omit	Mandatory
<FINAMT>	D	1	20	Balance of the account, excluding blocked amount.	Omit	Mandatory
<BLKAMT>	D	1	20	Amount of funds blocked on the card account as a result of all outstanding authorisations. The	Omit	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				balance amount can include up to four decimal places, depending on the currency exponent (e.g., 10.99 for EUR which has a currency exponent of 2). See Currency Codes.		
<AMTAVL>	D	1	20	Balance of the card account. This includes all financials and outstanding authorisations.	Omit	Mandatory

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_Renew_Card>
         <hyp:WSID>2021123456789</hyp:WSID>
         <hyp:IssCode>PMT</hyp:IssCode>
         <hyp:PAN></hyp:PAN>
         <hyp:PublicToken>123456789</hyp:PublicToken>
         <hyp:RenewOptions>3</hyp:RenewOptions>
         <hyp:ExpDate>2025-06-30</hyp:ExpDate>
         <hyp:NewProductID></hyp:NewProductID>
         <hyp:SendSMS>0</hyp:SendSMS>
         <hyp:MailOrSMS></hyp:MailOrSMS>
         <hyp:CreateImage>0</hyp:CreateImage>
         <hyp:FeeWaiver></hyp:FeeWaiver>
         <hyp:ProductRef></hyp:ProductRef>
         <hyp:DelvMethod></hyp:DelvMethod>
         <hyp:VirtualCardImage></hyp:VirtualCardImage>
         <hyp:ImageSize></hyp:ImageSize>
         <hyp:CarrierType>12345678901234567890123456789012345678901234567890123</hyp:CarrierType>
         <hyp:Url></hyp:Url>
      </hyp:Ws_Renew_Card>
   </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_Renew_CardResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_Renew_CardResult>
            <WSID>2021123456789</WSID>
            <IssCode>PMT</IssCode>
            <PAN>999999******1234</PAN>
            <PublicToken>123456789</PublicToken>
             <ExpDate>2025-06-30</ExpDate>
            <ActionCode>000</ActionCode>
            <CVV>404</CVV>
            <WebServiceResult/>
         </Ws_Renew_CardResult>
      </Ws_Renew_CardResponse>
   </soap:Body>
```

```
</soap:Envelope>
```

Card Regenerate Image

API: Ws_Regenerate

This web service enables you to retrieve the card image configured on the Thredd platform, which can then be displayed to the cardholder. Card images are stored for both virtual cards and physical cards that have been converted from virtual cards. If a customer wants to see the image some time after card creation, you can regenerate the image by using this web service.

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<PublicToken>	AN	1	9	The card's public token. Mandatory in request and response.	Mandatory	Mandatory
<RegenType>	N	1	1	Whether the card is regenerated. 0 = Only return the CVV and do not regenerate. 1 = Regenerate the card only if it has a status of lost or stolen, OR recreate the card image (note: legacy only, use Ws_Renew_Card). 2 = Only create the card image, do not regenerate card. See Card Renew);	Mandatory	Omit
<Sms_Required>	N	1	1	Whether an SMS is sent to the cardholder with the card's CVV. 1 = yes; 0 =No. The default is '0'. The SMS is configurable.	Mandatory	Omit
<Sms_Content >	N	1	1	Reserved for future use; set to 0.	Mandatory	Omit
<CVV>	AN	3	3	Card Verification Value, the 3-digit code printed on the back of the card.	Omit	Mandatory
<ActionCode>	AN	3	3	The action code for the response. See Action Codes.	Omit	Mandatory
<Image>	Base64 Binary			PGP-encrypted image of the card. Is only returned if a PGP key has been shared and configured.	Omit	Conditional
<ExternalRef>	AN	1	30	External reference code for the card. **Note**: Legacy field. Not used.	Optional	Omit
<TerminalID>	AN	1	15	Point of Sale (POS) or other terminal	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				identifier, such as a hostname.		
< MailOrSMS>	AN	1	1	The cardholder's preferred contact method. 0 = SMS; 1 = email. 2 = SMS and email. Default value is ‘0’.	Optional	Omit
<CustAccount>	AN	1	25	Cardholder account number or reference number. You can use this reference to find the cards linked to a cardholder. Also displayed in Smart Client and in Thredd Portal as *Customer Reference*.	Optional	Optional
<PAN>	N	14	19	Card Number displayed as masked. **Note**: For customers who are PCI DSS Compliant, Thredd can return the full PAN if required. This must be enabled at Program Manager level and applies to all web services which return the PAN. Only returned for successful calls.	Omit	Conditional
<WSID>	N	1	19	Web service ID. Must be unique for every request. For details, see the FAQs.	Optional	Omit
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Optional	Omit
<FeeWaiver>	N	1	1	Indicates whether to waive any web service fee set up on the system: 0 = No, 1=Yes. Default is 0.	Optional	Omit

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
```

```
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_Regenerate>
         <hyp:PublicToken>123456789</hyp:PublicToken>
         <hyp:RegenType>1</hyp:RegenType>
         <hyp:Sms_Required>0</hyp:Sms_Required>
         <hyp:Sms_Content>0</hyp:Sms_Content>
         <hyp:ExternalRef>ABCD001</hyp:ExternalRef>
         <hyp:TerminalID>POS-TEST</hyp:TerminalID>
         <hyp:MailOrSMS>0</hyp:MailOrSMS>
         <hyp:WSID>2021123456789678</hyp:WSID>
         <hyp:IssCode>CLIENT</hyp:IssCode>
      </hyp:Ws_Regenerate>
   </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_RegenerateResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_RegenerateResult>
            <PublicToken>123456789</PublicToken>
            <ActionCode>000</ActionCode>
            <CVV>123</CVV>
            <PAN>123456******4321</PAN>
         </Ws_RegenerateResult>
      </Ws_RegenerateResponse>
   </soap:Body>
</soap:Envelope>
```

Card Get Passcode

API: Ws_Get_Passcode

This web service enables you to retrieve the Access Code (also known as passcode or activation code) of a card.

Note: You must first provide the Access Code to Thredd when creating a card. See Card Create.

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every request. For details, see the FAQs.	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<PAN>	AN	14	19	Card Number. Mandatory if <PublicToken> is not provided.	Conditional	Omit
<PublicToken>	AN	1	9	The card's public token. Mandatory in request if <PAN> is not present. Mandatory in the response.	Conditional	Omit
<AccCode>	AN	0	6	Access code. For setting a code which is validated during activation, e.g. via an IVR system. If provided, it must be 6 digits, leading zeroes are acceptable. Leave empty if not required.	Omit	Mandatory
<ActionCode>	AN	3	3	The action code for the response. See Action Codes.	Omit	Mandatory

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soap:Body>
      <hyp:Ws_Get_Passcode>
         <hyp:WSID>202107150820</hyp:WSID>
         <hyp:IssCode>PMT</hyp:IssCode>
         <hyp:PAN></hyp:PAN>
         <hyp:PublicToken>123456789</hyp:PublicToken>
      </hyp:Ws_Get_Passcode>
   </soap:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_Get_PasscodeResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_Get_PasscodeResult>
            <WSID>202107150820</WSID>
            <AccCode>935647</AccCode>
            <IssCode>PMT</IssCode>
            <ActionCode>000</ActionCode>
         </Ws_Get_PasscodeResult>
      </Ws_Get_PasscodeResponse>
   </soap:Body>
</soap:Envelope>
```

Card Convert to Physical

API: Ws_Convert_Card

This web service enables you to upgrade a virtual card to a physical card. It triggers the inclusion of the card in the next XML card manufacturer or personalisation bureau file for your programme. As part of the upgrade to a physical card, a new expiry date and CVV2 is generated if the conversion and production of the XML card file falls in a different calendar month to the virtual card creation.

Following successful conversion, replacement or renewal, cards are generated as physical card records.

Note: Where a virtual card has been activated, the physical card is also active in transit. Thredd recommends that you enforce virtual only usage until the cardholder has received the card. You also need to use Ws_Activate (see Card Activate) to ensure Thredd has the updated card record data (where CVV2 and expiry date differ to the virtual card).

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<PublicToken>	AN	1	9	The card's public token. Mandatory in request and response.	Mandatory	Mandatory
<ConvertDate>	YYYY-MM-DD	10	10	The date on which the virtual card is upgraded to a physical card.	Optional	Mandatory
<Apply_Fee>	N	1	1	Whether to apply a card upgrade fee. 0 or blank = No, 1 = Yes.	Mandatory	Omit
<ExpDate>	YYYY-MM-DD	10	10	Card expiry date. If left blank, updates with the default expiry date, based on the Card Scheme's validity period in months, otherwise updates with the input value. The date returned of the actual physical expiry is in *MM/YY*.	Optional	Omit
<ImageId>	AN	1	16	Reference which identifies the card manufacturer's image file that is printed on the face of the card. If not supplied, then the ImageId supplied with Ws_CreateCard will be used if available.	Optional	Omit
< CarrierType>	AN	1	30	The Carrier Product design reference as used by the Card Manufacturer. This is the letter onto which the card is attached when sent to the cardholder. Identifies the Carrier Product type of the Card Manufacturer.	Optional	Omit
<ActionCode>	AN	3	3	The action code for the	Omit	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				response. See Action Codes.		

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_Convert_Card>
         <hyp:PublicToken>123456789</hyp:PublicToken>
         <hyp:ConvertDate>2021-01-01</hyp:ConvertDate>
         <hyp:Apply_Fee>0</hyp:Apply_Fee>
         <hyp:ExpDate>2025-03-31</hyp:ExpDate>
         <hyp:ImageId></hyp:ImageId>
         <hyp:CarrierType>12345678901234567890123456789012345</hyp:CarrierType>
      </hyp:Ws_Convert_Card>
   </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_Convert_CardResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_Convert_CardResult>
            <ActionCode>000</ActionCode>
            <PublicToken>123456789</PublicToken>
            <ConvertDate>2021-01-01</ConvertDate>
         </Ws_Convert_CardResult>
      </Ws_Convert_CardResponse>
   </soap:Body>
</soap:Envelope>
```

Cardholder Send Message

API: Ws_SendMessage

This web service enables you to send a pre-defined message to the cardholder via SMS or Email. Thredd can configure the message using a selection of variables.

Note: If the SMS or Email option is selected and a bespoke message has not been configured, the default Thredd message is sent. Character limitation is in line with standard SMS message capacity.

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every request. For details, see the FAQs.	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<AuthType>	AN	1	1	Parameter to specify how the card is authenticated. See Authentication Methods.	Mandatory	Omit
<PAN>	AN	14	19	Card Number. Required in request if <AuthType> is '1', '2', '3','4' or '6' and <PublicToken> is not present.	Conditional	Omit
<PublicToken>	AN	1	9	The card's public token. Mandatory in request if <PAN> is not present. Mandatory in the response.	Conditional	Mandatory
<LocDate>	YYYY-MM-DD	10	10	The local current date in *year-month-date* format.	Mandatory	Mandatory
<LocTime>	HHMMSS	6	6	The local current time, in *hour-minute-second* format.	Mandatory	Mandatory
<DOB>	YYYY-MM-DD	10	10	Date of Birth. Mandatory if value of <AuthType> is '2' or '6'.	Conditional	Omit
<CVV>	AN	3	3	Card Verification Value, the 3-digit code printed on the back of the card.	Conditional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				Mandatory if the value of <AuthType> is ‘3’.		
<AccCode>	AN	0	6	Access code or passcode for setting a code which is validated during activation (e.g. via the Thredd IVR system). If provided, must be 6 digits; leading zeroes are acceptable. Mandatory if the value of <AuthType> is ‘4’. Leave empty if not required.	Conditional	Omit
<LastName>	AN	1	20	Cardholder’s last name.	Optional	Omit
<EventId>	N	1	4	ID of the event. See Event ID below. Thredd generates and sends the appropriate SMS or Email message.	Mandatory	Omit
<MailOrSMS>	N	1	1	The cardholder's preferred contact method. 0 = SMS; 1 = email. 2 = SMS and email. Default value is ‘0’.	Mandatory	Omit
<SysDate>	YYYYY-MM-DD	10	10	The system processing date.	Omit	Mandatory
<ActionCode>	AN	3	3	The action code for the response. Relevant codes are: 604 = Invalid event ID 787 = Email address is missing 788 = Invalid mail or SMS	Omit	Mandatory

Event ID

ID	Description	ID	Description
1	Activation	12	Balance Adjustment
2	Balance Enquiry	13	Balance Transfer
3	Card Creation	14	Change Groups

ID	Description	ID	Description
4	Card Renewal	15	Extent Expiry
5	Card Replacement	16	Unload
6	Load	17	Unload and Status Change
7	PIN Retrieval	18	Update Cardholder
8	Status Change	19	Send Mobile Activation code to Cardholder
9	Card Image Regeneration	20	Notification of Tokenisation
10	Card Conversion	21	CVC2 Unblock
11	Activation and Load		

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>*****</hyp:strUserName>
         <hyp:strPassword>*****</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_SendMessage>
         <hyp:WSID>5122404400194940928</hyp:WSID>
         <hyp:IssCode>PMT</hyp:IssCode>
         <hyp:AuthType>1</hyp:AuthType>
         <hyp:PAN></hyp:PAN>
         <hyp:PublicToken>123456789</hyp:PublicToken>
         <hyp:LocDate>2015-07-20</hyp:LocDate>
         <hyp:LocTime>101010</hyp:LocTime>
         <hyp:DOB>1982-01-01</hyp:DOB>
         <hyp:CVV>223</hyp:CVV>
         <hyp:AccCode/>
         <hyp:LastName>Abraham</hyp:LastName>
         <hyp:EventId>1</hyp:EventId>
         <hyp:MailOrSMS>1</hyp:MailOrSMS>
      </hyp:Ws_SendMessage>
   </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_SendMessageResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_SendMessageResult>
            <WSID>5122404400194940928</WSID>
            <IssCode>PMT</IssCode>
            <PublicToken>101967192</PublicToken>
            <LocDate>2015-07-20</LocDate>
            <LocTime>101010</LocTime>
            <SysDate>2015-07-22</SysDate>
            <ActionCode>000</ActionCode>
         </Ws_SendMessageResult>
      </Ws_SendMessageResponse>
   </soap:Body>
```

```
</soap:Envelope>
```

Cards Link

API: Ws_link_cards

This web service enables you to link cards in a Primary and Secondary relationship, which is useful when the primary card with existing secondary card linkage(s) needs to be replaced with a new token. You can link secondary cards to the new token via this web service. More than one secondary card can be linked to a primary card.

Notes

- The billing currency of the cards you want to link must be the same.
- If the supplied PAN or PublicToken belongs to a primary card with no secondary cards then it is linked as a new secondary card of the card specified by NewPAN or NewToken.
- If the supplied PAN or PublicToken belongs to a secondary card, then the primary card of that secondary card is changed to the card identified by NewPAN/NewToken.
- If the supplied PAN or PublicToken belongs to a card with one or more secondary cards, then the primary card of each of those secondary cards is changed to NewPAN/NewToken.

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every request. For details, see the FAQs.	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<PAN>	AN	14	19	The account number of the card you want to link to another card. Mandatory in request if <PublicToken> is not provided.	Conditional	Omit
<PublicToken>	AN	1	9	The public token of the card you want to link to another card. Mandatory in request if <PAN> is not present. Mandatory in the response.	Conditional	Mandatory
<NewPAN>	AN	16	19	The account number of the card you want to link to. Mandatory in the request if <newToken> is not present.	Conditional	Omit
<NewToken>	AN	16	19	The public token of the card you want to link to. Mandatory in the request if <NewPAN> is not	Conditional	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				present.		
<LinkageGroup>	AN	1	10	Linkage Group to use for linking the two tokens. If not specified, uses the default Linkage Group.	Conditional	Mandatory
<ActionCode>	AN	3	3	The action code for the response. See Action Codes.	Omit	Mandatory
<NewPublicToken>	AN	1	9	New public token assigned to the linked cards.	Omit	Mandatory
<SecondaryCards>	-	-	-	An array of secondary cards. See Secondary Card below. Can occur multiple times within the message.	Omit	Mandatory

Secondary Card

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<PublicToken>	AN	1	9	Public token of the secondary card.	Omit	Mandatory

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_Link_Cards>
         <hyp:WSID>2021123456789</hyp:WSID>
         <hyp:IssCode>PMT</hyp:IssCode>
         <hyp:PAN></hyp:PAN>
         <hyp:PublicToken>123456789</hyp:PublicToken>
         <hyp:NewPAN></hyp:NewPAN>
         <hyp:NewToken>987654321</hyp:NewToken>
      </hyp:Ws_Link_Cards>
   </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_Link_CardsResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_Link_CardsResult>
```

```
            <WSID>2021123456789</WSID>
            <IssCode>PMT</IssCode>
            <PublicToken>123456789</PublicToken>
            <NewPublicToken>987654321</NewPublicToken>
            <ActionCode>000</ActionCode>
            <SecondaryCards>
               <SecondaryCard>
                  <PublicToken>792710863</PublicToken>
               </SecondaryCard>
               <SecondaryCard>
                  <PublicToken>506904572</PublicToken>
               </SecondaryCard>
               <SecondaryCard>
                  <PublicToken>422232038</PublicToken>
               </SecondaryCard>
               <SecondaryCard>
                  <PublicToken>546808888</PublicToken>
               </SecondaryCard>
               <SecondaryCard>
                  <PublicToken>838454145</PublicToken>
               </SecondaryCard>
               <SecondaryCard>
                  <PublicToken>590228767</PublicToken>
               </SecondaryCard>
            </SecondaryCards>
         </Ws_Link_CardsResult>
      </Ws_Link_CardsResponse>
   </soap:Body>
</soap:Envelope>
```

Remove Cardholder Data

API: Ws_Remove_CardHolder_Data

This web service removes personally identifiable cardholder data (cardholder name, address, email and phone number) from the specified card. You can remove data from multiple cards in a single request.

Before removing data from a card record, the web service checks that the card's issue date is more than 6 years old. The card must not have any balance or blocked amount. The status of the card must be either *Destroyed* or *Expired*.

This web service does not remove any transactional details, and does not affect transactional data, such as authorisations and financial records.

Note: Once deleted, this operation cannot be undone. Ensure you take extra care before using this web service.

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every web service request sent. For details, see the FAQs.**Tip**: You could use a number based on the current date and time, as long as it is unique (e.g., *20201217145006*).	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<TokenData>	AN	1	9	The public token of the card. You can specify an array of TokenData elements, to remove cardholder data from multiple cards in a single request.	Mandatory	Omit
<LocDate>	YYYY-MM-DD	10	10	The local current date in *year-month-date* format.	Mandatory	Mandatory
<LocTime>	HHMMSS	6	6	The local current time, in *hour-minute-second* format.	Mandatory	Mandatory
<ActionCode>	AN	3	3	The action code for the response. See Action Codes.	Omit	Mandatory
<TokensCount>	AN	1	4	The number of public token updates requested.	Omit	Mandatory
<TokenDetailsResponse>				Provides an array	Omit	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				of token results, one for each public token update request. See TokenResult.		

TokenResult

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<PublicToken>	AN	1	9	The public token of the card.	Omit	Mandatory
<ActionCode>	AN	3	3	The action code for the public token: *000* indicates that the public token has been sucessfully updated. See Action Codes.	Omit	Mandatory
<ActionDescription>	AN	1	4	Description of the result of the request: *Normal, approve* indicates that the public token has been sucessfully updated.	Omit	Mandatory

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
    <soapenv:Header>
        <hyp:AuthSoapHeader>
            <hyp:strUserName>******</hyp:strUserName>
            <hyp:strPassword>******</hyp:strPassword>
        </hyp:AuthSoapHeader>
    </soapenv:Header>
    <soapenv:Body>
        <hyp:Ws_Remove_CardHolder_Data>
            <hyp:WSID>20222022083012345556</hyp:WSID>
            <hyp:IssCode>PMT</hyp:IssCode>
            <hyp:TokenData>
                <!--Zero or more repetitions:-->
                <hyp:TokenData>
                    <hyp:PubToken>523686956</hyp:PubToken>
                </hyp:TokenData>
                <hyp:TokenData>
                    <hyp:PubToken>136331110</hyp:PubToken>
                </hyp:TokenData>
                <hyp:TokenData>
                    <hyp:PubToken>112060766</hyp:PubToken>
                </hyp:TokenData>
                <hyp:TokenData>
                    <hyp:PubToken>112060766</hyp:PubToken>
                </hyp:TokenData>
                <hyp:TokenData>
                    <hyp:PubToken>112730529</hyp:PubToken>
                </hyp:TokenData>
            </hyp:TokenData>
                 <hyp:LocDate>2022-20-05</hyp:LocDate>
                 <hyp:LocTime>1200800</hyp:LocTime>
        </hyp:Ws_Remove_CardHolder_Data>
```

```
    </soapenv:Body>
```

Response

```
<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
    <soap:Body>
        <Ws_Remove_CardHolder_DataResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
            <Ws_Remove_CardHolder_DataResult>
                <WSID>20222022083012345 56</WSID>
                <IssCode>PMT</IssCode>
                <ActionCode>000</ActionCode>
                <SysDate>2022-04-01</SysDate>
                <TokensCount>5</TokensCount>
                <TokenDetailsResponse>
                    <TokenResult>
                        <PubToken>136331110</PubToken>
                        <ActionCode>000</ActionCode>
                        <ActionDescription>Normal, approve</ActionDescription>
                    </TokenResult>
                    <TokenResult>
                        <PubToken>112060766</PubToken>
                        <ActionCode>000</ActionCode>
                        <ActionDescription>Normal, approve</ActionDescription>
                    </TokenResult>
                    <TokenResult>
                        <PubToken>523686956</PubToken>
                        <ActionCode>000</ActionCode>
                        <ActionDescription>Normal, approve</ActionDescription>
                    </TokenResult>
                    <TokenResult>
                        <PubToken>112060766</PubToken>
                        <ActionCode>000</ActionCode>
                        <ActionDescription>Normal, approve</ActionDescription>
                    </TokenResult>
                    <TokenResult>
                        <PubToken>112730529</PubToken>
                        <ActionCode>000</ActionCode>
                        <ActionDescription>Normal, approve</ActionDescription>
                    </TokenResult>
                </TokenDetailsResponse>
                <LocDate>2022-20-05</LocDate>
                <LocTime>1200800</LocTime>
            </Ws_Remove_CardHolder_DataResult>
        </Ws_Remove_CardHolder_DataResponse>
    </soap:Body>
</soap:Envelope>
```

Cardholder Enquiries

You can use the following web services to manage cardholder enquiries:

Card Enquiry (Live and Archived): Ws_Enquiry
Card Enquiry (Live): Ws_Customer_Enquiry and Ws_Customer_Enquiry_V2
Cardholder Details Enquiry: Ws_CardHolder_Details_Enquiry and Ws_CardHolder_Details_Enquiry_V2
Update Cardholder Details (V1): Ws_Update_Cardholder_Details
Update Cardholder Details (V2): Ws_Update_Cardholder_Details_V2
Cards Get Expiring Soon: Ws_Get_Card_ExpireSoon
Card Statement (V1): Ws_Card_Statement
Card Statement (V2): Ws_Banking_Card_Statement_V2

Card Enquiry

API: Ws_Enquiry

This web service provides the details of a card, such as: *Token*, *Expiry Date*, *Status* and *Cardholder name*. You can use his service to quickly determine the validity of a card. The Card Enquiry service returns useful information such as the status, balance and group membership details of a card.

This web service returns details of both live and archived cards. If you only want to return live cards or all cards associated with a customer, Thredd recommend you use Ws_Customer_Enquiry. See Customer Enquiry.

Note: The full 16 Digit PAN can be supplied for customers who are PCI DSS compliant.

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every web service request sent. For details, see the FAQs.**Tip**: You could use a number based on the current date and time, as long as it is unique (e.g., *20201217145006*).	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<TxnCode>	AN	1	2	The Transaction Code. See Transaction Codes. Default value is 9.	Mandatory	Mandatory
<AuthType>	AN	1	1	Parameter to specify how the card is authenticated. See Authentication Methods.	Mandatory	Omit
<ClientCode>	AN	1	64	User ID of the customer using the service. Only applicable to systems using member logins. Returned in the response if present in the request. **Note**: Legacy field. Not used.	Conditional	Conditional
<PAN>	AN	14	19	Card Number. Unique card identifier. Mandatory in request if <track2>	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				and <PublicToken> are not present.		
<AccNo>	AN	1	28	Account number of the card. Mandatory if neither <PublicToken> nor <PAN> are provided. Returned in the response if present in the request.	Conditional	Conditional
<PublicToken>	AN	1	9	The card's public token, Mandatory in request if <PAN> and <accno> are not present. Mandatory in the response.	Conditional	Mandatory
<CurCode>	AN	3	3	3-letter ISO currency code for the currency (e.g. EUR).	Optional	Mandatory
<LocDate>	YYYY-MM-DD	10	10	The local current date in *year-month-date* format.	Mandatory	Mandatory
<LocTime>	HHMMSS	6	6	The local current time, in *hour-minute-second* format.	Mandatory	Mandatory
<ItemSrc>	N	1	5	Source field to define alternate fees. Legacy field for information purposes only; see Item Source Types. Suggest using 0.	Mandatory	Omit
<LastName>	AN	1	20	Cardholder's last name for authenticating the cardholder if the value of <AuthType> is '6'.	Optional	Omit
<DOB>	YYYY-MM-DD	10	10	Date of Birth. Mandatory if value of <AuthType> is '2' or '6'.	Conditional	Omit
<CVV>	AN	3	3	Card Verification Value, the 3-digit code printed on the back of the card. Mandatory if the value of <AuthType> is '3'.	Conditional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<AccCode>	AN	0	6	Access code or passcode. If provided, must be 6 digits, leading zeroes are acceptable. Leave empty if not required. Mandatory if the value of <AuthType> is '4'.	Conditional	Omit
<SysDate>	YYYY-MM-DD	10	10	The system processing date.	Omit	Mandatory
<ActionCode>	AN	3	3	The action code for the response. See Action Codes.	Omit	Mandatory
<StartDate>	AN	5	5	Start date printed on the card in the format *MM/YY*.	Omit	
<EndDate>	AN	5	5	Physical end date printed on the card in the format *MM/YY*.	Omit	
<ExpDate>	YYYY-MM-DD	10	10	Expiry date of the card in *YYYY-MM-DD* format.	Omit	Mandatory
<StatCode>	AN	2	2	The status code of the card. See Status Codes.	Omit	Mandatory
<AvlBal>	D	1	20	The current balance on the card account. This includes all financial transactions and outstanding authorisations. The balance amount can include up to four decimal places, depending on the currency exponent (e.g., 10.99 for EUR which has a currency exponent of 2). See Currency Codes.	Omit	Mandatory
<BlkAmt>	D	1	20	Amount of funds blocked on the card account as a result of all outstanding authorisations. The balance amount can include up to four decimal places, depending on the currency exponent	Omit	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				(e.g., 10.99 for EUR which has a currency exponent of 2). See Currency Codes.		
<EmbossName>	AN	1	51	Name embossed on the card.	Omit	Mandatory
<IsLive>	N	1	1	Specifies whether the card is active or not. 1 or True = Active; 0 or False = Not Active.	Omit	Mandatory
<Scheme>	AN	1	50	The card's Thredd scheme.	Omit	Mandatory
<Product>	AN	1	50	The name you give to your Thredd card product. This is stored in Smart Client.	Omit	Mandatory
<MaskedPAN>	AN	14	19	Card number displayed as masked (e.g., 675926******1234). **Note**. The full PAN can be returned if you are PCI DSS compliant. Contact your Implementation Manager.	Omit	Mandatory
<LimitGroup>	AN	1	10	Group code of the Limit Group.	Omit	Mandatory
<MCCGroup>	AN	1	10	Group code of the MCC Group.	Omit	Mandatory
<PERMSGroup>	AN	1	10	Group code of the Usage Group.	Omit	Mandatory
<FeeGroup>	AN	1	10	Group code of the Fee Group.	Omit	Mandatory
<SchedFeeGroup>	AN	1	10	Group code of the Scheduled Fee Group.	Omit	Mandatory
<WSFeeGroup>	AN	1	10	Group code of the Web Service Fee Group.	Omit	Mandatory
<LinkageGroup>	AN	1	10	Group code of the Card Linkage Group.	Omit	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<AuthCalendarGroup>	AN	1	10	Group code of the Auth Calendar Group.	Omit	Mandatory
<FXGroup>	AN	1	10	Group code of the FX Group.	Omit	Mandatory
<PrimaryToken>	AN	1	9	The primary card's public token.	Omit	Mandatory
<BlackList>	AN	1	10	Group code of the card acceptor Deny list. See Card Acceptor Deny list.	Omit	Mandatory
<WhiteList>	AN	1	10	Group code of the card acceptor Allow list. See Card Acceptor Allow list.	Omit	Mandatory
<PaymentTokenUsageGroup>	AN	1	50	The unique 3-digit numeric code assigned to the payment token usage group at time of creation - plus a description of the payment token usage group. For example: "123-Company XYZ Full VDEP". For details, check with your Implementation Manager.	Omit	Mandatory
<CVV2_RemainingTries>	AN	1	2	The number of online CVV2 tries remaining.	Omit	Mandatory
<PIN_RemainingTries>	AN	1	2	The number of online PIN tries remaining.	Omit	Mandatory
<OOBAppURL>	AN	1	2048	Out Of Band app URL used in a 3D Secure authentication session. The Card Scheme (e.g., Mastercard) requires issuers using Out of Band/Biometric authentication to support the automatic redirection of cardholders from	Omit	Optional

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				the merchant app to the authenticator app. OOBAppURL is the URL of this authenticator app.		

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_Enquiry>
         <hyp:WSID>2021123456789</hyp:WSID>
         <hyp:IssCode>PMT</hyp:IssCode>
         <hyp:TxnCode>9</hyp:TxnCode>
         <hyp:AuthType>1</hyp:AuthType>
         <hyp:ClientCode></hyp:ClientCode>
         <hyp:PAN></hyp:PAN>
         <hyp:AccNo></hyp:AccNo>
         <hyp:PublicToken>123456789</hyp:PublicToken>
         <hyp:CurCode></hyp:CurCode>
         <hyp:LocDate>2013-01-01</hyp:LocDate>
         <hyp:LocTime>120000</hyp:LocTime>
         <hyp:ItemSrc>2</hyp:ItemSrc>
         <hyp:DOB></hyp:DOB>
         <hyp:CVV></hyp:CVV>
         <hyp:AccCode></hyp:AccCode>
         <hyp:LastName></hyp:LastName>
      </hyp:Ws_Enquiry>
   </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
<soap:Body>
 <Ws_EnquiryResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
  <Ws_EnquiryResult>
    <WSID>2021123456789</WSID>
    <IssCode>PMT</IssCode>
    <TxnCode>9</TxnCode>
    <PublicToken>123456789</PublicToken>
    <LocDate>2013-01-01</LocDate>
    <LocTime>120000</LocTime>
    <StartDate>10/12</StartDate>
    <EndDate>03/15</EndDate>
    <ExpDate>2015-03-31</ExpDate>
    <StatCode>00</StatCode>
    <EmbossName>GIFT CARD</EmbossName>
    <AvlBal>17</AvlBal>
    <BlkAmt>1</BlkAmt>
    <CurCode>GBP</CurCode>
    <ClientCode></ClientCode>
    <SysDate>2013-01-01</SysDate>
    <ActionCode>000</ActionCode>
    <IsLive>true</IsLive>
    <Scheme>Giftcard</Scheme>
```

```
      <Product>Gift card brand A</Product>
      <MaskedPAN>987654******0123</MaskedPAN>
      <LimitGroup>PMT-VL-002</LimitGroup>
      <MCCGroup></MCCGroup>
      <PERMSGroup>PMT-CU-002</PERMSGroup>
      <FeeGroup></FeeGroup>
      <AuthCalendarGroup></AuthCalendarGroup>
      <FXGroup></FXGroup>
      <PrimaryToken>9876543212345678</PrimaryToken>
      <BlackList>BL-01</BlackList>
      <WhiteList></WhiteList>
      <PaymentTokenUsageGroup></PaymentTokenUsageGroup>
      <CVV2_RemainingTries>5</CVV2_RemainingTries>
      <PIN_RemainingTries>3</PIN_RemainingTries>
      <OOBAppURL>https://login.app.bank1.com/</OOBAppURL>
    </Ws_EnquiryResult>
   </Ws_EnquiryResponse>
  </soap:Body>
</soap:Envelope>
```

Customer Enquiry

API: Ws_Customer_Enquiry and Ws_Customer_Enquiry_V2

This web service returns the list of cards associated with a customer name. It does not return the details of archived cards.

Note: Thredd recommend you use V2 of this service, which provides additional request and response parameters. V2 returns all cards linked to a specified <PublicToken>or <CustAccount> including secondary cards. See below.

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every request. For details, see the FAQs.	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<TxnCode>	AN	1	2	The Transaction Code. See Transaction Codes. Default value 4.	Mandatory	Mandatory
<ClientCode>	AN	1	64	User ID of the customer using the service. Only applicable to systems using member logins. Returned in the response if present in the request. **Note**: Legacy field. Not used. Removed in V2 of service	Conditional	Conditional
<PAN>	AN	14	19	Card Number. Mandatory if <ClientCode> or <accno> are not provided.	Optional	Omit
<AccNo>	AN	1	28	Account number of the card. Mandatory if neither <PublicToken> nor <PAN> are provided. Returned in the response if present in the request. Removed in V2	Conditional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				of service		
<PublicToken>	AN	1	9	The card's public token, Mandatory in request if <PAN> and <accno> are not present. Mandatory in the response.	Conditional	Mandatory
<CustAccount>	AN	1	25	Cardholder account number or reference number. You can use this reference to find the cards linked to a cardholder. Also displayed in Smart Client and in Thredd Portal as *Customer Reference*. Only available in V2 of the service	Omit	Optional
<CurrCode>	AN	3	3	3-letter ISO currency code for the currency (e.g. EUR).	Conditional	Conditional
<CardList>	-	-	-	See Card List below.	Omit	Optional
<LocDate>	YYYY-MM-DD	10	10	The local current date in *year-month-date* format.	Mandatory	Mandatory
<LocTime>	HHMMSS	6	6	The local current time, in *hour-minute-second* format.	Mandatory	Mandatory
<ItemSrc>	N	1	5	Source field to define alternate fees. Legacy field for information purposes only; see Item Source Types. Suggest using 0.	Mandatory	Omit
<SysDate>	YYYY-MM_DD	10	10	The system processing date.	Omit	Mandatory
<ActionCode>	AN	3	3	The action code for the response. See Action Codes.	Omit	Mandatory

Card List

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<PAN>	AN	14	19	Card Number. Unique card identifier.	Omit	Mandatory
<ExpDate>	YYYY-MM_DD	10	10	Expiry date of the card in *YYYY-MM-DD* format.	Omit	Mandatory
<CurCode>	AN	3	3	3-letter ISO currency code for the currency (e.g. EUR).	Omit	Mandatory
<StatCode>	AN	2	2	The status code of the card. See Status Codes.	Omit	Mandatory
<CrdProduct>	AN	4	5	The identifier of the card product, or Product ID, within Thredd. For details, check with your Implementation Manager.	Omit	Mandatory
<Program>	AN	1	6	The ID of the Program this card belongs to.	Omit	Optional
<DesignRef>	AN	1	50	Predefined design reference code associated with the card, also known as PRODUCT_REF.	Omit	Optional
<AvlBal>	D	1	20	The current balance on the card account. This includes all financial transactions and outstanding authorisations. The balance amount can include up to four decimal places, depending on the currency exponent (e.g., 10.99 for EUR which has a currency exponent of 2). See Currency Codes.	Omit	Mandatory
<LastName>	AN	1	100	Cardholder's last name.	Omit	Mandatory
<FirstName>	AN	1	100	Cardholder's first name.	Omit	Mandatory
<EmbossName>	AN	1	51	Name embossed on	Omit	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				the card.		
<BlkAmt>	D	1	20	Amount of funds blocked on the card account as a result of all outstanding authorisations. The balance amount can include up to four decimal places, depending on the currency exponent (e.g., 10.99 for EUR which has a currency exponent of 2). See Currency Codes.	Omit	Mandatory
<CustType>	D	1	1	Identifies the owner of the card: 0 = primary customer; 1 = additional customer (authorised user). Legacy field, no longer used."	Omit	Mandatory
<PaymentTokenUsageGroup>	AN	1	50	The unique 3-digit numeric code assigned to the payment token usage group at time of creation - plus a description of the payment token usage group. For example: “123-Company XYZ Full VDEP”. For details, check with your Implementation Manager.	Omit	Mandatory
Note: Fields listed below are only available in V2 of the web service						
<PublicToken>	AN	1	9	Thredd 9-digit public token of the card.	Omit	Mandatory
<Primary>	AN	1	1	Indicates if the card is the Primary card.	Omit	Mandatory
<IsLive>	N	1	1	Specifies whether the card is active or not. 1 or True = Active; 0 or False = Not Active.	Omit	Mandatory
<scheme>	AN	1	50	The card’s Thredd scheme.	Omit	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<product>	AN	1	50	The name you give to your Thredd card product. This is stored in Smart Client.	Omit	Mandatory
<MaskedPAN>	AN	14	19	Card Number displayed as masked. i.e. 675926******1234.	Omit	Mandatory
<StartDate>	AN	5	5	Start date printed on the card in the format *MM/YY*.	Omit	Mandatory
<EndDate>	AN	5	5	Physical end date printed on the card in the format *MM/YY*.	Omit	Mandatory
<LimitsGroup>	AN	1	10	Group code of the Limit Group.	Omit	Mandatory
<MCCGroup>	AN	1	10	Group code of the MCC Group.	Omit	Mandatory
<PERMSGroup>	AN	1	10	Group code of the Usage Group.	Omit	Mandatory
<FeeGroup>	AN	1	10	Group code of the Fee Group.	Omit	Mandatory
<SchedFeeGroup>	AN	1	10	Group code of the Scheduled Fee Group.	Omit	Mandatory
<WSFeeGroup>	AN	1	10	Group code of the Web Service Fee Group.	Omit	Mandatory
<LinkageGroup>	AN	1	10	Group code of the Card Linkage Group.	Omit	Mandatory
<AuthCalendarGroup>	AN	1	10	Group code of the Auth Calendar Group.	Omit	Mandatory
<FXGroup>	AN	1	10	Group code of the FX Group.	Omit	Mandatory
<ProductID>	N	1	5	Thredd Product ID.	Omit	Mandatory
<ProductRef>	AN	1	50	The physical card design reference as used by the Card Manufacturer. Identifies the *PRODUCT_REF* field in the XML file sent to the card	Omit	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				manufacturer.		

Request (v1)

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_Customer_Enquiry>
         <hyp:WSID>2021123456789</hyp:WSID>
         <hyp:IssCode>PMT</hyp:IssCode>
         <hyp:TxnCode>4</hyp:TxnCode>
         <hyp:ClientCode></hyp:ClientCode>
         <hyp:PAN></hyp:PAN>
         <hyp:AccNo></hyp:AccNo>
         <hyp:PublicToken>123456789</hyp:PublicToken>
         <hyp:CurrCode>GBP</hyp:CurrCode>
         <hyp:LocDate>2013-01-01</hyp:LocDate>
         <hyp:LocTime>120000</hyp:LocTime>
         <hyp:ItemSrc>2</hyp:ItemSrc>
      </hyp:Ws_Customer_Enquiry>
   </soapenv:Body>
</soapenv:Envelope>
```

Response (v1)

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_Customer_EnquiryResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_Customer_EnquiryResult>
            <WSID>2021123456789</WSID>
            <IssCode>PMT</IssCode>
            <TxnCode>4</TxnCode>
            <ClientCode/>
            <PublicToken>123456789</PublicToken>
            <AccNo>12345678912345 67</AccNo>
            <CurCode>GBP</CurCode>
            <LocDate>2013-01-01</LocDate>
            <LocTime>120000</LocTime>
            <SysDate>2013-01-01</SysDate>
            <ActionCode>000</ActionCode>
            <Cards>
               <CardList>
                  <PAN>530823******1234</PAN>
                  <ExpDate>2015-03-31</ExpDate>
                  <CurCode>GBP</CurCode>
                  <StatCode>00</StatCode>
                  <CrdProduct>MCRD</CrdProduct>
                  <Program>GPSCRU2C</Program>
                  <DesignRef/>
                  <EmbossName>GIFT CARD</EmbossName>
                  <AvlBal>10</AvlBal>
                  <BlkAmt>1</BlkAmt>
                  <FirstName>Firstname</FirstName>
                  <LastName>Lastname</LastName>
                  <CustType/>
               </CardList>
```

```
            </Cards>
         </Ws_Customer_EnquiryResult>
      </Ws_Customer_EnquiryResponse>
   </soap:Body>
</soap:Envelope>
```

Request (V2)

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_Customer_Enquiry_V2>
         <hyp:WSID>1233</hyp:WSID>
         <hyp:IssCode>PMT</hyp:IssCode>
         <hyp:TxnCode>4</hyp:TxnCode>
         <hyp:PAN></hyp:PAN>
         <hyp:CustAccount>ABCDE123</hyp:CustAccount>
         <hyp:PublicToken></hyp:PublicToken>
         <hyp:CurrCode>GBP</hyp:CurrCode>
         <hyp:LocDate>2015-09-02</hyp:LocDate>
         <hyp:LocTime>1610</hyp:LocTime>
         <hyp:ItemSrc>1</hyp:ItemSrc>
      </hyp:Ws_Customer_Enquiry_V2>
   </soapenv:Body>
</soapenv:Envelope>
```

Response (v2)

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_Customer_Enquiry_V2Response xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_Customer_Enquiry_V2Result>
            <WSID>123</WSID>
            <IssCode>PMT</IssCode>
            <TxnCode>4</TxnCode>
            <PublicToken>123456789</PublicToken>
            <CustAccount>ABCDE123</CustAccount>
            <CurCode>GBP</CurCode>
            <LocDate>2021-09-02</LocDate>
            <LocTime>1610</LocTime>
            <SysDate>2021-09-02</SysDate>
            <ActionCode>000</ActionCode>
            <Cards>
               <CardList2>
                  <PAN>675926******6791</PAN>
                  <ExpDate>2025-04-30</ExpDate>
                  <CurCode>GBP</CurCode>
                  <StatCode>00</StatCode>
                  <CrdProduct>MCRD</CrdProduct>
                  <Program>9876</Program>
                  <DesignRef>Your product name here</DesignRef>
                  <EmbossName>JOHN SMITH</EmbossName>
                  <AvlBal>33.11</AvlBal>
                  <BlkAmt>0</BlkAmt>
                  <FirstName>John</FirstName>
                  <LastName>Smith</LastName>
                  <CustType/>
                  <PublicToken>123456789</PublicToken>
                  <Primary>Y</Primary>
                  <IsLive>1</IsLive>
                  <Scheme>Your Scheme Name here</Scheme>
```

```
                  <Product> Your product name here </Product>
                  <MCCGroup>PMT-MCC-01</MCCGroup>
                  <LimitGroup>PMT-VL-002</LimitGroup>
                  <PERMSGroup>PMT-CU-002</PERMSGroup>
                  <FeeGroup>PMT-FEE-01</FeeGroup>
                  <SchedFeeGroup>PMT-SFG-02</SchedFeeGroup>
                  <WsFeeGroup>PMT-WSG-09</WsFeeGroup>
                  <LinkageGroup/>
                  <PrimaryToken>123456789</PrimaryToken>
                  <MaskedPAN>675926******6791</MaskedPAN>
                  <ProductID>9876</ProductID>
                  <ProductRef>PROGRAM11</ProductRef>
  <PaymentTokenUsageGroup></PaymentTokenUsageGroup>
              </CardList2>
           </Cards>
        </Ws_Customer_Enquiry_V2Result>
     </Ws_Customer_Enquiry_V2Response>
   </soap:Body>
</soap:Envelope>
```

Cardholder Details Enquiry

API: Ws_CardHolder_Details_Enquiry and Ws_CardHolder_Details_Enquiry_V2

This web service returns the details of a cardholder.

Note: V2 of this web service has some additional parameters and does not return the details of archived cards. See below.

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every request. For details, see the FAQs.	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<TxnCode>	AN	1	2	The Transaction Code. See Transaction Codes. Default value 13.	Mandatory	Mandatory
<LocDate>	YYYY-MM-DD	10	10	The local current date in *year-month-date* format.	Mandatory	Mandatory
<LocTime>	HHMMSS	6	6	The local current time, in *hour-minute-second* format.	Mandatory	Mandatory
<AuthType>	AN	1	1	Parameter to specify how the card is authenticated. See Authentication Methods.	Mandatory	Omit
<PAN>	AN	14	19	Card Number. Unique card identifier.	Conditional	Omit
<Track2>	AN	1	40	The card's Track 2. Mandatory in request if <PAN> and <PublicToken> are not present or when <AuthType> is '7'.	Conditional	Omit
<PublicToken>	AN	1	9	The card's public token, Mandatory in request if <PAN> and <Track2> are not present. Mandatory in the response.	Conditional	Mandatory
<DOB>	YYYY-MM-DD	10	10	Date of Birth. Mandatory if value	Conditional	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				of <AuthType> is ‘2’ or ‘6’.		
<CVV>	AN	3	3	Card Verification Value, the 3-digit code printed on the back of the card. Mandatory if the value of <AuthType> is ‘3’.	Conditional	Omit
<AccCode>	AN	0	6	Access code or passcode. If provided, must be 6 digits, leading zeroes are acceptable. Leave empty if not required. Mandatory if the value of <AuthType> is ‘4’.	Conditional	Omit
<CrdProduct>	AN	4	4	Card product associated with the card. Legacy field.	Omit	Mandatory
<ClientCode>	AN	1	64	User ID of the customer using the service. Only applicable to systems using member logins. Returned in the response if present in the request. **Note**: Legacy field. Not used. Not available in V2.	Conditional	Conditional
<CustAccount>	AN	1	25	Cardholder account number or reference number. You can use this reference to find the cards linked to a cardholder. Also displayed in Smart Client and in Thredd Portal as *Customer Reference*. Only available in V2	Omit	Optional
<ItemSrc>	N	1	5	Source field which defines the item source type. See Item Source Types. If used, overrides any existing fees for using this web	Mandatory	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				service.		
<LastName>	AN	1	30	Cardholder's last name for authenticating the cardholder if the value of <AuthType> is '6'.	Conditional	Mandatory
<StatCode>	AN	2	3	The status code of the card. See Status Codes.	Omit	Mandatory
<Title>	AN	1	4	Cardholder's title.	Omit	Optional
<MiddleName>	AN	1	100	Cardholder's middle name. The <MiddleName> is not part of the <EmbossName> and therefore, does not check manufacture-approved characters. If a delivery address is not supplied, the cardholder's middle name will be the card purchaser's middle name. Only available in V2	Omit	Optional
<FirstName>	AN	1	30	Cardholder's first name.	Omit	Optional
<Addrl1>	AN	1	50	Address line 1.	Omit	Optional
<Addrl2>	AN	1	50	Address line 2.	Omit	Optional
<Addrl3>	AN	1	50	Address line 3. Only available in V2	Omit	Optional
<City>	AN	1	50	City.	Omit	Optional
<PostCode>	AN	1	10	Postcode.	Omit	Optional
<Country>	AN	1	3	Cardholder's country of residence. This is represented as a 3 digit ISO country code (e.g. 826 for UK).	Omit	Optional
<Tel>	AN	1	15	Telephone number. See Processing of	Omit	Optional

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				Phone Numbers.		
<WorkAddrl1>	AN	1	35	Work address line 1.	Omit	Optional
<WorkAddrl2>	AN	1	35	Work address line 2.	Omit	Optional
<WorkAddrl3>	AN	1	35	Work address line 3.	Omit	Optional
<WorkCity>	AN	1	15	Work city.	Omit	Optional
<WorkPostCode>	AN	1	10	Work postcode.	Omit	Optional
<WorkCounty>	AN	1	20	Work county.	Omit	Optional
<WorkCountry>	AN	1	3	Work country of residence. This is represented as a 3 digit ISO country code (e.g. 826 for UK).	Omit	Optional
<WorkTel>	AN	1	15	Work telephone number. See Processing of Phone Numbers.	Omit	Optional
<EMail>	AN	1	64	Email address of the cardholder.	Omit	Optional
<Fax>	AN	1	20	Fax number.	Omit	Optional
<POBox>	AN	1	8	Post office box number.	Omit	Optional
<MobTel>	AN	1	15	Cardholder's mobile phone number (including dialing code if applicable). See Processing of Telephone Numbers.	Omit	Optional
<MaritalStatus>	AN	1	1	Marital status: S= single; M= married; D = divorced; W = widowed; space = not specified.	Omit	Optional
<Sex>	AN	1	1	Gender: M = male; F= female; space= Not specified.	Omit	Optional
<AccNo>	AN	1	28	Account number of the card. Not available in V2.	Omit	Optional
<EmbossName>	AN	1	27	Name embossed on	Omit	Optional

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				the card.		
<RefuseCheck>	AN	1	1	Whether cheques should be refused. 0 = No; 1= Yes. For customer use only. Thredd ignore this field.	Omit	Optional
<MailShots>	AN	1	1	Whether the cardholder accepts mailshots or member contact. 0 = No; 1 = Yes For customer use only. Thredd ignore this field.	Omit	Optional
<Discret>	AN	1	25	Discretionary data, for customer use only. Thredd ignores this field.	Omit	Optional
<UsrData>	AN	1	30	Cardholder information stored at card level, free text field. For customer use only. Thredd ignores this field.	Omit	Optional
<UsrData1>	AN	1	12	Cardholder information stored at member level, free text field. For customer use only. Thredd ignores this field.	Omit	Optional
<UsrData2>	AN	1	12	Cardholder information stored at member level, free text field. For customer use only. Thredd ignores this field.	Omit	Optional
<UsrData3>	AN	1	12	Cardholder information stored at member level, free text field. For customer use only. Thredd ignores this field.	Omit	Optional
<UsrData4>	AN	1	32	Cardholder information stored at member level, free text field. Thredd ignores this field.	Omit	Optional

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<CurrCode>	AN	1	3	3-letter ISO currency code for the account billing currency.	Omit	Optional
<ExpDate>	YYYY-MM-DD	10	10	Expiry date of the card in *YYYY-MM-DD* format. This is the Thredd expiry date. If the Thredd expiry date is not set, this is the expiry date printed on the card.	Omit	Optional
<EffDate>	YYYY-MM-DD	10	10	The issue date of the card. If the issue date is not set, then is the <DateCreated>.	Omit	Optional
<SvcCode>	AN	1	3	Card Service Code. The three-digit number which indicates where the card is valid for use.	Omit	Optional
<AdditionalNo>	N	1	1	Number of additional cards. Zero indicates the card is a primary card. Currently always set to 0. Reserved for future use.	Omit	Optional
<DateCreated>	YYYY-MM-DD	10	10	The date created, or the issue date of the card if this is set.	Omit	Optional
<DateActivated>	YYYY-MM-DD	10	10	Date the card was activated in the system.	Omit	Optional
<CrdDesign>	AN	1	50	The card manufacturer's card design reference. Also known as PRODUCT_REF in the XML file sent to the card manufacturer.	Omit	Optional
<PIN>	AN	1	1	Indicates whether the card should have a PIN: 0=No; 1=Yes Reserved for future use	Omit	Optional

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<DlvMethod>	AN	1	1	The delivery method for the card. Options include: 0 = Standard delivery; 1 = Registered mail; 2 = Direct delivery; 3 = Customized DelvMethod 1; 4 = Customized DelvMethod 2; 5 = Customized DelvMethod 3; 6= Customized DelvMethod 4; 7 = Customized DelvMethod 5; Default value is 0	Omit	Optional
<ImageID>	AN	1	16	Reference which identifies the card manufacturer's image file that is printed on the face of the card.	Omit	Optional
<BrnCode>	AN	8	8	Branch code (or Agent code) with which the card is associated.	Omit	Optional
<ReNew>	AN	1	1	Indicates whether the card should be renewed on expiry: 0= No; 1= Yes.	Omit	Optional
<DenyMCC>	AN	1	192	List of MCC's (merchant category codes) that are denied for the card. MCC's can be comma-separated, specified as a range, or combinations of both(e.g., 4546,5462,5667-5673,5957). These restrictions are in addition to MCC restrictions defined at the card product level. Legacy field. Do not use.	Omit	Optional
<DenySVC>	AN	1	64	(missing or bad snippet)	Omit	Optional
<AccType>	AN	2	2	Type code for the	Omit	Optional

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				account associated with the card. Legacy field. Not used.		
<CVC2>	AN	3	3	Card Verification Value, the 3-digit code printed on the back of the card.	Omit	Conditional
<DlvTitle>	AN	4	16	Delivery address title.	Omit	Optional
<DlvFirstName>	AN	1	30	Delivery first name.	Omit	Optional
<DlvMiddleName>	AN	1	50	Delivery middle name. Only available in V2	Omit	Optional
<DlvLastName>	AN	1	30	Delivery last name.	Omit	Optional
<DlvAddrL1>	AN	1	50	Delivery address line 1.	Omit	Optional
<DlvAddrL2>	AN	1	50	Delivery address line 2.	Omit	Optional
<DlvAddrL3>	AN	1	50	Delivery address line 3.	Omit	Optional
<DlvCity>	AN	1	50	Delivery city.	Omit	Optional
<DlvPostcode>	AN	1	10	Delivery Post code Only available in V2.	Omit	Optional
<DlvCounty>	AN	1	20	Card purchaser's /delivery address county.	Omit	Optional
<DlvCountry>	AN	1	3	Card purchaser's /delivery address country 3-digit ISO country code (e.g., 826 for UK).	Omit	Optional
<DlvTel>	AN	1	20	Delivery telephone number.	Omit	Optional
<DlvEffDate>	YYYY-MM-DD	10	10	Date at which the delivery name and/or address became effective. If not present, the current date is the	Omit	Optional

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				effective date. Legacy field. Not used.		
<DlvExpDate>	YYYY-MM-DD	10	10	Date after which the delivery name and/or address expires. Mandatory if name and/or address delivery fields are present. Legacy field. Not used.	Omit	Optional
<SysDate>	YYYY-MM-DD	10	10	The system processing date.	Omit	Mandatory
<ActionCode>	AN	3	3	The action code for the response. See Action Codes.	Omit	Mandatory
<IsoLang>	AN	2	2	The language code in ISO 639-1 format. The language is used for card mailers, and also used if bespoke SMS templates are set up.	Omit	Optional
<OptOut>	AN	4	5	Indicator for opting out of Visa Account Updater (VAU) or the Automatic Billing Updater (ABU) service for Mastercard. Only available in V2	Omit	Mandatory

Request

```
<?xml version="1.0" encoding="UTF-8"?>
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_CardHolder_Details_Enquiry>
         <hyp:WSID>12345678</hyp:WSID>
         <hyp:IssCode>PMT</hyp:IssCode>
         <hyp:TxnCode>13</hyp:TxnCode>
         <hyp:LocDate>2021-02-17</hyp:LocDate>
         <hyp:LocTime>094300</hyp:LocTime>
         <hyp:AuthType>1</hyp:AuthType>
```

```
         <hyp:PAN />
         <hyp:Track2 />
         <hyp:PublicToken>123456789</hyp:PublicToken>
         <hyp:DOB />
         <hyp:CVV />
         <hyp:AccCode />
         <hyp:ClientCode />
         <hyp:ItemSrc>0</hyp:ItemSrc>
         <hyp:LastName />
      </hyp:Ws_CardHolder_Details_Enquiry>
   </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_CardHolder_Details_EnquiryResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_CardHolder_Details_EnquiryResult>
            <WSID>2021123456789678</WSID>
            <IssCode>PMT</IssCode>
            <TxnCode>13</TxnCode>
            <LocDate>2021-02-17</LocDate>
            <LocTime>094300</LocTime>
            <ClientCode/>
            <PublicToken>123456789</PublicToken>
            <DOB>1990-01-01</DOB>
            <StatCode>00</StatCode>
            <CrdProduct/>
            <Title>Mr</Title>
            <FirstName>Bloggs</FirstName>
            <MiddleName>N</MiddleName>
            <LastName>Joe</LastName>
            <Addrl1>Office 13, The High Street</Addrl1>
            <Addrl2>6-8 Aldgate</Addrl2>
            <City>London</City>
            <PostCode>EC3A 7BB</PostCode>
            <Country>826</Country>
            <Tel/>
            <WorkAddrl1/>
            <WorkAddrl2/>
            <WorkAddrl3/>
            <WorkCity/>
            <WorkPostCode/>
            <WorkCounty/>
            <WorkCountry/>
            <WorkTel/>
            <EMail>joe.bloggs@google.com</EMail>
            <Fax/>
            <POBox>EC3A 7BB</POBox>
            <MobTel/>
            <MaritalStatus/>
            <Sex/>
            <AccNo/>
            <EmbossName>GIFT CARD</EmbossName>
            <RefuseCheck>0</RefuseCheck>
            <MailShots>1</MailShots>
            <Discret/>
            <UsrData/>
            <UsrData1/>
            <UsrData2/>
            <UsrData3/>
            <UsrData4/>
            <CurrCode>GBP</CurrCode>
            <ExpDate>2021-12-31</ExpDate>
            <EffDate>2021-01-19</EffDate>
            <SvcCode>221</SvcCode>
            <AdditionalNo>0</AdditionalNo>
            <DateCreated>2021-01-19</DateCreated>
            <DateActivated>2021-01-20</DateActivated>
```

```
            <CrdDesign>PMTPPU</CrdDesign>
            <PIN>0</PIN>
            <DlvMethod>0</DlvMethod>
            <ImageID/>
            <BrnCode/>
            <ReNew>0</ReNew>
            <DenyMCC/>
            <DenySVC/>
            <AccType/>
            <CVC2>554</CVC2>
            <DlvTitle>Mr</DlvTitle>
            <DlvFirstName>Bloggs</DlvFirstName>
            <DlvMiddleName>M</DlvMiddleName>
            <DlvLastName>Joe</DlvLastName>
            <DlvAddrL1>Office 13, The High Street</DlvAddrL1>
            <DlvAddrL2>6-8 Aldgate</DlvAddrL2>
            <DlvAddrL3/>
            <DlvCity>London</DlvCity>
            <DlvCounty/>
            <DlvCountry>826</DlvCountry>
            <DlvTel/>
            <DlvEffDate/>
            <DlvExpDate/>
            <IsoLang/>
            <SysDate>2021-02-17</SysDate>
            <ActionCode>000</ActionCode>
            <OptOut>false</OptOut>
         </Ws_CardHolder_Details_EnquiryResult>
      </Ws_CardHolder_Details_EnquiryResponse>
   </soap:Body>
</soap:Envelope>
```

Update Cardholder Details (V1)

API: Ws_Update_Cardholder_Details

This web service allows you to update cardholder details, such as: name and address.

Note: You can also use Ws_Update_Cardholder_Details_V2, which provides additional fields. See Update Cardholder Details (V2).

Note: You must use Ws_Update_Cardholder_Details_V2 if you want to update the card profile ID (ProductRef field) used for card tokenisation.

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every request. For details, see the FAQs.	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<TxnCode>	AN	1	2	The Transaction Code. See Transaction Codes. Default value is 13.	Mandatory	Mandatory
<ClientCode>	AN	1	64	User ID of the customer using the service. Only applicable to systems using member logins. Returned in the response if present in the request. **Note**: Legacy field. Not used.	Optional	Conditional
<AuthType>	AN	1	1	Parameter to specify how the card is authenticated. See Authentication Methods.	Mandatory	Omit
<PAN>	AN	14	19	Card Number. Unique card identifier.	Conditional	Omit
<Track2>	AN	1	40	The card's Track 2. Mandatory in request if <PAN> and <PublicToken> are not present or when <AuthType> is '7'.	Conditional	Omit
<PublicToken>	AN	1	9	The card's public token, Mandatory in request if <PAN> and <Track2> are not present. Mandatory in the response.	Conditional	Mandatory
<DOB>	YYYY-MM-DD	10	10	Date of Birth. Mandatory if value of <AuthType> is '2' or '6'.	Conditional	Omit
<CVV>	AN	3	3	Card Verification Value, the 3-digit code printed on the back of the card. Mandatory if the value of <AuthType> is '3'.	Conditional	Omit
<accCode>	AN	0	6	Access code or passcode. If provided, must be 6 digits, leading zeroes are acceptable. Leave	Conditional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				empty if not required. Mandatory if the value of <AuthType> is '4'.		
<newAccCode>	AN	0	6	The new access code for the card. This can be updated by the primary card and by additional cards that share the same customer record. If provided, must be 6 digits, leading zeroes are acceptable. Leave empty if not required.	Optional	Omit
<crdProduct>	AN	4	4	Card product associated with the card. Legacy field. Will always be blank.	Optional	Conditional
<lastName>	AN	1	30	Cardholder's last name for authenticating the cardholder if the value of <AuthType> is '6'.	C	Omit
<Title>	AN	1	4	Cardholder's title. This can be updated by the primary card and by additional cards that share the same customer record.	Optional	Omit
<firstName>	AN	1	30	Cardholder's first name. Also used as the card purchaser's first name if no delivery address is supplied. Mandatory if <lastName> is present and the value of <AuthType> is not '6'.	Conditional	Omit
<addr1>	AN	1	50	Cardholder's address line 1. Also used as the card purchaser's address line 1 if no delivery address is supplied. Mandatory if 'Address' fields are specified.	Conditional	Omit
<addr2>	AN	1	50	Cardholder's address line 2. Also used as the card purchaser's address line 2 if no delivery address is supplied.	Optional	Omit
<addr3>	AN	1	50	Cardholder's address line 3. Also used as the card purchaser's address line 3 if no delivery address is supplied.	Optional	Omit
<city>	AN	1	50	Cardholder's home city. Also used as the card purchaser's city if no delivery address is supplied. Mandatory if <addrL1> is present, and <postcode> is not present.	Conditional	Omit
<postcode>	AN	1	10	Cardholder's home postcode. Also used as the card purchaser's postcode if no postcode is supplied. Mandatory if <addrL1> is present, and <city> is not present. See Postcode Permitted Characters.	Conditional	Omit
<country>	AN	1	3	Cardholder's country of residence.	Conditional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				This is represented as a 3 digit ISO country code (e.g. 826 for UK). Mandatory if <addrL1> is present.		
<tel>	AN	1	15	Telephone number. See Processing of Phone Numbers.	Optional	Omit
<Workaddr1>	AN	1	35	Work address line 1. Mandatory if work address fields are being specified. If set to <space>, then clears *all* work address fields.	Conditional	Omit
<Workaddr2>	AN	1	35	Work address line 2.	Optional	Omit
<Workaddr3>	AN	1	35	Work address line 3.	Optional	Omit
<Workcity>	AN	1	15	Work city. Mandatory if <workAddrL1> is present, and <workPostcode> is not present.	Conditional	Omit
<Workpostcode>	AN	1	10	Work postcode. Mandatory if <addrL1> is present, and <workCity> is not present. See Postcode Permitted Characters.	Conditional	Omit
<Workcounty>	AN	1	20	Work county.	Optional	Omit
<Workcountry>	AN	1	3	Work country of residence. This is represented as a 3 digit ISO country code (e.g. 826 for UK). Mandatory if <workAddrL1> is present.	Conditional	Omit
<Worktel>	AN	1	15	Work telephone number. See Processing of Phone Numbers.	Optional	Omit
<pobox>	AN	1	8	Post office box number.	Optional	Omit
<email>	AN	1	64	Email address of the cardholder.	Optional	Omit
<fax>	AN	1	20	Fax number.	Optional	Omit
<mobTel>	AN	1	15	Cardholder's mobile phone number (including dialing code if applicable). See Processing of Telephone Numbers.	Optional	Omit
<maritalStatus>	AN	1	1	Marital status: S= single; M= married; D = divorced; W = widowed; space = not specified.	Optional	Omit
<sex>	AN	1	1	Gender: M = male; F= female; space= Not specified.	Optional	Omit
<embossName>	AN	1	27	Name embossed on the card. Note that actual embossed name does not change until the card is re-issued. This can be updated by the primary card and by additional cards that share the same customer	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				record.		
<refuseCheck>	AN	1	1	Whether cheques should be refused. 0 = No; 1= Yes. For customer use only. Thredd ignore this field.	Optional	Omit
<mailShots>	AN	1	1	Whether the cardholder accepts mailshots or member contact. 0 = No; 1 = Yes For customer use only. Thredd ignore this field.	Optional	Omit
<discret>	AN	1	25	Discretionary data, for information only.	Optional	Omit
<userdata>	AN	1	30	Cardholder information stored at card level, free text field.	Optional	Omit
<userdata1>	AN	1	12	Cardholder information stored at member level, free text field.	Optional	Omit
<userdata2>	AN	1	12	Cardholder information stored at member level, free text field.	Optional	Omit
<userdata3>	AN	1	12	Cardholder information stored at member level, free text field.	Optional	Omit
<userdata4>	AN	1	32	Cardholder information stored at member level, free text field.	Optional	Omit
<pin>	AN	1	1	Indicates whether the card should have a PIN: 0 = No; 1 = Yes. This can be updated by the primary card and by additional cards that share the same member record. **Note**: Updating this value to reflect that the card has a PIN does not trigger a PIN-generation request. The update must be initiated by another means. An update from 0 to 1 means that a PIN may be requested.	Optional	Omit
<imageID>	AN	1	16	ID of the card manufacturer image to be printed on the card. This can be updated by the primary card and by additional cards that share the same member record.	Optional	Omit
<brncode>	AN	8	8	Branch code (or Agent code) with which the card is associated. This can be updated by the primary card and by additional cards that share the same member record.	Optional	Omit
<renew>	AN	1	1	Indicates whether the card should be renewed on expiry: 0 = No, 1=	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				Yes. **Note**: The value is stored,but currently not used. Future feature.		
<dlvMethod>	AN	1	1	The delivery method for the card. Options include: 0 = Standard delivery; 1 = Registered mail; 2 = Direct delivery; 3 = Customized DelvMethod 1; 4 = Customized DelvMethod 2; 5 = Customized DelvMethod 3; 6= Customized DelvMethod 4; 7 = Customized DelvMethod 5; Default value is 0	Optional	Omit
<denyMCC>	AN	1	192	List of MCC's (merchant category codes) that should be denied for the card. MCC's can be comma-separated, specified as a range, or combinations of both (e.g. 4546,5462,5667-5673,5957). These restrictions are in addition to MCC restrictions defined at the card product level. **Note**: For legacy use only.	Optional	Omit
<denySvc>	AN	1	64	(missing or bad snippet)	Optional	Omit
<accType>	AN	2	2	Type of card account. See Account Types.	Optional	Omit
<memo>	AN	1	4096	Add a memo to the customer details that will be visible to CSR's on the GUI application.	Optional	Omit
<memoScope>	N	1	3	Scope of visibility for the memo. 0 – full visibility (any user logged in to the GUI application is able to view this memo). To set more restrictive scopes, the Member and Thredd must agree the value for each level before using it here. Default value as 0.	Mandatory	Omit
<memoUser>	AN	1	15	The user that created the memo.	Optional	Omit
<itemSrc>	N	1	5	Source field to define alternate fees. Legacy field for information purposes only; see Item Source Types. Suggest using 0.	Mandatory	Omit
<dlvTitle>	AN	4	16	Delivery address title.	Optional	Omit
<dlvfirstName>	AN	1	30	Delivery first name. Mandatory if	Conditional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				<dlvLastName> is present.		
<dlvlastName>	AN	1	30	Delivery last name. Mandatory if delivery name fields are being specified.	Conditional	Omit
<dlvaddr1>	AN	1	50	Delivery address line 1. Mandatory if delivery address fields are being specified.	Conditional	Omit
<dlvaddr2>	AN	1	50	Delivery address line 2.	Optional	Omit
<dlvaddr3>	AN	1	50	Delivery address line 3.	Optional	Omit
<dlvcity>	AN	1	50	Delivery city. Mandatory if <dlvAddrL1> is present, and <dlvPostcode> is not present.	Conditional	Omit
<dlvpostcode>	AN	1	10	Delivery postcode. Mandatory if <dlvAddrL1> is present, and <dlvCity> is not present. See Postcode Permitted Characters.	Conditional	Omit
<dlvcounty>	AN	1	20	Delivery county.	Optional	Omit
<dlvcountry>	AN	1	3	Card purchaser's /delivery address country 3-digit ISO country code (e.g., 826 for UK). Mandatory if <dlvAddrL1> is present.	Conditional	Omit
<dlvtel>	AN	1	20	Delivery telephone number.	Optional	Omit
<dlvEffDate>	YYYY-MM-DD	10	10	Date at which delivery name and/or address becomes effective. If not specified, the current date is used as the effective date.	Optional	Omit
<dlvDaysValid>	N	1	3	No longer used. Set to 0.	Mandatory	Omit
<crdprogram>	AN	1	6	Pre-defined program reference code associated with the card. This can be updated by the primary card and by additional cards that share the same customer record.	Optional	Omit
<crddesign>	AN	1	50	The card manufacturer's card design reference. Also known as PRODUCT_REF in the XML file sent to the card manufacturer.	Optional	Omit
<sysDate>	YYYY-MM-DD	10	10	The system processing date.	Omit	Mandatory
<actionCode>	AN	3	3	The action code for the response. See Action Codes.	Omit	Mandatory
<feeTier>	AN	1	3	The fee tier based on which fees are charged for the card.	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<isoLang>	AN	2	2	The language code in ISO 639-1 format. The language is used for card mailers, and also used if bespoke SMS templates are set up.	Optional	Omit
<fundcrdPAN>	AN	13	19	PAN of source-of-funds card. Reserved for future use. DO NOT USE	Optional	Omit
<fundCrdEffDate>	YYYY-MM-DD	10	10	Start Date of source-of-funds card. Reserved for future use. DO NOT USE	Optional	Omit
<fundCrdExpDate>	YYYY-MM-DD	10	10	Expiry Date of source-of-funds card. Reserved for future use. DO NOT USE	Optional	Omit
<fundCrdType>	AN	1	15	Type of card used as source of funds: MC = MasterCard VISA = Visa DELTA =Visa Debit/Delta SWITCH = UK Maestro MASTRO = International Maestro SOLO = Solo AMEX = American Express Reserved for future use. DO NOT USE	Optional	Omit
<fundCrdIssNum>	N	1	2	Issuer number of source of card funds. Reserved for future use. Set to 0.	Mandatory	Omit
<fundCrdCVC>	N	3	4	Card verification code of source of card funds. Reserved for future use. Set to 0.	Mandatory	Omit
<SmsBalance>	N	1	1	Whether to send an SMS regarding the details of transaction amount and available balance to the customer after each card use. 0 or False = Do not send; 1 or True = Send; 2 = Do not change current value.	Mandatory	Omit
<CustAccount>	AN	1	25	Client reference for the card.	Optional	Omit
< VanityName>	AN	1	32	Enables you to add an additional alternative form of title to the card, e.g. “Company Director”. Can appear on *Embossed Line 4*, or *Thermal Line 1* and *Thermal Line 2*,	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				if configured in Smart Client, and be recorded in the card purchaser details.		
< CarrierType>	AN	1	30	The Carrier Product design reference as used by the Card Manufacturer. This is the letter onto which the card is attached when sent to the cardholder. Identifies the Carrier Product type of the Card Manufacturer.	Optional	Omit
<Url>	AN	1	100	This value is included in the Thredd Card Generation file, in the <QRCode> field. For example: *https://www.your-e-card.com/balance/2909680989632389* For details, see the Card Generation Interface Specifications.	Optional	Omit

Service Details

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<svcSrc>	N	1	2	RESERVED FOR FUTURE USE Source of the service. Please use the value 4 (has no effect)	Mandatory	Omit
<svcType>	N	1	3	RESERVED FOR FUTURE USE The service type. Please use the value 1 (has no effect)	Mandatory	Omit
<svcStatus>	N	1	1	RESERVED FOR FUTURE USE The service status associated with <SMSSVCTYPE>. Please use the value 1 (has no effect)	Mandatory	Omit

Clearing Field Values

The following fields can have their values cleared by sending a <space>:

Title	tel	maritalStatus	imageID	Fulfil2
lastName	userdata	sex	VanityName	ProductRef
firstName	workAddr1	userdata1	dlvpostcode	ThermalLine1
addr1	workAddr2	userdata2	dlvaddr1	ThermalLine2
addr2	workAddr3	userdata3	dlvaddr2	
addr3	workcity	userdata4	dlvaddr3	
city	workcounty	email	dlvcity	
county	workpostcode	fax	dlvcountry	
postcode	workcountry	mobTel	EmbossLine4	
country	worktel	embossName	Fulfil1	

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_Update_Cardholder_Details>
         <hyp:WSID>2021123456789</hyp:WSID>
         <hyp:IssCode>PMT</hyp:IssCode>
         <hyp:TxnCode>13</hyp:TxnCode>
         <hyp:ClientCode></hyp:ClientCode>
         <hyp:AuthType>1</hyp:AuthType>
         <hyp:PAN></hyp:PAN>
         <hyp:Track2></hyp:Track2>
         <hyp:DOB></hyp:DOB>
         <hyp:CVV></hyp:CVV>
         <hyp:accCode></hyp:accCode>
         <hyp:newAccCode></hyp:newAccCode>
         <hyp:crdProduct></hyp:crdProduct>
         <hyp:lastName></hyp:lastName>
         <hyp:Title></hyp:Title>
         <hyp:firstName></hyp:firstName>
         <hyp:addr1></hyp:addr1>
         <hyp:addr2></hyp:addr2>
         <hyp:city></hyp:city>
         <hyp:postcode></hyp:postcode>
         <hyp:country></hyp:country>
         <hyp:tel></hyp:tel>
         <hyp:Workaddr1>Office 13, Telfords Yard</hyp:Workaddr1>
         <hyp:Workaddr2>6-8 The Highway, Wapping </hyp:Workaddr2>
         <hyp:Workaddr3></hyp:Workaddr3>
         <hyp:Workcity>London</hyp:Workcity>
         <hyp:Workpostcode>E1W 2BS</hyp:Workpostcode>
         <hyp:Workcounty></hyp:Workcounty>
         <hyp:Workcountry>826</hyp:Workcountry>
         <hyp:Worktel></hyp:Worktel>
         <hyp:pobox></hyp:pobox>
         <hyp:email></hyp:email>
         <hyp:fax></hyp:fax>
         <hyp:mobTel></hyp:mobTel>
         <hyp:maritalStatus>M</hyp:maritalStatus>
         <hyp:sex>M</hyp:sex>
         <hyp:embossName></hyp:embossName>
         <hyp:refuseCheck></hyp:refuseCheck>
         <hyp:mailShots></hyp:mailShots>
         <hyp:discret></hyp:discret>
         <hyp:userdata></hyp:userdata>
         <hyp:userdata1></hyp:userdata1>
         <hyp:userdata2></hyp:userdata2>
         <hyp:userdata3></hyp:userdata3>
         <hyp:userdata4></hyp:userdata4>
         <hyp:pin></hyp:pin>
         <hyp:imageID></hyp:imageID>
         <hyp:brncode></hyp:brncode>
         <hyp:renew></hyp:renew>
         <hyp:dlvMethod></hyp:dlvMethod>
         <hyp:denyMCC></hyp:denyMCC>
         <hyp:denySvc></hyp:denySvc>
         <hyp:accType></hyp:accType>
         <hyp:memo></hyp:memo>
         <hyp:memoScope>0</hyp:memoScope>
         <hyp:memoUser></hyp:memoUser>
         <hyp:itemSrc>2</hyp:itemSrc>
         <hyp:dlvTitle></hyp:dlvTitle>
         <hyp:dlvfirstName></hyp:dlvfirstName>
```

```
            <hyp:dlvlastName></hyp:dlvlastName>
            <hyp:dlvaddr1></hyp:dlvaddr1>
            <hyp:dlvaddr2></hyp:dlvaddr2>
            <hyp:dlvaddr3></hyp:dlvaddr3>
            <hyp:dlvcity></hyp:dlvcity>
            <hyp:dlvpostcode></hyp:dlvpostcode>
            <hyp:dlvcounty></hyp:dlvcounty>
            <hyp:dlvcountry></hyp:dlvcountry>
            <hyp:dlvtel></hyp:dlvtel>
            <hyp:dlvEffDate></hyp:dlvEffDate>
            <hyp:dlvDaysValid>0</hyp:dlvDaysValid>
            <hyp:crdprogram></hyp:crdprogram>
            <hyp:crddesign></hyp:crddesign>
            <hyp:feeTier></hyp:feeTier>
            <hyp:isoLang></hyp:isoLang>
            <hyp:fundcrdPAN></hyp:fundcrdPAN>
            <hyp:fundCrdEffDate></hyp:fundCrdEffDate>
            <hyp:fundCrdExpDate></hyp:fundCrdExpDate>
            <hyp:fundCrdType>1</hyp:fundCrdType>
            <hyp:fundCrdIssNum>1</hyp:fundCrdIssNum>
            <hyp:fundCrdCVC>1</hyp:fundCrdCVC>
            <hyp:svcSrc>1</hyp:svcSrc>
            <hyp:svcType>1</hyp:svcType>
            <hyp:svcStatus>1</hyp:svcStatus>
            <hyp:PublicToken>123456789</hyp:PublicToken>
            <hyp:SmsBalance>0</hyp:SmsBalance>
            <hyp:Url></hyp:Url>
         </hyp:Ws_Update_Cardholder_Details>
      </soapenv:Body>
   </soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_Update_Cardholder_DetailsResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_Update_Cardholder_DetailsResult>
            <WSID>2021123456789</WSID>
            <IssCode>PMT</IssCode>
            <TxnCode>13</TxnCode>
            <ClientCode/>
            <PublicToken>123456789</PublicToken>
            <CrdProduct/>
            <SysDate>2013-01-01</SysDate>
            <ActionCode>000</ActionCode>
         </Ws_Update_Cardholder_DetailsResult>
      </Ws_Update_Cardholder_DetailsResponse>
   </soap:Body>
</soap:Envelope>
```

Update Cardholder Details (V2)

API: Ws_Update_Cardholder_Details_V2

This web service updates the details of a cardholder.

Note: This web service is an enhancement to Ws_Update_Cardholder_Details (see Update Cardholder Details (V1). It allows you to update additional cardholder details, such as EmbossLine4, ProductRef andThermalLine1.

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every request. For details, see the FAQs.	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<TxnCode>	AN	1	2	The Transaction Code. See Transaction Codes. Default value is 13.	Mandatory	Mandatory
<ClientCode>	AN	1	64	User ID of the customer using the service. Only applicable to systems using member logins. Returned in the response if present in the request. **Note**: Legacy field. Not used.	Optional	Conditional
<AuthType>	AN	1	1	Parameter to specify how the card is authenticated. See Authentication Methods.	Mandatory	Omit
<PAN>	AN	14	19	Card Number. Unique card identifier.	Conditional	Omit
<PublicToken>	AN	1	9	The card's public token, Mandatory in request if <PAN> and <Track2> are not present. Mandatory in the response.	Conditional	Mandatory
<DOB>	YYYY-MM-DD	10	10	Date of Birth. Mandatory if value of <AuthType> is '2' or '6'.	Conditional	Omit
<CVV>	AN	3	3	Card Verification Value, the 3-digit code printed on the back of the card. Mandatory if the value of <AuthType> is '3'.	Conditional	Omit
<accCode>	AN	0	6	Access code or passcode. If provided, must be 6 digits, leading zeroes are acceptable. Leave empty if not required. Mandatory if the value of <AuthType> is '4'.	Conditional	Omit
<newAccCode>	AN	0	6	The new access code for the card. This can be updated by the	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				primary card and by additional cards that share the same customer record. If provided, must be 6 digits, leading zeroes are acceptable. Leave empty if not required.		
<lastName>	AN	1	30	Cardholder's last name for authenticating the cardholder if the value of <AuthType> is '6'.	C	Omit
<middleName>	AN	1	100	Cardholder's middle name. The <MiddleName> is not part of the <EmbossName> and therefore, does not check manufacture-approved characters. If a delivery address is not supplied, the cardholder's middle name will be the card purchaser's middle name. Only available in V2	Optional	Omit
<Title>	AN	1	4	Cardholder's title. This can be updated by the primary card and by additional cards that share the same customer record.	Optional	Omit
<firstName>	AN	1	30	Cardholder's first name. Also used as the card purchaser's first name if no delivery address is supplied. Mandatory if <lastName> is present and the value of <AuthType> is not '6'.	Conditional	Omit
<addr1>	AN	1	50	Cardholder's address line 1. Also used as the card purchaser's address line 1 if no delivery address is supplied. Mandatory if 'Address' fields are specified.	Conditional	Omit
<addr2>	AN	1	50	Cardholder's address line 2. Also used as the card purchaser's address line 2 if no delivery address is supplied.	Optional	Omit
<addr3>	AN	1	50	Cardholder's address line 3. Also used as the card purchaser's address line 3 if no delivery address is supplied.	Optional	Omit
<city>	AN	1	50	Cardholder's home city. Also used as the card purchaser's city if no delivery address is supplied. Mandatory if <addrL1> is present, and <postcode> is not present.	Conditional	Omit
<postcode>	AN	1	10		Conditional	Omit
<country>	AN	1	3	Cardholder's country of residence. This is represented as a 3 digit ISO country code (e.g. 826 for UK).	Conditional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				Mandatory if <addrL1> is present.		
<tel>	AN	1	15	Telephone number. See Processing of Phone Numbers.	Optional	Omit
<Workaddr1>	AN	1	35	Work address line 1. Mandatory if work address fields are being specified. If set to <space>, then clears *all* work address fields.	Conditional	Omit
<Workaddr2>	AN	1	35	Work address line 2.	Optional	Omit
<Workaddr3>	AN	1	35	Work address line 3.	Optional	Omit
<Workcity>	AN	1	15	Work city. Mandatory if <workAddrL1> is present, and <workPostcode> is not present.	Conditional	Omit
<Workpostcode>	AN	1	10	Work postcode. Mandatory if <addrL1> is present, and <workCity> is not present. See Postcode Permitted Characters.	Conditional	Omit
<Workcounty>	AN	1	20	Work county.	Optional	Omit
<Workcountry>	AN	1	3	Work country of residence. This is represented as a 3 digit ISO country code (e.g. 826 for UK). Mandatory if <workAddrL1> is present.	Conditional	Omit
<Worktel>	AN	1	15	Work telephone number. See Processing of Phone Numbers.	Optional	Omit
<email>	AN	1	64	Email address of the cardholder.	Optional	Omit
<fax>	AN	1	20	Fax number.	Optional	Omit
<mobTel>	AN	1	15	Cardholder's mobile phone number (including dialing code if applicable). See Processing of Telephone Numbers.	Optional	Omit
<maritalStatus>	AN	1	1	Marital status: S= single; M= married; D = divorced; W = widowed; space = not specified.	Optional	Omit
<sex>	AN	1	1	Gender: M = male; F= female; space= Not specified.	Optional	Omit
<embossName>	AN	1	27	Name embossed on the card. Note that actual embossed name does not change until the card is re-issued. This can be updated by the primary card and by additional cards that share the same customer record.	Optional	Omit
<discret>	AN	1	25	Discretionary data, for information	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				only.		
<userdata>	AN	1	30	Cardholder information stored at card level, free text field.	Optional	Omit
<userdata1>	AN	1	12	Cardholder information stored at member level, free text field.	Optional	Omit
<userdata2>	AN	1	12	Cardholder information stored at member level, free text field.	Optional	Omit
<userdata3>	AN	1	12	Cardholder information stored at member level, free text field.	Optional	Omit
<userdata4>	AN	1	32	Cardholder information stored at member level, free text field.	Optional	Omit
<imageID>	AN	1	16	ID of the card manufacturer image to be printed on the card. This can be updated by the primary card and by additional cards that share the same member record.	Optional	Omit
<brncode>	AN	8	8	Branch code (or Agent code) with which the card is associated. This can be updated by the primary card and by additional cards that share the same member record.	Optional	Omit
<dlvMethod>	AN	1	1	The delivery method for the card. Options include: 0 = Standard delivery; 1 = Registered mail; 2 = Direct delivery; 3 = Customized DelvMethod 1; 4 = Customized DelvMethod 2; 5 = Customized DelvMethod 3; 6= Customized DelvMethod 4; 7 = Customized DelvMethod 5; Default value is 0	Optional	Omit
<itemSrc>	N	1	5	Source field to define alternate fees. Legacy field for information purposes only; see Item Source Types. Suggest using 0.	Mandatory	Omit
<dlvTitle>	AN	4	16	Delivery address title.	Optional	Omit
<dlvfirstName>	AN	1	30	Delivery first name. Mandatory if <dlvLastName> is present.	Conditional	Omit
<dlvmiddleName>	AN	1	50	Delivery middle name. Only available in V2	Optional	Omit
<dlvlastName>	AN	1	30	Delivery last name. Mandatory if delivery name fields are being specified.	Conditional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<dlvaddr1>	AN	1	50	Delivery address line 1. Mandatory if delivery address fields are being specified.	Conditional	Omit
<dlvaddr2>	AN	1	50	Delivery address line 2.	Optional	Omit
<dlvaddr3>	AN	1	50	Delivery address line 3.	Optional	Omit
<dlvcity>	AN	1	50	Delivery city. Mandatory if <dlvAddrL1> is present, and <dlvPostcode> is not present.	Conditional	Omit
<dlvpostcode>	AN	1	10	Delivery postcode. Mandatory if <dlvAddrL1> is present, and <dlvCity> is not present. See Postcode Permitted Characters.	Conditional	Omit
<dlvcounty>	AN	1	20	Delivery county.	Optional	Omit
<dlvcountry>	AN	1	3	Card purchaser's /delivery address country 3-digit ISO country code (e.g., 826 for UK). Mandatory if <dlvAddrL1> is present.	Conditional	Omit
<crdprogram>	AN	1	6	Pre-defined program reference code associated with the card. This can be updated by the primary card and by additional cards that share the same customer record.	Optional	Omit
<ProductRef>	AN	1	50	The card manufacturer's card design reference. Also known as PRODUCT_REF in the XML file sent to the card manufacturer. **Note**: This field serves dual purposes and can also be used during mobile wallet tokenisation, to specify which card profile (image artwork and terms and conditions) the card scheme should use. For details, see the Tokenisation Service Guide.	Optional	Omit
<SysDate>	YYYY-MM-DD	10	10	The system processing date.	Omit	Mandatory
<ActionCode>	AN	3	3	The action code for the response. See Action Codes.	Omit	Mandatory
<isoLang>	AN	2	2	The language code in ISO 639-1 format. The language is used for card mailers, and also used if bespoke SMS templates are set up.	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<SmsBalance>	N	1	1	Whether to send an SMS regarding the details of transaction amount and available balance to the customer after each card use. 0 or False = Do not send; 1 or True = Send; 2 = Do not change current value.	Mandatory	Omit
<CustAccount>	AN	1	25	Cardholder account number or reference number. You can use this reference to find the cards linked to a cardholder. Also displayed in Smart Client and in Thredd Portal as *Customer Reference*.	Optional	Omit
< VanityName>	AN	1	32	Enables you to add an additional alternative form of title to the card, e.g. “Company Director”. Can appear on *Embossed Line 4*, or *Thermal Line 1* and *Thermal Line 2*, if configured in Smart Client, and be recorded in the card purchaser details.	Optional	Omit
< CarrierType>	AN	1	30	The Carrier Product design reference as used by the Card Manufacturer. This is the letter onto which the card is attached when sent to the cardholder. Identifies the Carrier Product type of the Card Manufacturer.	Optional	Omit
<Fulfil1>	AN	1	50	Free text field for transferring extra information to the card manufacturer, for example, to be printed on the Carrier. Identifies the *FULFIL1* field in the XML file sent to the card manufacturer.	Optional	Omit
<Fulfil2>	AN	1	50	Free text field for transferring extra information to the card manufacturer, for example, to be printed on the Carrier. Identifies the *FULFIL2* field in the XML file sent to the card manufacturer.	Optional	Omit
<ThermalLine1>	AN	1	120	Free text field for transferring extra information to be printed on the card. For example, to add a customer service phone number.	Optional	Omit
<ThermalLine2>	AN	1	70	Free text field for transferring extra information to be printed on the card. For example, to add a link to your service terms and conditions.	Optional	Omit
<EmbossLine4>	AN	1	27	The card’s embossed line 4 on the front of the card. Could be used for example, to add an account number or sort code.	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<LogoFrontId>	AN	1	30	Reference which identifies the card manufacturer's logo file that is printed on the face of the card.	Optional	Omit
<LogoBackId>	AN	1	30	Reference which identifies the card manufacturer's logo file that is printed on the back of the card, if supported.	Optional	Omit
<Delv_Code>	AN	1	12	The delivery code for the card. If specified, the card manufacturer sends all cards with the same delivery code to the specified delivery address.	Optional	Omit
<Url>	AN	1	100	This value is included in the Thredd Card Generation file, in the `<QRCode>` field. For example: *https://www.your-e-card.com/balance/2909680989632389* For details, see the Card Generation Interface Specifications.	Optional	Omit
<OptOut>	Boolean	1	1	Flag for opting out of Visa Account Updater (VAU) or the Automatic Billing Updater (ABU) service for Mastercard.	Optional	Omit
<OOBAppURL>	AN	1	2048	Out Of Band app URL used in a 3D Secure authentication session. The Card Scheme (e.g., Mastercard) requires issuers using Out of Band/Biometric authentication to support the automatic redirection of cardholders from the merchant app to the authenticator app. OOBAppURL is the URL of this authenticator app.	Optional	Omit
<Update3DSRecords>	Boolean	1	5	If set to *true* or *1* then this option enables you to automatically update the cardholder's 3D Secure data (SMS mobile number or email) to reflect any changes made to the cardholder's email address `<email>` or mobile number `<mobTel>`. If not used, then set this field to *false* or *0*. **Note:** Only relevant for cards enrolled in the 3D Secure service, where `Supplier_3DS_Version` = 'RDX' or'APATA'.	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				Note: If the card is not enrolled in the 3D Secure service and this field is set to 1, then the response returns the action code 933. See Action Codes.		

Clearing field values

The following fields may have their values cleared by sending a <space>:

Title lastName middleName firstName addr1 addr2 addr3 city county postcode country	tel userdata workAddr1 workAddr2 workAddr3 workcity workcounty workpostcode workcountry worktel	maritalStatus sex userdata1 userdata2 userdata3 userdata4 email fax mobTel embossName	imageID VanityName dlvpostcode dlvaddr1 dlvaddr2 dlvaddr3 dlvcity dlvcountry EmbossLine4 Fulfil1	Fulfil2 ProductRef ThermalLine1 ThermalLine2

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_Update_Cardholder_Details_V2>
    <hyp:WSID>2021123456789</hyp:WSID>
    <hyp:IssCode>PMT</hyp:IssCode>
    <hyp:TxnCode>13</hyp:TxnCode>
    <hyp:ClientCode></hyp:ClientCode>
    <hyp:AuthType>1</hyp:AuthType>
    <hyp:PAN></hyp:PAN>
    <hyp:PublicToken>123456789</hyp:PublicToken>
    <hyp:DOB></hyp:DOB>
    <hyp:CVV></hyp:CVV>
    <hyp:accCode></hyp:accCode>
    <hyp:newAccCode></hyp:newAccCode>
    <hyp:lastName></hyp:lastName>
    <hyp:middleName></hyp:middleName>
    <hyp:Title></hyp:Title>
    <hyp:firstName></hyp:firstName>
    <hyp:addr1></hyp:addr1>
    <hyp:addr2></hyp:addr2>
    <hyp:addr3></hyp:addr3>
    <hyp:city></hyp:city>
    <hyp:postcode></hyp:postcode>
    <hyp:country></hyp:country>
    <hyp:tel></hyp:tel>
    <hyp:Workaddr1>Office 13, Telfords Yard</hyp:Workaddr1>
    <hyp:Workaddr2>6-8 The Highway, Wapping </hyp:Workaddr2>
    <hyp:Workaddr3></hyp:Workaddr3>
    <hyp:Workcity>London</hyp:Workcity>
    <hyp:Workpostcode>E1W 2BS</hyp:Workpostcode>
    <hyp:Workcounty></hyp:Workcounty>
```

```
    <hyp:Workcountry>826</hyp:Workcountry>
    <hyp:Worktel></hyp:Worktel>
    <hyp:email></hyp:email>
    <hyp:fax></hyp:fax>
    <hyp:mobTel></hyp:mobTel>
    <hyp:maritalStatus>M</hyp:maritalStatus>
    <hyp:sex>M</hyp:sex>
    <hyp:embossName></hyp:embossName>
    <hyp:discret></hyp:discret>
    <hyp:userdata></hyp:userdata>
    <hyp:userdata1></hyp:userdata1>
    <hyp:userdata2></hyp:userdata2>
    <hyp:userdata3></hyp:userdata3>
    <hyp:userdata4></hyp:userdata4>
    <hyp:imageID></hyp:imageID>
    <hyp:brncode></hyp:brncode>
    <hyp:dlvMethod></hyp:dlvMethod>
    <hyp:itemSrc>2</hyp:itemSrc>
    <hyp:dlvTitle></hyp:dlvTitle>
    <hyp:dlvfirstName></hyp:dlvfirstName>
    <hyp:dlvmiddleName></hyp:dlvmiddleName>
    <hyp:dlvlastName></hyp:dlvlastName>
    <hyp:dlvaddr1></hyp:dlvaddr1>
    <hyp:dlvaddr2></hyp:dlvaddr2>
    <hyp:dlvaddr3></hyp:dlvaddr3>
    <hyp:dlvcity></hyp:dlvcity>
    <hyp:dlvpostcode></hyp:dlvpostcode>
    <hyp:dlvcounty></hyp:dlvcounty>
    <hyp:dlvcountry></hyp:dlvcountry>
    <hyp:crdprogram></hyp:crdprogram>
    <hyp:ProductRef></hyp:ProductRef>
    <hyp:isoLang></hyp:isoLang>
    <hyp:SmsBalance>0</hyp:SmsBalance>
    <hyp:CustAccount></hyp:CustAccount>
    <hyp:VanityName></hyp:VanityName>
    <hyp:CarrierType></hyp:CarrierType>
    <hyp:Fulfil1></hyp:Fulfil1>
    <hyp:Fulfil2></hyp:Fulfil2>
    <hyp:ThermalLine1></hyp:ThermalLine1>
    <hyp:ThermalLine2></hyp:ThermalLine2>
    <hyp:EmbossLine4></hyp:EmbossLine4>
    <hyp:LogoFrontId></hyp:LogoFrontId>
    <hyp:LogoBackId></hyp:LogoBackId>
    <hyp:Delv_Code></hyp:Delv_Code>
    <hyp:Url></hyp:Url>
    <hyp:OptOut>1</hyp:OptOut>
    <hyp:OOBAppURL>https://login.app.bank1.com/</hyp:OOBAppURL>
    <Update3DSRecords>0</Update3DSRecords>
  </hyp:Ws_Update_Cardholder_Details_V2>
   </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
    <Ws_Update_Cardholder_Details_V2Response xmlns="http://www.globalprocessing.ae/HyperionWeb">
     <Ws_Update_Cardholder_Details_V2Result>
        <WSID>2021123456789</WSID>
        <IssCode>PMT</IssCode>
        <TxnCode>13</TxnCode>
        <ClientCode/>
        <PublicToken>123456789</PublicToken>
        <SysDate>2020-08-01</SysDate>
        <ActionCode>000</ActionCode>
      </Ws_Update_Cardholder_Details_V2Result>
     </Ws_Update_Cardholder_Details_V2Response>
   </soap:Body>
</soap:Envelope>
```

Cards Get Expiring Soon

API: Ws_Get_Card_ExpireSoon

This web service returns the details of cards that are going to expire before the end of the current month. The response returns all cards due to expire, regardless of the volume.

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every request. For details, see the FAQs.	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<SysDate>	YYYY-MM-DD	10	10	The system processing date.	Omit	Mandatory
<ActionCode>	AN	3	3	The action code for the response. See Action Codes.	Omit	Mandatory
<cardList>	-	-	-	An array of Card_Details. See Card_Details below. Can occur multiple times within the message.		

Card_Details

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<Scheme>	AN	1	50	Scheme name.	Omit	Mandatory
<Product>	AN	1	50	Name of the product.	Omit	Mandatory
<PublicToken>	N	16	19	Card's public token.	Omit	Mandatory
<Emboss_Name>	AN	1	51	Name embossed on the card.	Omit	Mandatory
<ExpiryDate>	YYYY-MM-DD	10	10	Expiry date of the card in *YYYY-MM-DD* format.	Omit	Mandatory
<IsLive>	N	1	1	Indicates whether the card is active: 1 = Active; 0 = Not Active	Omit	Mandatory
<ActivationDate>	YYYY-MM-DD	10	10	Activation date of the card.	Omit	Mandatory
<AvlBal>	D	1	20	The current balance on	Omit	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				the card account. This includes all financial transactions and outstanding authorisations. The balance amount can include up to four decimal places, depending on the currency exponent (e.g., 10.99 for EUR which has a currency exponent of 2). See Currency Codes.		
<BlkAmt>	D	1	20	Amount of funds blocked on the card account as a result of all outstanding authorisations. The balance amount can include up to four decimal places, depending on the currency exponent (e.g., 10.99 for EUR which has a currency exponent of 2). See Currency Codes.	Omit	Mandatory
<CurCode>	AN	3	3	3-letter ISO currency code for the account billing currency.	Omit	Mandatory

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_Get_Card_ExpireSoon>
         <hyp:WSID>20211234567896</hyp:WSID>
         <hyp:IssCode>PMT</hyp:IssCode>
      </hyp:Ws_Get_Card_ExpireSoon>
   </soapenv:Body>
</soapenv:Envelope>
```

Response

```
soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_Get_Card_ExpireSoonResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_Get_Card_ExpireSoonResult>
            <WSID>20211234567896</WSID>
            <IssCode>PMT</IssCode>
            <SysDate>2021-10-22</SysDate>
            <ActionCode>000</ActionCode>
            <cardList>
               <Card_Details>
```

```
                  <Scheme>ABCD</Scheme>
                  <Product>XYZ</Product>
                  <PublicToken>123456789</PublicToken>
                  <Emboss_Name>FIRSTNAME LASTNAME</Emboss_Name>
                  <ExpiryDate>2021-11-12</ExpiryDate>
                  <IsLive>true</IsLive>
                  <ActivationDate>2020-11-12</ActivationDate>
                  <AvlBal>2206</AvlBal>
                  <BlkAmt>0.00</BlkAmt>
                  <CurCode>GBP</CurCode>
               </Card_Details>
               <Card_Details>
                  <Scheme>ABCD</Scheme>
                  <Product>ASDF</Product>
                  <PublicToken>789456123</PublicToken>
                  <Emboss_Name>FIRSTNAME LASTNAME</Emboss_Name>
                  <ExpiryDate>2021-11-15</ExpiryDate>
                  <IsLive>true</IsLive>
                  <ActivationDate>2020-01-08</ActivationDate>
                  <AvlBal>0</AvlBal>
                  <BlkAmt>0.00</BlkAmt>
                  <CurCode>GBP</CurCode>
               </Card_Details>            </cardList>
         </Ws_Get_Card_ExpireSoonResult>
      </Ws_Get_Card_ExpireSoonResponse>
   </soap:Body>
</soap:Envelope>
```

Card Statement (V1)

API: Ws_Card_Statement

This web service returns transactions performed by the cardholder which took place on the card since a specified date. If the date is omitted then one month's transactions are returned. Starting balance and current (actual and available) balances are also returned. See also Card Statement (V2).

Note: Ws_Card_Statement excludes card status change entries prior to 2022. Card status changes before this year are no longer retrievable. If you want to retrieve card status changes prior to 2022, raise a ticket with Thredd and a member of the App Support team will deal with your request.

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every request. For details, see the FAQs.	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<TxnCode>	AN	1	2	The Transaction Code. See Transaction Codes. Default value 5.	Mandatory	Mandatory
<ClientCode>	AN	1	64	User ID of the customer using the service. Only applicable to systems using member logins. Returned in the response if present in the request. **Note**: Legacy field. Not used.	Optional	Conditional
<ItemSrc>	N	1	5	Source field which defines the item source type. See Item Source Types. If used, overrides any existing fees for using this web service.	Mandatory	Omit
<AuthType>	AN	1	1	Parameter to specify how the card is authenticated. See	Mandatory	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				Authentication Methods.		
<PAN>	AN	14	19	Card Number. Unique card identifier.	Conditional	Omit
<Track2>	AN	1	40	The card's Track 2. Mandatory in request if <PAN> and <PublicToken> are not present or when <AuthType> is '7'.	Conditional	Omit
<PublicToken>	AN	1	9	The card's public token, Mandatory in request if <PAN> and <Track2> are not present. Mandatory in the response.	Conditional	Mandatory
<DOB>	YYYY-MM-DD	10	10	Date of Birth. Mandatory if value of <AuthType> is '2' or '6'.	Conditional	Omit
<CVV>	AN	3	3	Card Verification Value, the 3-digit code printed on the back of the card. Mandatory if the value of <AuthType> is '3'.	Conditional	Omit
<AccCode>	AN	0	6	Access code or passcode. If provided, must be 6 digits, leading zeroes are acceptable. Leave empty if not required. Mandatory if the value of <AuthType> is '4'.	Conditional	Omit
<LastName>	AN	1	20	Cardholder's last name for authenticating the cardholder if the value of <AuthType> is '6'.	Conditional	Omit
<LocDate>	YYYY-MM-DD	10	10	The local current date in *year-month-date* format.	Mandatory	Mandatory
<LocTime>	HHMMSS	6	6	The local current	Mandatory	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				time, in *hour-minute-second* format.		
<TerminalID>	AN	1	15	Point of Sale (POS) or other terminal identifier, such as a hostname.	Optional	Omit
<StartBal>	D	1	20	The opening balance of the card account for the period required, ignoring any pending authorisations. The amount can include up to four decimal places, depending on the currency exponent (e.g., 10.99 for EUR which has a currency exponent of 2). See Currency Codes.	Omit	Mandatory
<EndBal>	D	1	20	The closing balance of the card for the period required, ignoring pending authorisations. The balance amount can include up to four decimal places, depending on the currency exponent (e.g., 10.99 for EUR which has a currency exponent of 2). See Currency Codes.	Omit	Mandatory
<TxnFilter>	AN	1	1	Filter method to control the type of account entries returned: 0 = All account entries. Includes redemption transactions (including refunds), loads, and unloads, transfers, balance adjustments, account status changes and web service and card load fees. Also includes pending	Optional	Conditional

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				authorisations, expired authorisations, and auths matched with a financial i.e. cleared, and manually cleared authorisations. This is the default option if a value is not provided. 1 = Account entries affecting the account balance or available funds. Same as '0', but excludes cleared authorisations and account status changes. 2 = Financial entries only. Same as '1', but excludes all authorisations and also Expiry breakages. 3 = Shows only Loads, unloads, expiry breakages, balance adjustments and fees. 4 = Settled transactions only. Includes loads, unloads, presentments, balance adjustments, expiries and all other settled transactions, but excludes outstanding authorisations. 5 = All financial transactions, i.e., includes redemption transactions (including refunds), loads and unloads, transfers, balance adjustments, pending authorisations, expired authorisations, and authorised matched with a financial (i.e.		

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				cleared, and manually cleared authorisations). 6 = Accepted, pending authorisations only 7 = Same as 0 but also shows ATM/POS fees as separate fee entries. The field must be present in the response if present in the request.		
<StartDate>	YYYY-MM-DD	10	10	Start date for the Enquiry. Valid dates are in the range 1900-01-01 to 2079-06-06. Only account entries on this day and beyond are returned. If not specified and if <NumTxn> is 0, the search returns results of one calendar month by default. These results are sorted in ascending order of <ItemId>. If includded in the request, the response returns this field. **Note**: If the field is present and date range is more than 3 months then this field value is overridden with a new start date value, calculated by Thredd to provide the most recent 3 months.	Optional	Conditional
<EndDate>	YYYY-MM-DD	10	10	End date for the Enquiry. Valid	Optional	Conditional

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				dates are in the range 1900-01-01 to 2079-06-06. Only account entries on this day and before is returned. If not specified and if <NumTxn> is 0, the search returns results up to the last account entry. These results are sorted in ascending order of <ItemId>. If includded in the request, the response returns this field. **Note**: If the field is present and date range is more than 3 months then response contains only the most recent 3 months of data.		
<NumTxn>	N	1	4	Number of transactions to return. Used for requesting a specific number of the most recent transactions. The transactions are sorted in descending order of <ItemId>. If present, <StartDate> and <EndDate> are ignored. In the response, this field indicates the actual number of transactions returned.	Optional	Mandatory
<DataSrc>	N	1	1	The data source to be used to make the account enquiry. It has two predefined values: 0 or 1 = Live database ; 2 = Archive database.	Mandatory	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<ItemSrc>	N	1	5	Source field which defines the item source type. See Item Source Types. If used, overrides any existing fees for using this web service.	Mandatory	Mandatory
<DescriptionDelimiter>	AN	1	1	If provided, is used as an alternative delimiter to separate the Card Acceptor Name Location (DE 043) field of the presentment returned from MasterCard or Visa into: *Street*, *City* and *Country*.	Optional	Omit
<CurBill>	AN	3	3	3-letter ISO currency code for the cardholder's account (billing) currency.	Omit	Mandatory
<AvlBal>	D	1	20	The current balance on the card account. This includes all financial transactions and outstanding authorisations. The balance amount can include up to four decimal places, depending on the currency exponent (e.g., 10.99 for EUR which has a currency exponent of 2). See Currency Codes.	Omit	Mandatory
<BlkAmt>	D	1	20	Amount of funds blocked on the card account as a result of all outstanding authorisations. The balance amount can include up to four decimal places, depending on the currency exponent (e.g., 10.99 for EUR which has a	Omit	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				currency exponent of 2). See Currency Codes.		
<SysDate>	YYYY-MM_DD	10	10	The system processing date.	Omit	Mandatory
<ActionCode>	AN	3	3	The action code for the response. See Action Codes.	Omit	Mandatory
<Transactions>				List of 0 or more Transaction2 elements (see Transaction2 Description below).	Omit	Mandatory

Transaction2 Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<TxnDate>	YYYY-MM-DD	10	10	Calendar date on which the transaction is processed. Also the settlement date for certain types of transactions, such as presentments.	Optional	Mandatory
<PostDate>	YYYY-MM-DD	10	10	The businesses date on which Thredd process the transaction. For most transactions this is the same as the system date when the transaction was created. For fee collections, this is the reconciliation date.	Optional	Mandatory
<AmtBill>	D	1	20	The amount of the transaction billed (for financials) or blocked (for authorisations) to the cardholder account, expressed in the account currency <CurBill>.	Omit	Mandatory
<AmtTxn>	D	1	20	The transaction amount, expressed in the transaction currency <CurTxn>. The amount can include up to four decimal places, depending on the	Omit	Optional

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				currency exponent (e.g., 10.99 for EUR which has a currency exponent of 2). See Currency Codes.		
<BillConvRate>	D	1	8	The conversion rate used to calculate the billing amount <AmtBill> from the transaction amount <AmtTxn>. BillConvRate = AmtTxn /AmtBill	Omit	Conditional
<DebOrCred>	AN	1	1	Whether a transaction is a debit or credit. '-1' = Debit; '1' = Credit.	Omit	Mandatory
<TerminalId>	AN	1	15	Point of Sale (POS) or other terminal identifier, such as a hostname.	Omit	Conditional
<Description>	AN	1	150	Transaction description	Omit	Mandatory
<RRN>	AN	1	12	Retrieval reference number (DE037) from MasterCard or Visa.	Omit	Optional
<CurTxn>	AN	1	3	Transaction currency, represented by the 3-letter ISO currency code.	Omit	Optional
<ItemId>	AN	1	20	The item ID. Present in all returned items that impact the funds on the account.	Omit	Conditional
<AvlBal>	D	1	20	The current balance on the card account. This includes all financial transactions and outstanding authorisations. The balance amount can include up to four decimal places, depending on the currency exponent (e.g., 10.99 for EUR which has a currency exponent of 2). See Currency Codes.	Omit	Mandatory
<BlkAmt>	D	1	20	Amount of funds	Omit	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				blocked on the card account as a result of all outstanding authorisations. The balance amount can include up to four decimal places, depending on the currency exponent (e.g., 10.99 for EUR which has a currency exponent of 2). See Currency Codes.		
<TransactionType>	AN	1	2	The type of the transaction. See Transaction Types. For certain changes relating only to account details, this field may be omitted.	Omit	Conditional
<StatusCode>	AN	1	2	The transaction status code. See Transaction Status. For certain changes relating only to account details, this field may be omitted.	Omit	Conditional
<StatusDesc>	AN	1	50	Transaction status description. See Transaction Status.	Omit	Conditional
<TxnTime>	N	6	6	Time at which Thredd processed the transaction in *HHMMSS* format.	Omit	Mandatory
<LocDate>	YYYY-MM-DD	10	10	Calendar date the transaction was generated by the terminal (POS/ATM) or acquirer. Applicable to MasterCard or Visa received transactions only. For presentment transactions it is the local date of the terminal that generated the transaction.	Omit	Conditional
<FeeId>	N	1	19	Specifies the unique identifier of the fee, created by Thredd.	Omit	Optional
<WSID>	N	1	19	Web service ID. Must be unique for every request. For details, see the FAQs.	Omit	Optional

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<FixedFee>	D	1	20	Fixed fee applied to this transaction.	Omit	Optional
<RateFee>	D	1	20	Rate fee applied to this particular transaction.	Omit	Optional
<FxPdg>	D	1	20	Padding amount applied for a foreign currency transaction.	Omit	Optional
<MCCPdg>	D	1	20	Padding amount applied against a particular merchant category.	Omit	Optional
<LinkId>	AN	1	20	Identifier of the linked financial transaction.	Omit	Conditional
<MCC>	AN	1	4	Merchant category code (presentments only).	Omit	Conditional
<OrigStan>	AN	1	50	System Trace Audit Number (STAN) returned from MasterCard or Visa.	Omit	Optional
<ProcCode>	AN	1	6	Processing code (DE003) of the transaction if processed by Mastercard or Visa. Thredd also use this field to supply a processing code for Thredd-generated transactions; See Processing Codes.	Omit	Conditional
<MCCDescription>	AN	1	250	Merchant Category Code (MCC) description.	Omit	Conditional
<Dom_Fee_Fixed>	D	1	20	Fixed domestic fee amount.	Omit	Conditional
<Dom_Fee_Rate>	D	1	20	Rate domestic fee amount.	Omit	Conditional
<Non_Dom_Fee_Fixed>	D	1	20	Fixed non-domestic fee amount.	Omit	Conditional
<Non_Dom_Fee_Rate>	D	1	20	Rate non-domestic fee amount.	Omit	Conditional
<Fx_Fee_Fixed>	D	1	20	Fixed foreign exchange (FX) fee amount.	Omit	Conditional

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<Fx_Fee_Rate>	D	1	20	Rate foreign exchange (FX) fee amount.	Omit	Conditional
<Other_Fee_Desc>	D	1	20	Description of any other fees applied to this transaction (e.g., monthly fee).	Omit	Conditional
<Other_Fee_Amt>	D	1	20	Other fee amount.	Omit	Conditional
<TxnCodeType>	AN	1	20	Transaction type code (for an authorisation, presentment or reversal only): pos = point of sale transaction. atm = automated teller machine transaction (e.g.,cash withdrawal) pos_cb = point of sale transaction with cashback. pos_re = purchase refund tfr = cardholder funds transfer.	Omit	Conditional

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_Card_Statement>
         <hyp:WSID>2021123456789</hyp:WSID>
         <hyp:IssCode>PMT</hyp:IssCode>
         <hyp:TxnCode>5</hyp:TxnCode>
         <hyp:ClientCode></hyp:ClientCode>
         <hyp:ItemSrc>2</hyp:ItemSrc>
         <hyp:AuthType>1</hyp:AuthType>
         <hyp:PAN></hyp:PAN>
         <hyp:Track2></hyp:Track2>
         <hyp:PublicToken>123456789</hyp:PublicToken>
         <hyp:DOB></hyp:DOB>
         <hyp:CVV></hyp:CVV>
         <hyp:AccCode></hyp:AccCode>
         <hyp:LastName></hyp:LastName>
         <hyp:LocDate>2021-01-01</hyp:LocDate>
         <hyp:LocTime>120000</hyp:LocTime>
         <hyp:TerminalID></hyp:TerminalID>
         <hyp:TxnFilter>5</hyp:TxnFilter>
         <hyp:StartDate></hyp:StartDate>
         <hyp:EndDate></hyp:EndDate>
         <hyp:NumTxn>0</hyp:NumTxn>
         <hyp:DataSrc>0</hyp:DataSrc>
```

```
      </hyp:Ws_Card_Statement>
   </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_Card_StatementResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_Card_StatementResult>
            <WSID>2021123456789</WSID>
            <IssCode>PMT</IssCode>
            <TxnCode>5</TxnCode>
            <ClientCode/>
            <PublicToken>123456789</PublicToken>
            <LocDate>2021-01-01</LocDate>
            <LocTime>120000</LocTime>
            <StartBal>10</StartBal>
            <EndBal>0</EndBal>
            <TxnFilter>5</TxnFilter>
            <StartDate/>
            <EndDate/>
            <NumTxn>2</NumTxn>
            <ItemSrc>2</ItemSrc>
            <CurBill>GBP</CurBill>
            <AvlBal>0</AvlBal>
            <BlkAmt>0</BlkAmt>
            <SysDate>2021-01-01</SysDate>
            <ActionCode>000</ActionCode>
            <Transactions>
               <Transaction2>
                  <TxnDate>2021-01-01</TxnDate>
                  <PostDate>2021-01-01</PostDate>
                  <AmtBill>10</AmtBill>
                  <AmtTxn>10</AmtTxn>
                  <BillConvRate>1</BillConvRate>
                  <DebOrCred>-1</DebOrCred>
                  <TerminalId/>
                  <Description> Unload: UnLoad</Description>
                  <RRN/>
                  <CurTxn>GBP</CurTxn>
                  <ItemId>4321</ItemId>
                  <AvlBal>0</AvlBal>
                  <BlkAmt>0</BlkAmt>
                  <TransactionType>U</TransactionType>
                  <StatusCode>S</StatusCode>
                  <StatusDesc>Settled :  -</StatusDesc>
                  <TxnTime>105025</TxnTime>
                  <LocDate>2021-01-01</LocDate>
                  <FeeId>0</FeeId>
                  <WSID>2021123456789</WSID>
                  <FixedFee>0</FixedFee>
                  <RateFee>0</RateFee>
                  <FxPdg>0</FxPdg>
                  <MCCPdg>0</MCCPdg>
                  <LinkId>0</LinkId>
                  <ProcCode>230000</ProcCode>
               </Transaction2>
               <Transaction2>
                  <TxnDate>2021-01-01</TxnDate>
                  <PostDate>2021-01-01</PostDate>
                  <AmtBill>10</AmtBill>
                  <AmtTxn>10</AmtTxn>
                  <BillConvRate>1</BillConvRate>
                  <DebOrCred>1</DebOrCred>
                  <TerminalId/>
                  <Description> Load: Web services load </Description>
                  <RRN/>
                  <CurTxn>GBP</CurTxn>
                  <ItemId>1233</ItemId>
```

```
                  <AvlBal>10</AvlBal>
                  <BlkAmt>0</BlkAmt>
                  <TransactionType>L</TransactionType>
                  <StatusCode>S</StatusCode>
                  <StatusDesc>Settled :  -</StatusDesc>
                  <TxnTime>100854</TxnTime>
                  <LocDate>2021-01-01</LocDate>
                  <FeeId>0</FeeId>
                  <WSID>2021123456789</WSID>
                  <FixedFee>0</FixedFee>
                  <RateFee>0</RateFee>
                  <FxPdg>0</FxPdg>
                  <MCCPdg>0</MCCPdg>
                  <LinkId>0</LinkId>
                  <ProcCode>220000</ProcCode>
               </Transaction2>
            </Transactions>
         </Ws_Card_StatementResult>
      </Ws_Card_StatementResponse>
   </soap:Body>
</soap:Envelope>
```

Card Statement (V2)

API: Ws_Banking_Card_Statement_V2

This web service is an enhancement to Ws_Card_Statement (see Card Statement (V1)) and returns all statement details for this card, as well as for previous cards if the card has been replaced.

Request Description

The details for the request are identical to those in Card Statement (V1): Ws_Card_Statement.

Note: Ws_Banking_Card_Statement_V2 excludes card status change entries prior to 2022. Card status changes before this year are no longer retrievable. If you want to retrieve card status changes prior to 2022, raise a ticket with Thredd and a member of the App Support team will deal with your request.

Note: Thredd recommend you start with a simple check of the status of the web service to make sure you can connect, using Ws_Check. See Check Service Availability.

Response Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every request. For details, see the FAQs.	Mandatory	Mandatory
<ActionCode>	N	3	3	The action code for the response. See Action Codes.		Mandatory
<ErrorText>	AN			Human readable text of the error that occurred. Should be read in conjunction with the <ActionCode>.		Optional
<Statements >	List (CardStatement2)			A list of card statements. Each statement gives details of the card's associated statements. For details, see Card Statement (V1).		

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>*****</hyp:strUserName>
         <hyp:strPassword>*****</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_Banking_Card_Statement_V2>
```

```
         <hyp:request>
            <hyp:WSID>1234465</hyp:WSID>
            <hyp:IssCode>PMT</hyp:IssCode>
            <hyp:TxnCode>5</hyp:TxnCode>
            <hyp:ClientCode></hyp:ClientCode>
            <hyp:ItemSrc>2</hyp:ItemSrc>
            <hyp:AuthType>1</hyp:AuthType>
            <hyp:PAN></hyp:PAN>
            <hyp:Track2></hyp:Track2>
            <hyp:PublicToken>123456789</hyp:PublicToken>
            <hyp:DOB></hyp:DOB>
            <hyp:CVV></hyp:CVV>
            <hyp:AccCode></hyp:AccCode>
            <hyp:LastName></hyp:LastName>
            <hyp:LocDate>2021-01-01</hyp:LocDate>
            <hyp:LocTime>120000</hyp:LocTime>
            <hyp:TerminalID></hyp:TerminalID>
            <hyp:TxnFilter>5</hyp:TxnFilter>
            <hyp:StartDate></hyp:StartDate>
            <hyp:EndDate></hyp:EndDate>
            <hyp:NumTxn>0</hyp:NumTxn>
            <hyp:DataSrc>0</hyp:DataSrc>
            <hyp:DescriptionDelimiter>,</hyp:DescriptionDelimiter>
         </hyp:request>
      </hyp:Ws_Banking_Card_Statement_V2>
   </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:soap="h-
ttp://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <Ws_Banking_Card_Statement_V2Response xmlns="http://www.globalprocessing.ae/HyperionWeb">
      <Ws_Banking_Card_Statement_V2Result>
        <WSID>1234</WSID>
        <ActionCode>string</ActionCode>
        <ErrorText>string</ErrorText>
        <Statements>
          <CardStatement2>
            <WSID>2021123456789</WSID>
            <IssCode>PMT</IssCode>
            <TxnCode>5</TxnCode>
            <ClientCode></ClientCode>
            <PublicToken>123456789</PublicToken>
            <LocDate>2021-01-01</LocDate>
            <LocTime>120000</LocTime>
            <StartBal>10</StartBal>
            <EndBal>0</EndBal>
            <TxnFilter>5</TxnFilter>
            <StartDate></StartDate>
            <EndDate></EndDate>
            <NumTxn>2</NumTxn>
            <ItemSrc>2</ItemSrc>
            <CurBill>GBP</CurBill>
            <AvlBal>0</AvlBal>
            <BlkAmt>0</BlkAmt>
            <SysDate>2021-01-01</SysDate>
            <ActionCode>000</ActionCode>
            <Transactions xsi:nil="true" />
          </CardStatement2>
          <CardStatement2>
            <WSID>20211234567896</WSID>
            <IssCode>PMT</IssCode>
            <TxnCode>5</TxnCode>
            <ClientCode></ClientCode>
            <PublicToken>234456789</PublicToken>
            <LocDate>2021-01-01</LocDate>
            <LocTime>120000</LocTime>
            <StartBal>10</StartBal>
```

```
            <EndBal>0</EndBal>
            <TxnFilter>5</TxnFilter>
            <StartDate></StartDate>
            <EndDate></EndDate>
            <NumTxn>2</NumTxn>
            <ItemSrc>2</ItemSrc>
            <CurBill>GBP</CurBill>
            <AvlBal>0</AvlBal>
            <BlkAmt>0</BlkAmt>
            <SysDate>2021-01-01</SysDate>
            <ActionCode>000</ActionCode>
            <Transactions xsi:nil="true" />
          </CardStatement2>
        </Statements>
      </Ws_Banking_Card_Statement_V2Result>
    </Ws_Banking_Card_Statement_V2Response>
  </soap:Body>
</soap:Envelope>
```

Card Balance Overview

You can use the following web services to check, update or transfer the balance on an account:

Card Balance Enquiry: Ws_Balance_Enquiry and Ws_Balance_Enquiry(_V2)
Card Balance Enquiry (lightweight): Ws_Card_BalEnq
Card Balance Adjustment: Ws_BalanceAdjustment
Card Balance Update: Ws_BalanceUpdate
Card Balance Transfer: Ws_BalanceTransfer

Card Balance Enquiry

API: Ws_Balance_Enquiry and Ws_Balance_Enquiry_V2

This web service returns the current available balance on the card.

Note: There are two versions of this web service. Ws_Balance_Enquiry_V2 omits a few request parameters and includes a new LimitInfo response structure, as described below.

Note: Thredd recommends that clients implement EHI (External Host Interface) to receive up-to-date customer balances after every transaction to comply with a Mastercard mandate which states that issuers must offer a mobile-based transaction alerts service to cardholders. For details, contact your Implementation Manager.

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every request. For details, see the FAQs.	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<TxnCode>	AN	1	2	The Transaction Code. See Transaction Codes. Default value '3'.	Mandatory	Mandatory
<ClientCode>	AN	1	64	User ID of the customer using the service. Only applicable to systems using member logins. Returned in the response if present in the request. **Note**: Legacy field. Not used.	Conditional	Conditional
<itemSrc>	N	1	5	Source field which defines the item source type. See Item Source Types. If used, overrides any existing fees for using this web service.	Mandatory	Omit
<AuthType>	AN	1	1	Parameter to specify how the card is authenticated. See Authentication Methods.	Mandatory	Omit
<PAN>	AN	14	19	Card Number. Unique card	Conditional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				identifier. Mandatory in request if <track2> and <PublicToken> are not present.		
<Track2>	AN	1	40	The card's Track 2. Mandatory in request and response if <PAN> and <PublicToken> are not present or when <AuthType> is '4'.	Conditional	Omit
<PublicToken>	AN	1	9	The card's public token, Mandatory in request if <PAN> and <Track2> are not present. Mandatory in the response.	Conditional	Mandatory
<DOB>	YYYY-MM-DD	10	10	Date of Birth. Mandatory if value of <AuthType> is '2' or '6'.	Conditional	Omit
<CVV>	AN	3	3	Card Verification Value, the 3-digit code printed on the back of the card. Mandatory if the value of <AuthType> is '3'.	Conditional	Omit
<AccCode>	AN	0	6	Access code or passcode. If provided, must be 6 digits, leading zeroes are acceptable. Leave empty if not required. Mandatory if the value of <AuthType> is '4'.	Conditional	Omit
<LastName>	AN	1	20	Cardholder's last name for authenticating the cardholder if the value of <AuthType> is '6'.	Conditional	Omit
<LocDate>	YYYY-MM-DD	10	10	The local current date in *year-month-date* format.	Mandatory	Mandatory
<LocTime>	HHMMSS	6	6	The local current	Mandatory	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				time, in *hour-minute-second* format.		
<TerminalID>	AN	1	15	Point of Sale (POS) or other terminal identifier, such as a hostname.	Optional	Omit
<GetLimits>	AN	1	1	Optional request parameter to return limit information. Possible values are: 0 = Do not return limits information; 1 = Return limits information. If GetLimits is empty or not supplied, the default is 0. If GetLimits is 1, an extra XML element is returned in the reponse. See LimitInfo Details below.	Optional	Omit
<AvlBal>	D	1	20	The current balance on the card account. This includes all financial transactions and outstanding authorisations. The balance amount can include up to four decimal places, depending on the currency exponent (e.g., 10.99 for EUR which has a currency exponent of 2). See Currency Codes.	Omit	Mandatory
<BlkAmt>	D	1	20	Amount of funds blocked on the card account as a result of all outstanding authorisations. The balance amount can include up to four decimal places, depending on the currency exponent (e.g., 10.99 for EUR which has a currency exponent of 2). See Currency Codes.	Omit	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<CurCode>	AN	3	3	3-letter ISO currency code for the currency (e.g. EUR).	Omit	Mandatory
<SysDate>	YYYY-MM-DD	10	10	The system processing date.	Omit	Mandatory
<PINStatus>	N	1	1	Indicates whether the allowed number of card PIN tries has been exceeded. 0 = No; 1 = Yes.	Omit	Mandatory
<LimitInfo>				See LimitInfo Details below. Occurs 0 or 1 times in the response.	Omit	Optional
<ActionCode>	AN	3	3	The action code for the response. See Action Codes.	Omit	Mandatory

LimitInfo Details (V1)

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<MaxAllowableBalance>	D	1	20	Maximum allowed balance of the card.	Omit	Mandatory
<DailyLoadLimit>	D	1	20	Daily load limit.	Omit	Mandatory
<DailyLoadFrequencyLimit>	D	1	20	Daily load frequency.	Omit	Mandatory
<AmountLoaded>	D	1	20	Amount loaded today.	Omit	Mandatory
<NoOfLoads>	D	1	20	Number of loads today.	Omit	Mandatory
<AmountLeftToLoad>	D	1	20	Available amount left to load today.	Omit	Mandatory
<NoOfLoadLeft>	D	1	20	Available number of loads left today.	Omit	Mandatory
<DailyPosLimit>	D	1	20	Daily POS terminal spend limit.	Omit	Mandatory
<DailyPosFrequencyLimit>	D	1	20	Daily POS	Omit	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				spend frequency limit (how many times the cardholder is allowed to spend at a POS terminal.)		
<POSUsage>	D	1	20	POS terminal spend value so far today.	Omit	Mandatory
<NoOfPOSUsage>	D	1	20	POS terminal spend frequency today.	Omit	Mandatory
<ValueOfPOSLeft>	D	1	20	POS terminal spend value left today.	Omit	Mandatory
<NoOfPOSTransactionsLeft>	D	1	20	POS terminal spend frequency left today.	Omit	Mandatory
<DailyCashLimit>	D	1	20	Cash withdrawal daily value limit.	Omit	Mandatory
<DailyCashFrequencyLimit>	D	1	20	Cash withdrawal daily frequency limit.	Omit	Mandatory
<CashWithdrawal>	D	1	20	Cash withdrawals so far today.	Omit	Mandatory
<NoOfCashWithdrawal>	D	1	20	Cash withdrawal frequency today.	Omit	Mandatory
<ValueOfCashLeft>	D	1	20	Cash withdrawal value left today.	Omit	Mandatory
<NoOfCashTransactionLeft>	D	1	20	Cash withdrawal frequency left today.	Omit	Mandatory
<DailyUnLoadLimit>	D	1	20	Unload daily limit.	Omit	Mandatory
<DailyUnLoadFrequencyLimit>	D	1	20	Unload daily frequency limit.	Omit	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<AmountUnLoaded>	D	1	20	Amount unloaded so far today.	Omit	Mandatory
<NoOfUnLoads>	D	1	20	Frequency of unloads today.	Omit	Mandatory
<AmountLeftToUnLoad>	D	1	20	Amount available to unload today.	Omit	Mandatory
<NoOfUnLoadLeft>	D	1	20	Frequency of unloads available today.	Omit	Mandatory

LimitInfo Details (V2)

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<MaxAllowableBalance>	D	1	20	Maximum allowed balance of the card.	Omit	Mandatory
<SubLimit>				Containing element (repeats).	Omit	Mandatory
<Process>	AN	1	10	Name of the process that the sub-limit affects. Valid values are: POS, CASH and LOAD.	Omit	Mandatory
Source (attribute)	N	1	3	The numeric Load Source (LoadSrc). Only applies to LOAD sub limits and is optional.	Omit	Conditional
<MaxPerTransaction>	D	1	20	Maximum amount of a single transaction.	Omit	Mandatory
<MinPerTransaction>	D	1	20	Minimum amount of a single transaction.	Omit	Mandatory
<SubLimitPeriod>				Containing element (repeats)	Omit	Mandatory
<Period>	N	1	10	Number of units of the period.	Omit	Mandatory
<Unit>	AN	1	10	Type of period	Omit	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				unit. Valid values are: Hour, Day, Month and Year.		
<Limit>	D	1	20	Total financial amount of limit per period.	Omit	Mandatory
<Frequency>	N	1	10	Number of transactions allowed within the period.	Omit	Mandatory
<Usage>	D	1	20	Current usage of total financial amount of limit.	Omit	Mandatory
<No>	N	1	10	Current usage of number of transactions within the period.	Omit	Mandatory
<SubLimitPeriod>				Containing element (repeats).	Omit	Mandatory
<SubLimit>				Containing element (repeats).	Omit	Mandatory

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_Balance_Enquiry>
         <hyp:WSID>2021123456789</hyp:WSID>
         <hyp:IssCode>PMT</hyp:IssCode>
         <hyp:TxnCode>3</hyp:TxnCode>
         <hyp:ClientCode></hyp:ClientCode>
         <hyp:ItemSrc>2</hyp:ItemSrc>
         <hyp:AuthType>1</hyp:AuthType>
         <hyp:PAN></hyp:PAN>
         <hyp:Track2></hyp:Track2>
         <hyp:PublicToken>123456789</hyp:PublicToken>
         <hyp:DOB></hyp:DOB>
         <hyp:CVV></hyp:CVV>
         <hyp:AccCode></hyp:AccCode>
         <hyp:LastName></hyp:LastName>
         <hyp:LocDate>2021-01-01</hyp:LocDate>
         <hyp:LocTime>120000</hyp:LocTime>
         <hyp:TerminalID></hyp:TerminalID>
         <hyp:GetLimits>1</hyp:GetLimits>
      </hyp:Ws_Balance_Enquiry>
   </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_Balance_EnquiryResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_Balance_EnquiryResult>
            <WSID>2021123456789</WSID>
            <IssCode>PMT</IssCode>
            <TxnCode>3</TxnCode>
            <PublicToken>123456789</PublicToken>
            <LocDate>2021-01-01</LocDate>
            <LocTime>120000</LocTime>
            <AvlBal>10</AvlBal>
            <BlkAmt>0</BlkAmt>
            <CurCode>GBP</CurCode>
            <ClientCode/>
            <SysDate>2021-01-01</SysDate>
            <ActionCode>000</ActionCode>
            <PINStatus>0</PINStatus>
            <LimitInfo>
               <LimitInformation>
                  <MaxAllowableBalance>375000</MaxAllowableBalance>
                  <DailyLoadLimit>375000</DailyLoadLimit>
                  <DailyLoadFrequencyLimit>50</DailyLoadFrequencyLimit>
                  <AmountLoaded>0</AmountLoaded>
                  <NoOfLoads>0</NoOfLoads>
                  <AmountLeftToLoad>374305.93</AmountLeftToLoad>
                  <NoOfLoadLeft>50</NoOfLoadLeft>
                  <DailyPosLimit>375000</DailyPosLimit>
                  <DailyPosFrequencyLimit>9999</DailyPosFrequencyLimit>
                  <POSUsage>0</POSUsage>
                  <NoOfPOSUsage>0</NoOfPOSUsage>
                  <ValueOfPOSLeft>694.07</ValueOfPOSLeft>
                  <NoOfPOSTransactionsLeft>9999</NoOfPOSTransactionsLeft>
                  <DailyCashLimit>0</DailyCashLimit>
                  <DailyCashFrequencyLimit>0</DailyCashFrequencyLimit>
                  <CashWithdrawal>0</CashWithdrawal>
                  <NoOfCashWithdrawal>0</NoOfCashWithdrawal>
                  <ValueOfCashLeft>694.07</ValueOfCashLeft>
                  <NoOfCashTransactionLeft>0</NoOfCashTransactionLeft>
                  <DailyUnLoadLimit>40000</DailyUnLoadLimit>
                  <DailyUnLoadFrequencyLimit>50</DailyUnLoadFrequencyLimit>
                  <AmountUnLoaded>0</AmountUnLoaded>
                  <NoOfUnLoads>0</NoOfUnLoads>
                  <AmountLeftToUnLoad>694.07</AmountLeftToUnLoad>
                  <NoOfUnLoadLeft>50</NoOfUnLoadLeft>
               </LimitInformation>
            </LimitInfo>
         </Ws_Balance_EnquiryResult>
      </Ws_Balance_EnquiryResponse>
   </soap:Body>
</soap:Envelope>
```

Card Balance Enquiry (Legacy)

API: Ws_Card_BalEnq

This web service retrieves the available balance of a card and the sum of any blocked amounts.

Note: Alternative web services you can use include: ws_balance_enquiry and ws_balance enquiry_V2 . See Card Balance Enquiry.

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every request. For details, see the FAQs.	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<TxnCode>	AN	1	2	The Transaction Code. See Transaction Codes. Default value is 9.	Mandatory	Mandatory
<AuthType>	AN	1	1	Parameter to specify how the card is authenticated. See Authentication Methods.	Mandatory	Omit
<ClientCode>	AN	1	64	User ID of the customer using the service. Only applicable to systems using member logins. Returned in the response if present in the request. **Note**: Legacy field. Not used.	Conditional	Conditional
<PAN>	AN	14	19	Card Number. Mandatory if <ClientCode> or <accno> are not provided. Returned in the response if present in the request.	Optional	Omit
<AccNo>	AN	1	28	Account number of the card.	Conditional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				Mandatory if neither <PublicToken> nor <PAN> are provided. Returned in the response if present in the request.		
<PublicToken>	AN	1	9	The card's public token. Mandatory in request if <PAN> and <accno> are not provided. Mandatory in the response.	Conditional	Mandatory
<LocDate>	YYYY-MM-DD	10	10	The local current date in *year-month-date* format.	Mandatory	Mandatory
<LocTime>	HHMMSS	6	6	The local current time, in *hour-minute-second* format.	Mandatory	Mandatory
<ItemSrc>	N	1	5	Source field which defines the item source type. See Item Source Types. If used, overrides any existing fees for using this web service.	Mandatory	Omit
<LastName>	AN	1	20	Cardholder's last name.	Optional	Omit
<DOB>	YYYY-MM-DD	10	10	Date of Birth. Mandatory if value of <AuthType> is '2' or '6'.	Conditional	Omit
<CVV>	AN	3	3	Card Verification Value, the 3-digit code printed on the back of the card. Mandatory if the value of <AuthType> is '3'.	Conditional	Omit
<AccCode>	AN	0	6	Access code or passcode. If provided, must be 6 digits, leading zeroes are acceptable. Leave	Conditional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				empty if not required. Mandatory if the value of <AuthType> is '4'.		
<SysDate>	YYYY-MM-DD	10	10	The system processing date.	Omit	Mandatory
<ActionCode>	AN	3	3	The action code for the response. See Action Codes.	Omit	Mandatory
<Logical_Expiry>	YYYY-MM-DD	10	10	Logical expiry date of the card.	Omit	Mandatory
<Physical_Expiry>	YYYY-MM-DD	10	10	Physical expiry date of the card.	Omit	Mandatory
<StatCode>	AN	2	2	The status code of the card. See Status Codes.	Omit	Mandatory
<CurCode>	AN	3	3	3-letter ISO currency code for the currency (e.g. EUR).	Optional	Mandatory
<AvlBal>	D	1	20	The current balance on the card account. This includes all financial transactions and outstanding authorisations. The balance amount can include up to four decimal places, depending on the currency exponent (e.g., 10.99 for EUR which has a currency exponent of 2). See Currency Codes.	Omit	Mandatory
<EmbossName>	AN	1	51	Name embossed on the card.	Omit	Mandatory
<BlkAmt>	D	1	20	Amount of funds blocked on the card account as a result of all outstanding authorisations. The balance amount can include up to four decimal places, depending on the	Omit	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				currency exponent (e.g., 10.99 for EUR which has a currency exponent of 2). See Currency Codes.		
<IsLive>	N	1	1	Specifies whether the card is active or not. 1 or True = Active; 0 or False = Not Active.	Omit	Mandatory
<Scheme>	AN	1	50	The card's Thredd scheme.	Omit	Mandatory

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_Card_BalEnq>
         <hyp:WSID>2021123456789</hyp:WSID>
         <hyp:IssCode>PMT</hyp:IssCode>
         <hyp:TxnCode>3</hyp:TxnCode>
         <hyp:AuthType>1</hyp:AuthType>
         <hyp:ClientCode></hyp:ClientCode>
         <hyp:PAN></hyp:PAN>
         <hyp:AccNo></hyp:AccNo>
         <hyp:PublicToken>123456789</hyp:PublicToken>
         <hyp:CurCode>GBP</hyp:CurCode>
         <hyp:LocDate>2021-01-01</hyp:LocDate>
         <hyp:LocTime>120000</hyp:LocTime>
         <hyp:ItemSrc>2</hyp:ItemSrc>
         <hyp:DOB></hyp:DOB>
         <hyp:CVV></hyp:CVV>
         <hyp:AccCode></hyp:AccCode>
         <hyp:LastName></hyp:LastName>
      </hyp:Ws_Card_BalEnq>
   </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_Card_BalEnqResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_Card_BalEnqResult>
            <WSID>2021123456789</WSID>
            <IssCode>PMT</IssCode>
            <TxnCode>3</TxnCode>
            <PublicToken>123456789</PublicToken>
            <LocDate>2021-01-01</LocDate>
            <LocTime>120000</LocTime>
            <Logical_Expiry>2025-03-31</Logical_Expiry>
            <Physical_Expiry>17/10</Physical_Expiry>
            <StatCode>00</StatCode>
            <EmbossName>GIFT CARD</EmbossName>
```

```
            <AvlBal>10</AvlBal>
            <BlkAmt>0</BlkAmt>
            <CurCode>GBP</CurCode>
            <ClientCode/>
            <SysDate>2021-01-01</SysDate>
            <ActionCode>000</ActionCode>
            <IsLive>true</IsLive>
            <Scheme>Giftcard</Scheme>
         </Ws_Card_BalEnqResult>
      </Ws_Card_BalEnqResponse>
   </soap:Body>
</soap:Envelope>
```

Card Balance Update

API: Ws_BalanceUpdate

This web service updates the available and current (STIP) balance for EHI (External Host Interface) Mode 4 cards. See the EHI Guide.

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every request. For details, see the FAQs.	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<TxnCode>	AN	1	2	The Transaction Code. See Transaction Codes. Default value 16.	Mandatory	Mandatory
<PAN>	AN	14	19	Card Number. Unique card identifier. Required in request if <PublicToken> is not present.	Conditional	Omit
<PublicToken>	AN	1	9	The card's public token. Mandatory in request if <PAN> is not present. Mandatory in the response.	Conditional	Mandatory
<LocDate>	YYYY-MM-DD	10	10	The local current date in *year-month-date* format.	Mandatory	Mandatory
<LocTime>	HHMMSS	6	6	The local current time, in *hour-minute-second* format.	Mandatory	Mandatory
<CurrCode>	AN	3	3	In Request: the currency code of the adjustment. Must match the currency of the card account. In Response: the currency code of the balance returned. This is the same as the currency of the card account.	Mandatory	Mandatory
<AvlBalance_GPS_STIP>	D	1	20	The new available to spend balance on the card: *Available Balance =*	Mandatory	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				Current Balance - Blocked Amount		
<CurBalance_GPS_STIP>	D	1	20	The new current balance on the card. Must not be less than the available balance.	Mandatory	Omit
<Balance_Sequence_Exthost>	N	1	18	External Host balance sequence number. In request: sets the new balances only if this sequence number is higher than the existing balance sequence number currently held in Thredd. This is to ensure that an out-of-date balance is not set due to race conditions. In response: the external host balance sequence number in Thredd after this update. (This will be <Balance_Sequence_Exthost> in the request message if set, or the current value on Thredd if not set.)	Mandatory	Mandatory
<LoadedBy>	AN	1	30	Name of person or cashier making the adjustment.	Optional	Omit
<Balance_Sequence>	N	1	18	The Thredd balance sequence returned in the response. This is updated each time Thredd updates the actual balance or blocked amount.	Omit	Mandatory
<SysDate>	YYYY-MM-DD	10	10	The system processing date.	Omit	Mandatory
<ItemID>	AN	1	20	The unique item ID returned for the adjustment.	Omit	Mandatory
<ActionCode>	AN	3	3	The action code for the response. See Action Codes.	Omit	Mandatory
<WebServiceResult>	AN			Parameter group describing the result	Omit	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				of the Web Service call. Only has values if the current request returns an action code of *868 Duplicate WSID*. See WebServiceResult.		

Request

```
<soap:Body>
   <hyp:Ws_BalanceUpdate>
      <hyp:WSID>202112345678967890</hyp:WSID>
      <hyp:IssCode>PMT</hyp:IssCode>
      <hyp:TxnCode>16</hyp:TxnCode>
      <hyp:PAN></hyp:PAN>
      <hyp:PublicToken>123456789</hyp:PublicToken>
      <hyp:LocDate>2021-01-01</hyp:LocDate>
      <hyp:LocTime>120000</hyp:LocTime>
      <hyp:CurrCode>GBP</hyp:CurrCode>
      <hyp:AvlBalance_GPS_STIP>100</hyp:AvlBalance_GPS_STIP>
      <hyp:CurBalance_GPS_STIP>110</hyp:CurBalance_GPS_STIP>
      <hyp:Balance_Sequence_Exthost>1</hyp:Balance_Sequence_Exthost>
      <hyp:LoadedBy>Test Update</hyp:LoadedBy>
      </hyp:Ws_BalanceUpdate>
</soap:Body>
```

Response

```
<soap:Body>
   <Ws_BalanceUpdateResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
      <Ws_BalanceUpdateResult>
         <WSID>202112345678967890</WSID>
         <IssCode>PMT</IssCode>
         <TxnCode>16</TxnCode>
         <PublicToken>123456789</PublicToken>
         <LocDate>2021-01-01</LocTime>
         <LocTime>120000</LocTime>
         <CurCode>GBP</CurCode>
         <Balance_Sequence_Exthost>2</Balance_Sequence_Exthost>
         <Balance_Sequence>2</Balance_Sequence>
         <SysDate>2021-01-01</SysDate>
         <ItemID>23290</ItemID>
         <ActionCode>000</ActionCode>
         <WebServiceResult/>
      </Ws_BalanceUpdateResult>
   </Ws_BalanceUpdateResponse>
</soap:Body>
```

Card Balance Adjustment

API: Ws_BalanceAdjustment

This web service enables you to apply debits and credits to a card record.

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every request. For details, see the FAQs.	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<TxnCode>	AN	1	2	The Transaction Code. See Transaction Codes. Default value 16.	Mandatory	Mandatory
<ClientCode>	AN	1	64	User ID of the customer using the service. Only applicable to systems using member logins. Returned in the response if present in the request. **Note**: Legacy field. Not used. Mandatory if the value of <AuthType> is '5'.	Conditional	Conditional
<AuthType>	AN	1	1	Parameter to specify how the card is authenticated. See Authentication Methods.	Mandatory	Omit
<PAN>	AN	14	19	Card Number. Unique card identifier.	Conditional	Omit
<Track2>	AN	1	40	The card's Track 2. Mandatory in request if <PAN> and <PublicToken> are not present or when <AuthType> is '7'.	Conditional	Omit
<PublicToken>	AN	1	9	The card's public token, Mandatory in request if <PAN> and <Track2> are not present. Mandatory in the response.	Conditional	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<DOB>	YYYY-MM-DD	10	10	Date of Birth. Mandatory if value of <AuthType> is '2' or '6'.	Conditional	Omit
<CVV>	AN	3	3	Card Verification Value, the 3-digit code printed on the back of the card. Mandatory if the value of <AuthType> is '3'.	Conditional	Omit
<AccCode>	AN	0	6	Access code or passcode for setting a code which is validated during activation (e.g. via the Thredd IVR system). If provided, must be 6 digits; leading zeroes are acceptable. Mandatory if the value of <AuthType> is '4'. Leave empty if not required.	Conditional	Omit
<LastName>	AN	1	20	Cardholder's last name for authenticating the cardholder if the value of <AuthType> is '6'.	Conditional	Omit
<LocDate>	YYYY-MM-DD	10	10	The local current date in *year-month-date* format.	Mandatory	Mandatory
<LocTime>	HHMMSS	6	6	The local current time, in *hour-minute-second* format.	Mandatory	Mandatory
<AmtAdjustment>	N	1	7	The amount to debit or credit the card.	Mandatory	Omit
<CurCode>	AN	3	3	In Request: the currency alpha code of <amtAdjustment>. Must match the currency of the card account. In Response: the currency alpha code of the <avlBal> (balance) returned. Will be the currency of the card account.	Mandatory	Mandatory
<DebOrCred>	AN	1	2	Whether a transaction is a debit or credit.	Mandatory	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				'-1' = Debit; '1' = Credit.		
<Description>	AN**	1	150	Description of balance adjustment. Will appear in Card Statement (account enquiry).	Mandatory	Omit
<AvlBal>	D	1	7	The balance on the card following the adjustment. This includes all the financials received, but excludes pending authorisations.	Omit	Mandatory
<ForcePost>	N	1	1	Whether to force post the adjustment to the account: *False* = do not force posting; *true* = force posting. If <forcePost> value is 1, the adjustment is posted to the account regardless of restrictions such as limits, insufficient funds or negative balance. Force posting overrides any maximum balance limit set for the card or account.	Optional	Omit
<ExtCode>	AN	1	16	External code associated with the posting. Only supported for legacy reasons, do not use.	Optional	Omit
<SysDate>	YYYY-MM-DD	10	10	The system processing date.	Omit	Mandatory
<ItemID>	AN	1	20	The unique item ID returned for the adjustment.	Omit	Mandatory
<ActionCode>	AN	3	3	The action code for the response. See Action Codes.	Omit	Mandatory
<LoadedBy>	AN	1	30	Name of person or cashier making the adjustment.	Optional	Omit
<WebServiceResult>	AN			Parameter group describing the result	Omit	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				of the Web Service call. Only has values if the current request returns an action code of *868 Duplicate WSID*. See WebServiceResult.		

** Some formatting may be done on this string, see String Cleaning and Approved Characters.

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_BalanceAdjustment>
         <hyp:WSID>2021123456789</hyp:WSID>
         <hyp:IssCode>PMT</hyp:IssCode>
         <hyp:TxnCode>16</hyp:TxnCode>
         <hyp:ClientCode></hyp:ClientCode>
         <hyp:AuthType>1</hyp:AuthType>
         <hyp:PAN></hyp:PAN>
         <hyp:Track2></hyp:Track2>
         <hyp:PublicToken>123456789</hyp:PublicToken>
         <hyp:DOB></hyp:DOB>
         <hyp:CVV></hyp:CVV>
         <hyp:AccCode></hyp:AccCode>
         <hyp:LastName></hyp:LastName>
         <hyp:LocDate>2021-01-01</hyp:LocDate>
         <hyp:LocTime>120000</hyp:LocTime>
         <hyp:AmtAdjustment>10</hyp:AmtAdjustment>
         <hyp:CurCode>GBP</hyp:CurCode>
         <hyp:DebOrCred>1</hyp:DebOrCred>
         <hyp:Description>Balance Ajustement</hyp:Description>
         <hyp:ForcePost>0</hyp:ForcePost>
         <hyp:ExtCode></hyp:ExtCode>
      </hyp:Ws_BalanceAdjustment>
   </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_BalanceAdjustmentResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_BalanceAdjustmentResult>
            <WSID>2021123456789</WSID>
            <IssCode>PMT</IssCode>
            <TxnCode>16</TxnCode>
            <PublicToken>123456789</PublicToken>
            <LocDate>2021-01-01</LocDate>
            <LocTime>120000</LocTime>
            <ClientCode>0</ClientCode>
            <SysDate>2021-01-01</SysDate>
            <ActionCode>000</ActionCode>
            <AvlBal>20</AvlBal>
            <CurCode>826</CurCode>
            <ItemID>123</ItemID>
```

```
            <WebServiceResult/>
         </Ws_BalanceAdjustmentResult>
      </Ws_BalanceAdjustmentResponse>
   </soap:Body>
</soap:Envelope>
```

Card Balance Transfer

API: Ws_BalanceTransfer

This web service is for transferring an amount from one card to another.

You can transfer funds from a primary card to its secondary card if:

- The secondary card belongs to a Limit Group.
- That limit group has settings for the <Load Source> of the primary card (value of 68).
- The transfer amount is within the limits defined by the limit group.

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every request. For details, see the FAQs.	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<TxnCode>	AN	1	2	The Transaction Code. See Transaction Codes. Default value 7.	Mandatory	Mandatory
<ClientCode>	AN	1	64	User ID of the customer using the service. Only applicable to systems using member logins. Returned in the response if present in the request. **Note**: Legacy field. Not used.	Optional	Conditional
<AuthType>	AN	1	1	Parameter to specify how the card is authenticated. See Authentication Methods.	Mandatory	Omit
<PAN>	AN	14	19	Card Number. Unique card identifier.	Conditional	Omit
<Track2>	AN	1	40	The card's Track 2. Mandatory in request if <PAN> and <PublicToken> are not present or when <AuthType> is '7'.	Conditional	Omit
<PublicToken>	AN	1	9	The card's public token, Mandatory in request if <PAN> and <Track2> are not	Conditional	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				present. Mandatory in the response.		
<DOB>	YYYY-MM-DD	10	10	The cardholder's date of birth. Mandatory if the value of <actMethod> is '1' or <AuthType> is '2' or '6'. Otherwise, may be supplied for informational purposes or as part of cardholder registration.	Conditional	Omit
<CVV>	AN	3	3	Card Verification Value, the 3-digit code printed on the back of the card. Mandatory if the value of <AuthType> is '3'.	Conditional	Omit
<AccCode>	AN	0	6	Access code or passcode. If provided, must be 6 digits, leading zeroes are acceptable. Leave empty if not required. Mandatory if the value of <AuthType> is '4'.	Conditional	Omit
<LastName>	AN	1	20	Cardholder's last name for authenticating the cardholder if the value of <AuthType> is '6'.	Conditional	Omit
<LocDate>	YYYY-MM-DD	10	10	The local current date in *year-month-date* format.	Mandatory	Mandatory
<LocTime>	HHMMSS	6	6	The local current time, in *hour-minute-second* format.	Mandatory	Mandatory
<TerminalID>	AN	1	15	Point of Sale (POS) or other terminal identifier, such as a hostname.	Conditional	Omit
<NewPAN>	AN	16	19	The new card number to where funds should be transferred. Mandatory in the request if <newToken> is not present.	Conditional	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<NewToken>	AN	16	19	The public token to where funds should be transferred to. Mandatory in the request if <newPAN> is not present.	Conditional	Omit
<AvlBal>	D	1	20	The current balance on the card account. This includes all financial transactions and outstanding authorisations. The balance amount can include up to four decimal places, depending on the currency exponent (e.g., 10.99 for EUR which has a currency exponent of 2). See Currency Codes.	Omit	Mandatory
<BlkAmt>	D	1	20	Amount of funds blocked on the card account as a result of all outstanding authorisations. The balance amount can include up to four decimal places, depending on the currency exponent (e.g., 10.99 for EUR which has a currency exponent of 2). See Currency Codes.	Omit	Mandatory
<AmtTxn>	D	1	20	The requested amount to transfer. If AmtTxn = 0, it is assumed the full card balance is requested to be transferred. If the amount is specified, this amount is returned in the response. Otherwise, the actual amount transferred (net of fees) is returned.	Mandatory	Mandatory
<CurrCode>	AN	3	3	3-letter ISO currency code for the currency (e.g. EUR). Must be supplied in the request if an <AmtTxn> is specified.	Conditional	Mandatory
<SysDate>	YYYY-MM-DD	10	10	The system processing date.	Omit	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<LoadSrc>	AN	1	3	The source of the transfer request. For transfers between Primary and Secondary cards, the value must be “68”. See Load Sources. If omitted, defaults to “14” = “Unknown” for normal transfers, but “68” for Primary-Secondary card transfers.	Optional	Omit
<ItemID>	AN	1	20	The unique item ID for this card transfer. The ID returned is the ID relating to the ‘unload’ leg of the transfer from the source card.	Omit	Mandatory
<ActionCode>	AN	3	3	The action code for the response. See Action Codes.	Omit	Mandatory
<LoadedBy>	AN	1	30	Name of person/cashier making the transfer.	Optional	Omit
<Description>	AN**	1	150	Description of balance transfer. Will appear in <Account Enquiry> if supplied.	Optional	Omit
<FeeWaiver>	N	1	1	Indicates whether to waive any web service fee set up on Thredd. Options are: 0 = No; 1= Yes, waive all fees, on “from” and “to” card 2 = Waive the fee on the “from” card only. 3 = Waive the fee on the “to” card only. Default is 0.	Optional	Omit
<BrnCode>	AN	8	8	Branch code (or Agent code) with which the card is associated. If supplied, it will be exported in the XML in *CardLoadUnload > Card > branchcode*.	Optional	Omit
<Fee>	D	1	9	Allows you to override the configured fee for specific transfers.	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WebServiceResult>	AN			Parameter group describing the result of the Web Service call. Only has values if the current request returns an action code of *868 Duplicate WSID*. See WebServiceResult.	Omit	Mandatory

** Some formatting may be done on this string, see String Cleaning and Approved Characters.

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_BalanceTransfer>
         <hyp:WSID>2021123456789</hyp:WSID>
         <hyp:IssCode>PMT</hyp:IssCode>
         <hyp:TxnCode>7</hyp:TxnCode>
         <hyp:ClientCode></hyp:ClientCode>
         <hyp:AuthType>1</hyp:AuthType>
         <hyp:PAN></hyp:PAN>
         <hyp:Track2></hyp:Track2>
         <hyp:PublicToken>123456789</hyp:PublicToken>
         <hyp:DOB></hyp:DOB>
         <hyp:CVV></hyp:CVV>
         <hyp:AccCode></hyp:AccCode>
         <hyp:LastName></hyp:LastName>
         <hyp:LocDate>2021-01-01</hyp:LocDate>
         <hyp:LocTime>120000</hyp:LocTime>
         <hyp:TerminalID></hyp:TerminalID>
         <hyp:NewPAN></hyp:NewPAN>
         <hyp:NewToken>987654321</hyp:NewToken>
         <hyp:AmtTxn>10</hyp:AmtTxn>
         <hyp:CurrCode>GBP</hyp:CurrCode>
         <hyp:LoadSrc>10</hyp:LoadSrc>
         <hyp:Description>Test Balance Transfer</hyp:Description >
         <hyp:LoadedBy>Agent Grey</hyp:LoadedBy >
         <hyp:FeeWaiver>0</hyp:FeeWaiver >
      </hyp:Ws_BalanceTransfer>
   </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_BalanceTransferResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_BalanceTransferResult>
            <WSID>2021123456789</WSID>
            <IssCode>PMT</IssCode>
            <TxnCode>7</TxnCode>
            <PublicToken>123456789</PublicToken>
            <LocDate>2021-01-01</LocDate>
            <LocTime>120000</LocTime>
            <NewPAN>9876543219876543</NewPAN>
```

```
            <ClientCode>0</ClientCode>
            <SysDate>2021-01-01</SysDate>
            <ActionCode>000</ActionCode>
            <AvlBal>10</AvlBal>
            <BlkAmt>0</BlkAmt>
            <AmtTxn>10</AmtTxn>
            <CurCode>GBP</CurCode>
            <ItemID>1234</ItemID>
            <WebServiceResult/>
         </Ws_BalanceTransferResult>
      </Ws_BalanceTransferResponse>
   </soap:Body>
</soap:Envelope>
```

Card Fees Overview

You can use the following web services to view and manage your card fees:

Card List Pending Fees: Ws_List_Pending_Fees
Card Apply Fees: Ws_Generic_Fees
Apply FX Rate: Ws_Client_FX

Note: For more information on the setting up of fees and restrictions which may apply, see the Thredd Fees Guide.

Card List Pending Fees

API: Ws_List_Pending_Fees

This web service lists details of pending fees that relate to a specific card.

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every request. For details, see the FAQs.	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd. Mandatory in the request. If only <IssCode> is present in the request then this method returns the pending fee details of all cards that belong to the given program manager.	Mandatory	Mandatory
<PAN>	N	14	19	Original PAN number embossed on the card. If present in the request, then this method returns the pending fee details of the given card only.	Optional	Omit
<PublicToken>	N	9	9	Card's public token. If present in the request, then this method returns the pending fee details of the given card only.	Optional	Omit
<FeeProcessingCode>	AN	2	2	The transaction fee processing code. See Processing Codes (fees).	Optional	Omit
<ActionCode>	AN	3	3	The action code for the response. See Action Codes.	Omit	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<Fees>	-	-	-	An array of Fee records. See Fee Record below. Can occur multiple times within the message.		

Fee Record

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<PublicToken>	N	9	9	Card's public token.	Omit	Mandatory
<PostDate>	YYYY-MM-DD	10	10	Actual date when Thredd received the fee request.	Omit	Mandatory
<TransDate>	YYYY-MM-DD	10	10	Date in which Thredd processed the fee request.	Omit	Mandatory
<ProcCode>	AN	1	3	The transaction fee processing code. See Processing Codes (fees).	Omit	Mandatory
<ActualAmt>	D	1	20	Actual fee amount.	Omit	Mandatory
<AmtTaken>	D	1	20	Amount already taken.	Omit	Mandatory
<RemainingAmt>	D	1	20	Remaining amount need to take as fee, i.e., *<ActualAmt> - <AmtTaken>*.	Omit	Mandatory
<Description>	AN	1	150	Fee description.	Omit	Mandatory
<PartialAllowed>	N	1	1	Whether a partial amount is allowed. 1 = Allowed; 0 = Not allowed	Omit	Mandatory
<Collected>	N	1	1	Whether the fee has been taken. 1 = Taken; 0 = Not taken	Omit	Mandatory
<PendingFeesEnabled>	N	1	1	Whether pending fees is enabled. 1 = Enabled; 0 = Disabled	Omit	Mandatory

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_List_Pending_Fees>
         <hyp:WSID>20211234567896789</hyp:WSID>
         <hyp:IssCode>PMT</hyp:IssCode>
         <hyp:PAN></hyp:PAN>
         <hyp:PublicToken>123456789</hyp:PublicToken>
         <hyp:FeeProcessingCode></hyp:FeeProcessingCode>
      </hyp:Ws_List_Pending_Fees>
   </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_List_Pending_FeesResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_List_Pending_FeesResult>
            <WSID>20211234567896789</WSID>
            <IssCode>PMT</IssCode>
            <ActionCode>000</ActionCode>
            <Fees>
               <Fee>
                  <PublicToken>123456789</PublicToken>
                  <PostDate>2021-09-14</PostDate>
                  <TransDate>2021-09-14</TransDate>
                  <ProcCode>10</ProcCode>
                  <ActualAmt>1</ActualAmt>
                  <AmtTaken>1</AmtTaken>
                  <RemainingAmt>0.1</RemainingAmt>
                  <Description>Load fee</Description>
                  <PartialAllowed>true</PartialAllowed>
                  <Collected>true</Collected>
                  <PendingFeesEnabled>true</PendingFeesEnabled>
               </Fee>
               <Fee>
                  <PublicToken>123456789</PublicToken>
                  <PostDate>2021-09-14</PostDate>
                  <TransDate>2021-09-14</TransDate>
                  <ProcCode>82</ProcCode>
                  <ActualAmt>2</ActualAmt>
                  <AmtTaken>0</AmtTaken>
                  <RemainingAmt>2</RemainingAmt>
                  <Description>Card Issue Fee</Description>
                  <PartialAllowed>false</PartialAllowed>
                  <Collected>true</Collected>
                  <PendingFeesEnabled>true</PendingFeesEnabled>
               </Fee>
            </Fees>
         </Ws_List_Pending_FeesResult>
      </Ws_List_Pending_FeesResponse>
   </soap:Body>
</soap:Envelope>
```

Card Apply Fees

API: Ws_Generic_Fees

This web service enables you to apply fees with a comment to a particular card.

Note: For more information on the setting up of fees and restrictions which may apply, see the Thredd Fees Guide.

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every request. For details, see the FAQs.	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<PAN>	AN	14	19	Card Number. Unique card identifier.	Conditional	Omit
<PublicToken>	AN	1	9	The card's public token. Mandatory in request if <PAN> and <track2> are not present. Mandatory in the response.	Conditional	Mandatory
<LocDate>	YYYY-MM-DD	10	10	The local current date in *year-month-date* format.	Mandatory	Mandatory
<LocTime>	HHMMSS	6	6	The local current time, in *hour-minute-second* format.	Mandatory	Mandatory
<ProcCode>	AN	1	3	The transaction fee processing code. See Processing Codes (fees).	Mandatory	Omit
<Comment>	AN**	1	50	If it is blank then this is the default comment associated with the processing code.	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<Fee>	D	1	20	Fee applied to this card. If it is 0 then will apply the default fee associated with the given processing code otherwise the input value will apply.	Optional	Mandatory
<SysDate>	YYYY-MM-DD	10	10	The system processing date.	Omit	Mandatory
<ItemId>	AN	1	20	The unique item ID returned for this fee.	Omit	Mandatory
<IsPartial>	N	1	1	Whether a partial fee was taken. 1=true and 0=false.	Omit	Mandatory
<WaivedoffAmount>	D	1	20	Amount of fee that could not be taken.	Omit	Mandatory
<TotalAmount>	D	1	20	Total amount of fee taken.	Omit	Mandatory
<ActionCode>	AN	3	3	The action code for the response. See Action Codes.	Omit	Mandatory

** Some formatting may be done on this string, see String Cleaning and Approved Characters.

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_Generic_Fees>
         <hyp:WSID>2021123456789</hyp:WSID>
         <hyp:IssCode>PMT</hyp:IssCode>
         <hyp:PAN></hyp:PAN>
         <hyp:PublicToken>123456789</hyp:PublicToken>
         <hyp:ProcCode>47</hyp:ProcCode>
         <hyp:Comment></hyp:Comment>
         <hyp:LocDate>2021-01-01</hyp:LocDate>
         <hyp:LocTime>120000</hyp:LocTime>
         <hyp:Fee>0.0</hyp:Fee>
      </hyp:Ws_Generic_Fees>
   </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_Generic_FeesResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_Generic_FeesResult>
            <WSID>2021123456789</WSID>
            <IssCode>PMT</IssCode>
            <ActionCode>000</ActionCode>
            <LocDate>2021-01-01</LocDate>
            <LocTime>120000</LocTime>
            <SysDate>2021-01-01</SysDate>
            <PublicToken>123456789</PublicToken>
            <Fee>1</Fee>
            <ItemId>1234</ItemId>
            <IsPartial>false</IsPartial>
            <WaivedoffAmount>1</WaivedoffAmount>
            <TotalAmount>1</TotalAmount>
         </Ws_Generic_FeesResult>
      </Ws_Generic_FeesResponse>
   </soap:Body>
</soap:Envelope>
```

Apply FX Rate

API: Ws_Client_FX

This web service enables you to send your own FX (foreign exchange) rates to Thredd. You can stream in FX rates at your chosen frequency, such as: hourly or daily. The rates could be used for Multi-FX wallet functions or for services such as provisioning of fixed rate FX cards.

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every request. For details, see the FAQs.	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<GroupFxID>	N	1	4	Currency conversion Group ID.	Mandatory	Mandatory
<Rates>				An array of rates. See Rate Details below. Can occur multiple times within the request.	Mandatory	Omit

Rate Details (in request)

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<SrcCurCode>	AN	3	3	Alpha currency code of source currency(e.g. GBP).	Mandatory	Omit
<DesCurCode>	AN	3	3	Alpha currency code of destination currency (e.g. EUR).	Mandatory	Omit
<BuyRate>	D	1	(6,8)*	Currency buying rate.	Mandatory	Omit
<SellRate>	D	1	(6,8)	Currency selling rate. If not used, then pass '0' as the default value.	Optional	Omit
<MidRate>	D	1	(6,8)	Middle currency rate (median average of buy and sell rates). If not used, then pass '0' as the default value.	Optional	Omit

Notes

- (6,8) is 6 numeric with 8 decimal values. This represents a maximum value of 999999.99999999.

Rate Details (in response)

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<ActionCode>	AN	3	3	The action code for the response. Possible action codes in the response are: 000 = Normal, approve. 801 = IssCode is missing. 909 = System malfunction, deny. 868 = Duplicate WSID in the request, deny. 707 = Invalid FX Group ID.	Omit	Mandatory
<SysDate>	YYYY-MM-DD	10	10	The system processing date.	Omit	Mandatory
<NoOfInvalidRates>	N	1	4	Number of invalid rates in the request.	Omit	Mandatory
<InvalidRates>				See Invalid Rate Details below. Can occur multiple times within the response. It is the rejected list of rates in the request. If all rates in the request are valid then it will not present in the response.	Omit	Conditional

Invalid Rate Details (in response)

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<RateNo>	N	1	4	Position of invalid rate in the request.	Omit	Mandatory
<SrcCurCode>	AN	3	3	Alpha currency code of source currency(e.g. GBP).	Omit	Mandatory
<DesCurCode>	AN	3	3	Alpha currency code of destination currency (e.g. EUR).	Omit	Mandatory
<BuyRate>	D	1	(6,8)*	Currency buying rate.	Omit	Mandatory
<SellRate>	D	1	(6,8)	Currency selling rate.	Omit	Optional
<MidRate>	D	6,8	(6,8)	Middle currency rate (median average of buy	Omit	Optional

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				and sell rates).		
<ErrorCode>	AN	3	3	Reason code for the rejection. Possible error codes are: 702 = Invalid Currency Buy Rate. It should be greater than 0.0. 703 = Invalid Currency Sell Rate. It should be non-negative. 704 = Invalid Currency Sell Rate. It should be non-negative. 705 = Invalid source currency code 706 = Invalid destination currency code	Omit	Mandatory
<ErrorDescription>	AN	1	150	Reason for the rate rejection.	Omit	Mandatory

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_Client_Fx>
         <hyp:WSID>2021123456789</hyp:WSID>
         <hyp:IssCode>PMT</hyp:IssCode>
         <hyp:GroupFxID>123</hyp:GroupFxID>
         <hyp:Rates>
            <hyp:Rates>
               <hyp:SrcCurCode>GBP</hyp:SrcCurCode>
               <hyp:DesCurCode>USD</hyp:DesCurCode>
               <hyp:BuyRate>1.4</hyp:BuyRate>
               <hyp:SellRate>1.4</hyp:SellRate>
               <hyp:MidRate>1.4</hyp:MidRate>
            </hyp:Rates>
            <hyp:Rates>
               <hyp:SrcCurCode>GBP</hyp:SrcCurCode>
               <hyp:DesCurCode>EUR</hyp:DesCurCode>
               <hyp:BuyRate>1.1</hyp:BuyRate>
               <hyp:SellRate>1.1</hyp:SellRate>
               <hyp:MidRate>1.1</hyp:MidRate>
            </hyp:Rates>
            <hyp:Rates>
               <hyp:SrcCurCode>GBP</hyp:SrcCurCode>
               <hyp:DesCurCode>ABC</hyp:DesCurCode>
               <hyp:BuyRate>1.1</hyp:BuyRate>
               <hyp:SellRate>1.1</hyp:SellRate>
               <hyp:MidRate>1.1</hyp:MidRate>
            </hyp:Rates>
         </hyp:Rates>
      </hyp:Ws_Client_Fx>
   </soapenv:Body>
```

```
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_Client_FxResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_Client_FxResult>
            <WSID>2021123456789</WSID>
            <IssCode>PMT</IssCode>
            <ActionCode>000</ActionCode>
            <SysDate>2014-08-29</SysDate>
            <GroupFxID>1</GroupFxID>
            <NoOfInvalidRates>1</NoOfInvalidRates>
            <InvalidRates>
               <InvalidRate>
                  <RateNo>3</RateNo>
                  <SrcCurCode>GBP</SrcCurCode>
                  <DesCurCode>ABC</DesCurCode>
                  <BuyRate>1.1</BuyRate>
                  <SellRate>1.1</SellRate>
                  <MidRate>1.1</MidRate>
                  <ErrorCode>706</ErrorCode>
                  <ErrorDescription>Invalid destination currency code</ErrorDescription>
               </InvalidRate>
            </InvalidRates>
         </Ws_Client_FxResult>
      </Ws_Client_FxResponse>
   </soap:Body>
</soap:Envelope>
```

Acceptor Lists Overview

Acceptor lists enable you to control which merchants or merchant code are blocked or allowed to use your service. You can set up multiple acceptor lists and link cards to a list.

You can use the following web services to view and manage your card *Disallow* lists and *Allow* lists:

Card Acceptor Disallow list: Ws_CardAcceptorBlacklist
Card Acceptor Allow list: Ws_CardAcceptorWhiteList
Card Change Acceptor List: Ws_Card_Change_Cardacceptor_List
Card Change Acceptor List (Bulk): Ws_Change_Cardacceptor_List

Card Acceptor Deny List

API: Ws_CardAcceptorBlacklist

This web service enables you to manage Card Acceptor (MerchantID) *Deny* lists, which can then be assigned to a card or group of cards. Any merchant IDs in the disallow will see transactions declined by Thredd at the authorisation stage. The response code will be '*05 - Do not honour*'.

Note: If the card does not have the disallow group assigned, this will need to be added via Ws_Card_Change_Cardacceptor_List or Ws_Change_Cardacceptor_List. See Card Change Acceptor List and Card Change Acceptor List (Bulk).

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every request. For details, see the FAQs.	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<BlackList>	AN	1	255	Identifier for a Card Acceptor Deny list in Thredd.	Mandatory	Mandatory
<CardAcceptors>	-	-	-	Provides a list of CardAcceptorModifier elements; see CardAcceptorModifier Description below. If the list is empty, the web service returns a list of all the CardAcceptorModifier elements in the Deny list.	Mandatory	Omit
<SysDate>	AN	10	10	The system processing date.	Omit	Mandatory
<ActionCode>	AN	3	3	The action code for the response. See Action Codes.	Omit	Mandatory
<NoOfInvalidCardAcceptors>	N	1	9	Number of invalid *CardAcceptorModifier* elements detected. Check the <ActionCode> of each one to see the reason for the rejection.	Omit	Mandatory
<InvalidCardAcceptors>	-	-	-	See Invalid Card Acceptor Description below. Provides a list of InvalidCardAcceptor elements.	Omit	Mandatory

CardAcceptorModifier Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<CardAcceptorID>	AN	1	50	Card Acceptor ID. Also known as Merchant ID (DE 42).	Mandatory	N/A
<Action>	N	1	9	Action Code: 0 = Delete Card Acceptor ID 1 = Insert Card Acceptor ID	Mandatory	N/A

Invalid CardAcceptorModifier Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<AcceptorNo>	N	1	9	Unique, sequential identifier for the entry in the list.	N/A	Mandatory
<CardAcceptorID>	AN	1	50	Card Acceptor ID. Also known as Merchant ID (DE 42).	N/A	Mandatory
<ErrorCode>	AN	3	4	Action Code for this Card Acceptor ID: 781 = CardAcceptorId is empty 782 = Invalid Action (parameter value was invalid) 783 = CardAcceptorID not found (valid when Action = 0) 799 = CardAcceptorID already exists	N/A	Mandatory
ErrorDescription	AN	1	255	Description of the error.	N/A	Mandatory

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soap:Body>
      <hyp:Ws_CardAcceptorBlackList>
         <hyp:WSID>202107150820</hyp:WSID>
         <hyp:IssCode>PMT</hyp:IssCode>
         <hyp:BlackList>BL1</hyp:BlackList>
         <hyp:CardAcceptors>
            <!--Zero or more repetitions:-->
            <hyp:CardAcceptorModifier>
               <hyp:CardAcceptorID>123456789</hyp:CardAcceptorID>
               <hyp:Action>1</hyp:Action>
```

```
            </hyp:CardAcceptorModifier>
         </hyp:CardAcceptors>
      </hyp:Ws_CardAcceptorBlackList>
   </soap:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_CardAcceptorBlackListResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_CardAcceptorBlackListResult>
            <WSID>201507150820</WSID>
            <IssCode>PMT</IssCode>
            <ActionCode>000</ActionCode>
            <SysDate>2021-07-15</SysDate>
            <BlackList>BL1</BlackList>
            <NoOfInvalidCardAcceptors>1</NoOfInvalidCardAcceptors>
            <InvalidCardAcceptors>
               <InvalidCardAcceptor>
                  <AcceptorNo>1</AcceptorNo>
                  <CardAcceptorID>123456789</CardAcceptorID>
                  <ErrorCode>799</ErrorCode>
                  <ErrorDescription>This card acceptor is already added to the Deny list of the given scheme</ErrorDescription>
               </InvalidCardAcceptor>
            </InvalidCardAcceptors>
         </Ws_CardAcceptorBlackListResult>
      </Ws_CardAcceptorBlackListResponse>
   </soap:Body>
</soap:Envelope>
```

Card Acceptor Allow List

API: Ws_CardAcceptorWhiteList

This web service enables you to manage Card Acceptor (MerchantID) Allow lists, which can then be assigned to a card or group of cards. Only merchant ID's added to the Allow list will be approved by Thredd at authorisation stage.

Note: If the card does not have an Allow list group assigned, this needs to be added via Ws_Card_Change_Cardacceptor_List or Ws_Change_Cardacceptor_List. See Card Change Acceptor List and Card Change Acceptor List (Bulk).

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every request. For details, see the FAQs.	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<WhiteList>	AN	1	255	Identifier for a Card Acceptor Allow list in Thredd.	Mandatory	Mandatory
<SysDate>	AN	10	10	The system processing date.	Omit	Mandatory
<ActionCode>	AN	3	3	The action code for the response. See Action Codes.	Omit	Mandatory
<NoOfInvalidCardAcceptors>	N	1	9	Number of invalid *CardAcceptorModifier* elements detected. Check the <ActionCode> of each one to see the reason for the rejection.	Omit	Mandatory
<CardAcceptors>	-	-	-	Provides a list of CardAcceptorModifier elements; see Card CardAcceptorModifier Description below. If the list is empty, the web service returns a list of all the CardAcceptorModifier elements in the Whitelist.	Mandatory	Omit
<InvalidCardAcceptors>	-	-	-	See Invalid CardAcceptorModifier Description below. InvalidCardAcceptors is a list of CardAcceptorModifier elements.	Omit	Mandatory

CardAcceptorModifier Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<CardAcceptorID>	AN	1	50	Card Acceptor ID. Also known as Merchant ID (DE 42).	Mandatory	N/A
<Action>	N	1	9	Action Code: 0 = Delete Card Acceptor ID 1 = Insert Card Acceptor ID	Mandatory	N/A

Invalid CardAcceptorModifier Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<AcceptorNo>	N	1	9	Unique, sequential identifier for the entry in the list.	N/A	Mandatory
<CardAcceptorID>	AN	1	50	Card Acceptor ID. Also known as Merchant ID (DE 42).	N/A	Mandatory
<ErrorCode>	AN	3	4	Action Code for this Card Acceptor ID: 781 = CardAcceptorId is empty 782 = Invalid Action (parameter value was invalid) 783 = CardAcceptorID not found (valid when Action = 0) 799 = CardAcceptorID already exists	N/A	Mandatory
ErrorDescription	AN	1	255	Description of the error.	N/A	Mandatory

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soap:Body>
      <hyp:Ws_CardAcceptorWhiteList>
         <hyp:WSID>202107150820</hyp:WSID>
         <hyp:IssCode>PMT</hyp:IssCode>
         <hyp:WhiteList>WL1</hyp:WhiteList>
         <hyp:CardAcceptors>
            <!--Zero or more repetitions:-->
            <hyp:CardAcceptorModifier>
               <hyp:CardAcceptorID>123456789</hyp:CardAcceptorID>
               <hyp:Action>1</hyp:Action>
```

```
            </hyp:CardAcceptorModifier>
         </hyp:CardAcceptors>
      </hyp:Ws_CardAcceptorWhiteList>
   </soap:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_CardAcceptor WhiteList Response xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_CardAcceptorWhiteListResult>
            <WSID>202107150820</WSID>
            <IssCode>PMT</IssCode>
            <ActionCode>000</ActionCode>
            <SysDate>2021-07-15</SysDate>
            <WhiteList>WL1</WhiteList>
            <NoOfInvalidCardAcceptors>1</NoOfInvalidCardAcceptors>
            <InvalidCardAcceptors>
               <InvalidCardAcceptor>
                  <AcceptorNo>1</AcceptorNo>
                  <CardAcceptorID>123456789</CardAcceptorID>
                  <ErrorCode>799</ErrorCode>
                  <ErrorDescription>This card acceptor is already added to the Allow list of the given scheme</ErrorDescription>
               </InvalidCardAcceptor>
            </InvalidCardAcceptors>
         </Ws_CardAcceptorWhiteListResult>
      </Ws_CardAcceptorWhiteListResponse>
   </soap:Body>
</soap:Envelope>
```

Card Change Acceptor List

API: Ws_Card_Change_Cardacceptor_List

This web service modifies the card acceptor (MerchantID) lists (such as Allow lists and Deny lists) that a card makes use of. You use a list to modify a single card. This determines the list of merchants at which the card can be used.

Note: The acceptance of a card can be subject to an Allow list or a Deny list, not both.

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every request. For details, see the FAQs.	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<PAN>	AN	14	19	Card Number. Mandatory if <PublicToken> is not provided.	Optional	Omit
<PublicToken>	AN	1	9	The card's public token. Mandatory in request if <PAN> is not present. Mandatory in the response.	Conditional	Mandatory
<LocDate>	YYYY-MM-DD	10	10	The local current date in *year-month-date* format.	Mandatory	Mandatory
<LocTime>	HHMMSS	6	6	The local current time, in *hour-minute-second* format.	Mandatory	Mandatory
<BlackList>	AN	1	10	Group code of the card acceptor Deny list. See Card Acceptor Deny list.	Optional	Omit
<WhiteList>	AN	1	10	Group code of the card acceptor Allow list. See Card Acceptor Allow list.	Optional	Omit
<SysDate>	YYYY-MM-DD	10	10	The system processing date.	Omit	Mandatory
<ActionCode>	AN	3	3	The action code for the response. See Action Codes.	Omit	Mandatory
<WebServiceResult>	AN			Parameter group describing the result	Omit	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				of the Web Service call. Only has values if the current request returns an action code of *868 Duplicate WSID*. See WebServiceResult.		

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_Card_Change_Cardacceptor_List>
         <hyp:WSID>1234</hyp:WSID>
         <hyp:IssCode>PMT</hyp:IssCode>
         <hyp:PAN></hyp:PAN>
         <hyp:PublicToken>123456789</hyp:PublicToken>
         <hyp:LocDate>2021-01-01</hyp:LocDate>
         <hyp:LocTime>120000</hyp:LocTime>
         <hyp:BlackList>ABCD</hyp:BlackList>
         <hyp:WhiteList>XYZ</hyp:WhiteList>
      </hyp:Ws_Card_Change_Cardacceptor_List>
   </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_Card_Change_Cardacceptor_ListResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_Card_Change_Cardacceptor_ListResult>
            <WSID>20211234567896</WSID>
            <IssCode>PMT</IssCode>
            <ActionCode>000</ActionCode>
            <LocDate>2021-01-01</LocDate>
            <LocTime>10000</LocTime>
            <SysDate>2021-01-01</SysDate>
            <PublicToken/>
            <WebServiceResult/>
         </Ws_Card_Change_Cardacceptor_ListResult>
      </Ws_Card_Change_Cardacceptor_ListResponse>
   </soap:Body>
</soap:Envelope>
```

Card Change Acceptor List (Bulk)

API: Ws_Change_Cardacceptor_List

This web service is used to modify acceptor lists, such as the Allow lists and Deny lists that a group of cards belong to. This determines the list of merchants at which the cards can be used.

Note: The acceptance of a card can be subject to either a Allow list or a Deny list, not both.

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every request. For details, see the FAQs.	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<CardDesc>	-	-	-	See CARD Description below.	Omit	Mandatory
<CardSelector>	N	1	2	Card Selector type: 1 = Product ID; 2 = Customer account number; 3 = To be confirmed	Mandatory	Mandatory
<CardSelectorValue>	AN	1	30	Card Selector value. If <Card Selector> is 1 then this is a product ID (e.g. 12345). If <Card Selector> is 2 then this is a customer account number (e.g. 008480510001), and wildcards are supported in the Card Selector value (e.g. '0084505*').	Mandatory	Mandatory
<LocDate>	YYYY-MM-DD	10	10	The local current date in *year-month-date* format.	Mandatory	Mandatory
<LocTime>	HHMMSS	6	6	The local current time, in *hour-minute-second* format.	Mandatory	Mandatory
<BlackList>	AN	1	10	Group code of the card acceptor Deny list. See Card Acceptor Deny list.	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WhiteList>	AN	1	10	Group code of the card acceptor Allow list. See Card Acceptor Allow list.	Optional	Omit
<CurrentBlackList>	AN	1	10	Group code of the Deny list to further select cards. If specified, then only the cards within the Card Selector value that belong to this group are migrated to the new group. If not specified, all cards within the Card Selector value are moved.	Optional	Omit
<CurrentWhiteList>	AN	1	10	Group code of the Allow list to further select cards. If specified, then only the cards within the Card Selector value that belong to this group are migrated to the new group. If not specified, all cards within the Card Selector value are moved.	Optional	Omit
<SysDate>	YYYY-MM-DD	10	10	The system processing date.	Omit	Mandatory
<ActionCode>	AN	3	3	The action code for the response. See Action Codes.	Omit	Mandatory

CARD Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<PublicToken>	AN	1	9	The card's public token. Mandatory in the response.	Omit	Mandatory
<CurrentBlackList>	AN	1	10	Group code of the Deny list to further select cards. If specified, then only the cards within the Card Selector value that belong to this group are migrated to the new group. If not specified, all cards within the Card Selector value are moved.	Omit	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<CurrentWhiteList>	AN	1	10	Group code of the Allow list to further select cards. If specified, then only the cards within the Card Selector value that belong to this group are migrated to the new group. If not specified, all cards within the Card Selector value are moved.	Omit	Mandatory

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_Change_Cardacceptor_List>
         <hyp:WSID>2021123456789</hyp:WSID>
         <hyp:IssCode>PMT</hyp:IssCode>
         <hyp:CardSelector>1</hyp:CardSelector>
         <hyp:CardSelectorValue>123</hyp:CardSelectorValue>
         <hyp:LocDate>2021-01-01</hyp:LocDate>
         <hyp:LocTime>120000</hyp:LocTime>
         <hyp:BlackList>XYZ</hyp:BlackList>

         <hyp:WhiteList></hyp:WhiteList>

         <hyp:CurrentBlackList>ABCD</hyp:CurrentBlackList>

         <hyp:CurrentWhiteList></hyp:CurrentWhiteList>
      </hyp:Ws_Change_Cardacceptor_List>
      </hyp:Ws_Change_Groups>
   </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_Change_Cardacceptor_ListResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_Change_Cardacceptor_ListResult>
            <WSID>2021123456789</WSID>
            <IssCode>PMT</IssCode>
            <CardSelector>1</CardSelector>
            <CardSelectorValue>123</CardSelectorValue>
            <ActionCode>000</ActionCode>
            <LocDate>2021-01-01</LocDate>
            <LocTime>120000</LocTime>
            <SysDate>2021-01-01</SysDate>
            <CardsAccepter>
               <CardAccepterList>
                  <PublicToken>123456789</PublicToken>
                  <CurrentBlackList>XYZ</CurrentBlackList>
                  <CurrentWhiteList/>
               </CardAccepterList>
```

```
               <CardAccepterList>
                  <PublicToken>223456789</PublicToken>
                  <CurrentBlackList>XYZ</CurrentBlackList>
                  <CurrentWhiteList/>
               </CardAccepterList>
            </CardsAccepter>
         </Ws_Change_Cardacceptor_ListResult>
      </Ws_Change_Cardacceptor_ListResponse>
   </soap:Body>
</soap:Envelope>
```

Thredd Groups and Products

Thredd enables you to set up limit groups, which control your customer card usage. These groups can be set up by Thredd or you may be able to set up and configure them in Smart Client and in Thredd Portal. You can use the following web services to view and manage your card groups and products:

List Groups: Ws_list_group
Card Change Groups (single): Ws_Card_Change_Groups
Card Change Groups (Bulk): Ws_Change_Groups
List Products: Ws_List_Products

List Groups

API: Ws_list_group

This web service lists the codes and descriptions of all groups of a certain type (e.g. Fee Groups, Limit Groups).

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every request. For details, see the FAQs.	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<GroupType>	N	1	2	Group Type identifier. Possible values are: 1 = Limit Groups 2 = Authorisation Fee Groups 3 = Recurring/Scheduled Fee Groups 4 = Web Service Fee Groups 5 = MCC Groups 6 = Usage Groups 7 = Linkage Groups 8 = FX Groups 9 = Auth Calendar Groups 10 = Payment Token Usage Groups	Mandatory	Mandatory
<SysDate>	YYYY-MM-DD	10	10	The system processing date.	Omit	Mandatory
<ActionCode>	AN	3	3	The action code for the response. See Action Codes.	Omit	Mandatory
<GroupInfo>	-	-	-	Returns a list of <GroupListInfo>. See Group List Info below. Can occur multiple times within the message.		

Group List Info

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<GroupCode>	AN	1	10	Group code.	Omit	Mandatory
<GroupDesc>	AN	1	30	Group description.	Omit	Mandatory

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_List_Group>
         <hyp:WSID>2021123456789</hyp:WSID>
         <hyp:IssCode>PMT</hyp:IssCode>
         <hyp:GroupType>1</hyp:GroupType>
      </hyp:Ws_List_Group>
   </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_List_GroupResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_List_GroupResult>
            <WSID>2021123456789</WSID>
            <IssCode>PMT</IssCode>
            <GroupType>1</GroupType>
            <SysDate>2014-10-28</SysDate>
            <ActionCode>000</ActionCode>
            <GroupInfo>
               <GroupListInfo>
                  <GroupCode>GRP_EURO</GroupCode>
                  <GroupDesc>GROUP EURO</GroupDesc>
               </GroupListInfo>
               <GroupListInfo>
                  <GroupCode>GRP_GBP</GroupCode>
                  <GroupDesc>GROUP GBP</GroupDesc>
               </GroupListInfo>
               <GroupListInfo>
                  <GroupCode>GRP_USD</GroupCode>
                  <GroupDesc>GROUP USD</GroupDesc>
               </GroupListInfo>
            </GroupInfo>
         </Ws_List_GroupResult>
      </Ws_List_GroupResponse>
   </soap:Body>
</soap:Envelope>
```

Card Change Groups (single)

API: Ws_Card_Change_Groups

This web service enables you to change one or more of the groups for a specific card within any of those configured for your programme (e.g. Limit Groups, MCC Group, Fee Group and Usage Group).

For example you may have groups set up to limit Merchant Category Codes (MCCs) based on the cardholder controls in your app. These can include blocking gambling or adult services or spend/ATM limits which are determined by the end cardholder or by a parent cardholder (e.g. corporate card administrator).

Tip: To find out the group codes that are currently configured for each group type, use the List Groups API: Ws_list_group. Grouo codes are also shown in Smart Client.

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every web service request sent. For details, see the FAQs.**Tip**: You could use a number based on the current date and time, as long as it is unique (e.g., *20201217145006*).	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<PAN>	AN	14	19	Card Number. Mandatory if <PublicToken> is not provided.	Optional	Omit
<PublicToken>	AN	1	9	The card's public token. Mandatory in request if <PAN> is not present. Mandatory in the response.	Conditional	Mandatory
<LocDate>	YYYY-MM-DD	10	10	The local current date in *year-month-date* format.	Mandatory	Mandatory
<LocTime>	HHMMSS	6	6	The local current time, in *hour-minute-second* format.	Mandatory	Mandatory
<LimitsGroup>	AN	1	10	Group code of the Limit Group. To remove the group assigned to the card send a single	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				space character (ASCII code 32).		
<MCCGroup>	AN	1	10	Group code of the MCC Group. To remove the group assigned to the card send a single space character (ASCII code 32).	Optional	Omit
<PERMSGroup>	AN	1	10	Group code of the Usage Group. To remove the group assigned to the card send a single space character (ASCII code 32).	Optional	Omit
<FeeGroup>	AN	1	10	Group code of the Fee Group. To remove the group assigned to the card send a single space character (ASCII code 32).	Optional	Omit
<SchedFeeGroup>	AN	1	10	Group code of the Scheduled Fee Group. To remove the group assigned to the card send a single space character (ASCII code 32).	Optional	Omit
<WSFeeGroup>	AN	1	10	Group code of the Web Service Fee Group. To remove the group assigned to the card send a single space character (ASCII code 32).	Optional	Omit
<LinkageGroup>	AN	1	10	Group code of the Card Linkage Group. To remove the group assigned to the card send a single space character (ASCII code 32).	Optional	Omit
<AuthCalendarGroup>	AN	1	10	Group code of the Auth Calendar Group. To remove the group assigned to the card send a single space character (ASCII code 32).	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<FXGroup>	AN	1	10	Group code of the FX Group. To remove the group assigned to the card send a single space character (ASCII code 32).	Optional	Omit
<SysDate>	YYYY-MM-DD	10	10	The system processing date.	Omit	Mandatory
<ActionCode>	AN	3	3	The action code for the response. See Action Codes.	Omit	Mandatory
<PaymentTokenUsageGroup>	AN	1	10	Payment token usage group code. Defines configuration options specific to the provisioning of a digital payment token. For details, see the *Tokenisation Guide*. This is a numeric value; only digits 0-9 are valid. Leave empty if no usage group is required.	Optional	Omit

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_Card_Change_Groups>
         <hyp:WSID>2021123456789</hyp:WSID>
         <hyp:IssCode>PMT</hyp:IssCode>
         <hyp:PAN></hyp:PAN>
         <hyp:PublicToken>123456789</hyp:PublicToken>
         <hyp:LocDate>2021-01-01</hyp:LocDate>
         <hyp:LocTime>120000</hyp:LocTime>
         <hyp:LimitsGroup>PMT-VL-002</hyp:LimitsGroup>
         <hyp:MCCGroup></hyp:MCCGroup>
         <hyp:PERMSGroup></hyp:PERMSGroup>
         <hyp:FeeGroup></hyp:FeeGroup>
         <hyp:SchedFeeGroup></hyp:SchedFeeGroup>
         <hyp:LinkageGroup></hyp:LinkageGroup>
         <hyp:AuthCalendarGroup></hyp:AuthCalendarGroup>
         <hyp:FXGroup></hyp:FXGroup>
         <hyp:PaymentTokenUsageGroup></hyp:PaymentTokenUsageGroup>
      </hyp:Ws_Card_Change_Groups>
   </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_Card_Change_GroupsResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_Card_Change_GroupsResult>
            <WSID>2021123456789</WSID>
            <IssCode>PMT</IssCode>
            <ActionCode>000</ActionCode>
            <LocDate>2021-01-01</LocDate>
            <LocTime>120000</LocTime>
            <SysDate>2021-01-01</SysDate>
            <PublicToken>123456789</PublicToken>
         </Ws_Card_Change_GroupsResult>
      </Ws_Card_Change_GroupsResponse>
   </soap:Body>
</soap:Envelope>
```

Card Change Groups (Bulk)

API: Ws_Change_Groups

This web service enables you to bulk change groups configured for your programme (e.g. Limit Groups, MCC Group, Fee Group and Usage Group) to apply to multiple cards. It affects all cards found by the <CardSelectorValue> and does not update the default group linked to the card's product.

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every request. For details, see the FAQs.	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<CardSelector>	N	1	2	Card selector type: 1 = product ID; 2 = customer account number.	Mandatory	Mandatory
<CardSelectorValue>	AN	1	30	Card selector value. For example, 123456 for a product ID or '008480510001 for a customer account number. If <CardSelector> is 2 then Wildcards can be used (e.g. '0084505*').	Mandatory	Mandatory
<LocDate>	YYYY-MM-DD	10	10	The local current date in *year-month-date* format.	Mandatory	Mandatory
<LocTime>	HHMMSS	6	6	The local current time, in *hour-minute-second* format.	Mandatory	Mandatory
<LimitsGroup>	AN	1	10	Group code of the Limit Group. To remove the group assigned to the card send a single space character (ASCII	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				code 32).		
<MCCGroup>	AN	1	10	Group code of the MCC Group. To remove the group assigned to the card send a single space character (ASCII code 32).	Optional	Omit
<PERMSGroup>	AN	1	10	Group code of the Usage Group. To remove the group assigned to the card send a single space character (ASCII code 32).	Optional	Omit
<FeeGroup>	AN	1	10	Group code of the Fee Group. To remove the group assigned to the card send a single space character (ASCII code 32).	Optional	Omit
<SchedFeeGroup>	AN	1	10	Group code of the Scheduled Fee Group. To remove the group assigned to the card send a single space character (ASCII code 32).	Optional	Omit
<WSFeeGroup>	AN	1	10	Group code of the Web Service Fee Group. To remove the group assigned to the card send a single space character (ASCII code 32).	Optional	Omit
<LinkageGroup>	AN	1	10	Group code of the Card Linkage Group. To remove the group assigned to the card send a single space character (ASCII code 32).	Optional	Omit
<FXGroup>	AN	1	10	Group code of the FX Group. To remove the	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				group assigned to the card send a single space character (ASCII code 32).		
<CurrentLimitsGroup>	AN	1	10	Group code of the group limit that should be used to further select cards. If specified, then only the cards within the <CardSelector> value that belong to this group will be migrated to the new group.If not specified, all cards within the <CardSelector> value will be moved.	Optional	Omit
<CurrentMCCGroup>	AN	1	10	Group code of the MCC group that should be used to further select cards. If specified, then only the cards within the <CardSelector> value that belong to this group will be migrated to the new group. If not specified, all cards within the <CardSelector> value will be moved.	Optional	Omit
<CurrentPERMSGroup>	AN	1	10	Group code of the Usage group that should be used to further select cards. If specified, then only the cards within the <CardSelector> value that belong to this group will be migrated to the new group. If not specified, all cards within the CardSelector value will be moved.	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<CurrentFeeGroup>	AN	1	10	Group code of the Fee Group that should be used to further select cards. If specified, then only the cards within the <CardSelector> value that belong to this group will be migrated to the new group. If not specified, all cards within the <CardSelector> value will be moved.	Optional	Omit
<CurrentSchedFeeGroup>	AN	1	10	Group code of the Scheduled Fees Group that should be used to further select cards. If specified, then only the cards within the <CardSelector> value that belong to this group will be migrated to the new group. If not specified, all cards within the <CardSelector> value will be moved.	Optional	Omit
<CurrentWSFeeGroup>	AN	1	10	Group code of the Web Service Fees Group that should be used to further select cards. If specified, then only the cards within the <CardSelector> value that belong to this group will be migrated to the new group. If not specified, all cards within the <CardSelector> value will be moved.	Optional	Omit
<CurrentLinkageGroup>	AN	1	10	Group code of the Card	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				Linkage Group that should be used to further select cards. If specified, then only the cards within the <CardSelector> value that belong to this group will be migrated to the new group. If not specified, all cards within the <CardSelector> value will be moved.		
<CurrentFXGroup>	AN	1	10	Group code of the FX Rates Group that should be used to further select cards. If specified, then only the cards within the <CardSelector> value that belong to this group will be migrated to the new group. If not specified, all cards within the <CardSelector> value will be moved.	Optional	Omit
<PaymentTokenUsageGroup>	AN	1	10	New payment token usage group code. This is a numeric value, only digits 0-9 are valid. Leave empty if no group required.		
<CurrentPaymentTokenUsageGroup>	AN	1	10	Current Payment token usage group code. This is a numeric value, only digits 0-9 are valid. Leave empty if no group is required.		
<SysDate>	YYYY-MM-DD	10	10	The system processing date.	Omit	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<ActionCode>	AN	3	3	The action code for the response. See Action Codes.	Omit	Mandatory
<Cards>	-	-	-	An array of <CardDesc>. See Cards Description below.	Omit	Mandatory

Card Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<PublicToken>	AN	1	9	The card's public token. Mandatory in the response.	Omit	Mandatory
<CurrentLimitsGroup>	AN	1	10	Group code of the Limit Group after any change has been applied.	Omit	Mandatory
<CurrentMCCGroup>	AN	1	10	Group code of the MCC Group after any change has been applied.	Omit	Mandatory
<CurrentPERMSGroup>	AN	1	10	Group code of the Usage Group after any change has been applied.	Omit	Mandatory
<CurrentFeeGroup>	AN	1	10	Group code of the Fee Group after any change has been applied.	Omit	Mandatory
<CurrentSchedFeeGroup>	AN	1	10	Group code of theScheduled Fee Group after any change has been applied.	Omit	Mandatory
<CurrentWSFeeGroup>	AN	1	10	Group code of the Web Service Fee Group after any change has been applied.	Omit	Mandatory
<CurrentLinkageGroup>	AN	1	10	Group code of the Card Linkage Group	Omit	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				after any change has been applied.		
<CurrentFXGroup>	AN	1	10	Group code of the FX Group after any change has been applied.	Omit	Mandatory
<CurrentPaymentTokenUsageGroup>	AN	1	10	Group code of the Payment Token Usage Group after any change has been applied.	Omit	Mandatory

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_Change_Groups>
         <hyp:WSID>2021123456789</hyp:WSID>
         <hyp:IssCode>PMT</hyp:IssCode>
         <hyp:CardSelector>1</hyp:CardSelector>
         <hyp:CardSelectorValue>123</hyp:CardSelectorValue>
         <hyp:LocDate>2013-01-01</hyp:LocDate>
         <hyp:LocTime>120000</hyp:LocTime>
         <hyp:LimitsGroup>DF - 02</hyp:LimitsGroup>
         <hyp:MCCGroup></hyp:MCCGroup>
         <hyp:PERMSGroup></hyp:PERMSGroup>
         <hyp:FeeGroup></hyp:FeeGroup>
         <hyp:SchedFeeGroup></hyp:SchedFeeGroup>
         <hyp:WSFeeGroup></hyp:WSFeeGroup>
         <hyp:LinkageGroup></hyp:LinkageGroup>
         <hyp:FXGroup></hyp:FXGroup>
         <hyp:CurrentLimitsGroup>DF - 01</hyp:CurrentLimitsGroup>
         <hyp:CurrentMCCGroup></hyp:CurrentMCCGroup>
         <hyp:CurrentPERMSGroup></hyp:CurrentPERMSGroup>
         <hyp:CurrentFeeGroup></hyp:CurrentFeeGroup>
         <hyp:CurrentSchedFeeGroup></hyp:CurrentSchedFeeGroup>
         <hyp:CurrentWSFeeGroup></hyp:CurrentWSFeeGroup>
         <hyp:CurrentLinkageGroup></hyp:CurrentLinkageGroup>
         <hyp:CurrentFXGroup></hyp:CurrentFXGroup>
         <hyp:PaymentTokenUsageGroup></hyp:PaymentTokenUsageGroup>
         <hyp:CurrentPaymentTokenUsageGroup></hyp:CurrentPaymentTokenUsageGroup>
      </hyp:Ws_Change_Groups>
   </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_Change_GroupsResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_Change_GroupsResult>
            <WSID>2021123456789</WSID>
```

```
            <IssCode>PMT</IssCode>
            <CardSelector>1</CardSelector>
            <CardSelectorValue>123</CardSelectorValue>
            <ActionCode>000</ActionCode>
            <LocDate>2013-01-01</LocDate>
            <LocTime>120000</LocTime>
            <SysDate>2013-01-01</SysDate>
            <Cards>
               <CardDesc>
                  <PublicToken>123456789</PublicToken>
                  <CurrentLimitsGroup>PMT-VL-002</CurrentLimitsGroup>
                  <CurrentMCCGroup/>
                  <CurrentPERMSGroup/>
                  <CurrentFeeGroup/>
                  <CurrentSchedFeeGroup/>
                  <CurrentWSFeeGroup/>
                  <CurrentLinkageGroup/>
                  <CurrentFXGroup/>
  <CurrentPaymentTokenUsageGroup/>
               </CardDesc>
               <CardDesc>
                  <PublicToken>987654321</PublicToken>
                  <CurrentLimitsGroup>PMT-VL-002</CurrentLimitsGroup>
                  <CurrentMCCGroup/>
                  <CurrentPERMSGroup/>
                  <CurrentFeeGroup/>
                  <CurrentSchedFeeGroup/>
                  <CurrentWSFeeGroup/>
                  <CurrentLinkageGroup/>
                  <CurrentFXGroup/>
  <CurrentPaymentTokenUsageGroup/>
               </CardDesc>
            </Cards>
         </Ws_Change_GroupsResult>
      </Ws_Change_GroupsResponse>
   </soap:Body>
</soap:Envelope>
```

List Products

API: Ws_List_Products

This web service enables you to list products your program has on Thredd systems and view the details of each product.

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every request. For details, see the FAQs.	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<SysDate>	YYYY-MM-DD	10	10	The system processing date.	Omit	Mandatory
<ActionCode>	AN	3	3	The action code for the response. See Action Codes.	Omit	Mandatory
<ProductInfo>	-	-	-	A list of ProductListInfo data, See ProductListInfo below. Can occur multiple times within the message.		

ProductListInfo

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<ProductID>	N	1	10	The identifier of the Modulr card product, or Product ID, within Thredd. For details, check with your Implementation Manager.	Omit	Mandatory
<ProductName>	AN	1	50	Name of the product.	Omit	Mandatory
<ProductDesc>	AN	1	100	Product description.	Omit	Mandatory
<ProgramID>	AN	1	50	Program ID.	Omit	Mandatory
<Currency>	AN	3	3	Billing currency.	Omit	Mandatory
<CrdProduct>	AN	1	50	Scheme name. For example, Visa, Mastercard or Discover.	Omit	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<GroupLimitCode>	AN	1	10	Group code of the Limit Group.	Omit	Mandatory
<GroupFeeTranCode>	AN	1	10	Group code of the Fee Group.	Omit	Mandatory
<GroupFeeMasterCode>	AN	1	10	Group code of the Scheduled Fee Group.	Omit	Mandatory
<GroupFeeWebCode>	AN	1	10	Group code of the Web Service Fee Group.	Omit	Mandatory
<GroupMCCCode>	AN	1	10	Group code of the MCC Group.	Omit	Mandatory
<GroupUsageCode>	AN	1	10	Group code of the Usage Group.	Omit	Mandatory

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_List_Products>
         <hyp:WSID>2021123456789</hyp:WSID>
         <hyp:IssCode>PMT</hyp:IssCode>
      </hyp:Ws_List_Products>
   </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_List_ProductsResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_List_ProductsResult>
            <WSID>2021123456789</WSID>
            <IssCode>PMT</IssCode>
            <SysDate>2014-11-26</SysDate>
            <ActionCode>000</ActionCode>
            <ProductInfo>
               <ProductListInfo>
                  <ProductID>100</ProductID>
                  <ProductName>PRD1</ProductName>
                  <ProductDesc>Product 1</ ProductDesc >
                  <ProgramID>PRD1</ProgramID>
                  <Currency>GBP</Currency>
                  <CrdProduct>MCRD</CrdProduct>
                  <GroupLimitCode>GRPLIMIT1</GroupLimitCode>
                  <GroupFeeTranCode>GRPAUTH1</GroupFeeTranCode>
                  <GroupFeeMasterCode>GRPREC1</GroupFeeMasterCode>
                  <GroupFeeWebCode>GRPWEB1</GroupFeeWebCode>
                  <GroupMCCCode>MCC1</GroupMCCCode>
```

```
                  <GroupUsageCode>USAGE1</GroupUsageCode>
               </ProductListInfo>
               <ProductListInfo>
                  <ProductID>101</ProductID>
                  <ProductName>PRD2</ProductName>
                  <ProductDesc>Product 2</ ProductDesc >
                  <ProgramID>PRD2</ProgramID>
                  <Currency>USD</Currency>
                  <CrdProduct>MCRD</CrdProduct>
                  <GroupLimitCode>GRPLIMIT2</GroupLimitCode>
                  <GroupFeeTranCode>GRPAUTH2</GroupFeeTranCode>
                  <GroupFeeMasterCode>GRPREC2</GroupFeeMasterCode>
                  <GroupFeeWebCode>GRPWEB2</GroupFeeWebCode>
                  <GroupMCCCode>MCC2</GroupMCCCode>
                  <GroupUsageCode>USAGE2</GroupUsageCode>
               </ProductListInfo>
               <ProductListInfo>
                  <ProductID>102</ProductID>
                  <ProductName>PRD3</ProductName>
                  <ProductDesc>Product 3</ ProductDesc >
                  <ProgramID>PRD3</ProgramID>
                  <Currency>EUR</Currency>
                  <CrdProduct>MCRD</CrdProduct>
                  <GroupLimitCode>GRPLIMIT3</GroupLimitCode>
                  <GroupFeeTranCode>GRPAUTH3</GroupFeeTranCode>
                  <GroupFeeMasterCode>GRPREC3</GroupFeeMasterCode>
                  <GroupFeeWebCode>GRPWEB3</GroupFeeWebCode>
                  <GroupMCCCode>MCC3</GroupMCCCode>
                  <GroupUsageCode>USAGE3</GroupUsageCode>
               </ProductListInfo>
            </ProductInfo>
         </Ws_List_ProductsResult>
      </Ws_List_ProductsResponse>
   </soap:Body>
</soap:Envelope>
```

Manage Mobile Devices

You can use the following web services to view and manage tokens on mobile devices:

Payment Token Get: Ws_Payment_Token_Get
Payment Token Status Change: Ws_Payment_Token_StatusChange
Token Device Management: WS_Token_Device_Management (Visa only)

Token Device Management

API: Ws_Token_Device_Management

This web service enables you to retrieve a list of devices bound to a DPAN. You can also use it to unbind a device by initiating an Unbind API call to Visa.

Note: For use on Visa (VDEP) service only.

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every request. For details, see the FAQs.	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<Func>	AN	1	2	Token device function requested: 00 = Retrieve list, 01 = Unbind device.	Mandatory	Omit
<DPAN>	AN	16	19	Tokenised PAN.	Conditional	Omit
<PaymentTokenID>	AN	1	20	Payment token ID.	Conditional	Omit
<DeviceIndex>	AN	1	3	Visa device index (Func 01 only).	Conditional	Omit
<ActionCode>	AN	3	3	The action code for the response. See Action Codes.	Omit	Mandatory
<DeviceList>	-	-	-	An array of device lists. See Device Listbelow. Can occur multiple times within the message.	Omit	Conditional

Device List

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<BoundDeviceIndex>	AN	1	3	Index of the device in the Visa database.	Omit	Mandatory
<TokenUserId>	AN	1	11	Identifer of the token user, the entity that	Omit	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				initiates the payment request.		
<TokenUserType>	AN	1	2	Token user type: 00 = Unknown, 01 = Web, 02 = Mobile web, 03 = Mobile application, 04 = Marketplace app, 05 = Voice app, 06 = Biometric app.	Omit	Mandatory
<GPSDeviceStatus>	A	1	1	Device status on the Thredd system. Options include: A = Active D = Deleted (once in this status, it is normally never changed) I = Inactive N = Not Tokenised P = Pending S = Suspended U = Unknown X = Deactivated	Omit	Mandatory
<NetDeviceStatus>	A	1	1	Device status on the Payment Network. Options include: A = Active D = Deleted (once in this status, it is normally never changed) I = Inactive N = Not Tokenised P = Pending S = Suspended U = Unknown X = Deactivated	Omit	Mandatory
<DeviceBindDate>	YYYY-MM-DD HHMMSS	19	19	Date/Time (in GMT) initial binding message is received.	Omit	Mandatory
<DeviceStatusDate>	YYYY-MM-DD HHMMSS	19	19	Date/Time binding last changed.	Omit	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<DeviceType>	A	1	10	The device type. See Device Types.	Omit	Mandatory
<DeviceLang>	A	1	2	Device language code as ISO 639-1 (2 letter lowercase) code.	Omit	Optional
<DeviceID>	A	1	48	Unique ID of the secure element in the device.	Omit	Optional
<DeviceTelNum>	A	1	15	Device telephone number (if applicable).	Omit	Optional
<DeviceName>	A	1	20	Name assigned to the device.	Omit	Optional
<DeviceLongitiude>	D	1	20	Device longitude in degrees at time of digitisation request: -180 to +180; +ve = East, -ve = West (of Greenwich). Example: 176.2 = East 176.2 degrees, -98.5 = West 98.5 degrees. **Note**: the spelling is not a typo. It reflects how the field name is coded.	Omit	Optional
<DeviceLatitude>	D	1	20	Device latitude in degrees at time of digitisation request: -90 (south pole) to +90 (north pole). +ve=North, -ve=South (from equator). Example: +63.2 = North 63.2 degrees, -82.6 = South 82.6 degrees.	Omit	Optional
<DeviceIP>	A	1	15	IP address (full or last part only) of the device at time of binding /	Omit	Optional

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				digitisation.		

Request

```
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope" xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soap:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soap:Header>
   <soap:Body>
      <hyp:Ws_Token_Device_Management>
         <hyp:WSID>11012021817</hyp:WSID>
         <hyp:IssCode>PMT</hyp:IssCode>
         <hyp:Func>00</hyp:Func>
         <hyp:DPAN>?</hyp:DPAN>
         <hyp:PaymentTokenId>?</hyp:PaymentTokenId>
         <hyp:DeviceIndex>?</hyp:DeviceIndex>
      </hyp:Ws_Token_Device_Management>
   </soap:Body>
</soap:Envelope>
```

Response

```
soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd-
d="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_Token_Device_ManagementResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_Token_Device_ManagementResult>
            <WSID>11012021817</WSID>
            <IssCode>PMT</IssCode>
            <ActionCode>218</ActionCode>
         </Ws_Token_Device_ManagementResult>
      </Ws_Token_Device_ManagementResponse>
   </soap:Body>
</soap:Envelope>
```

Payment Token Get

API: Ws_Payment_Token_Get

This web service gets the details for both Mastercard Digital Enablement Service (MDES) payment token cards and Visa Token Service (VTS) cards.

Your request must provide one of the following card details: PAN, PublicToken, DPAN or Payment_Token_ID. If the MDES or VTS card is not specified, the call returns all linked MDES or VTS cards.

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every request. For details, see the FAQs.	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd. If only <IssCode> is present in the request then this method returns the pending fee details of all cards belonging to the given program manager.	Mandatory	Mandatory
<TxnCode>	AN	1	2	The Transaction Code. See Transaction Codes. Default value is 9.	Mandatory	Mandatory
<PAN>	N	14	19	Card Number. Unique card identifier.	Conditional	Omit
<PublicToken>	N	9	9	Thredd 9-digit public token of the card.	Conditional	Omit
<DPAN>	AN	16	19	Digital PAN value for the card.	Conditional	Omit
<Payment_Token_ID>	N	1	20	Payment token identifier for the MDES or VTS Card.	Conditional	Omit
<LocDate>	YYYY-MM-DD	10	10	The local current date in *year-month-date* format.	Mandatory	Mandatory
<LocTime>	HHMMSS	6	6	The local current time, in *hour-minute-second* format.	Mandatory	Mandatory
<ActionCode>	AN	3	3	The action code for the response. See Action Codes.	Omit	Mandatory

Payment Token Get Res Info

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<Creator>	AN	1	10	Name of the system or process that created the token (e.g., MC-MDES and VISA-T).	Omit	Mandatory
<Creator_PAN_Ref>	AN	1	48	The token creator's unique reference to the linked card.	Omit	Mandatory
<Creator_Token_Ref>	AN	1	48	The token creator's unique reference for this payment token. (Mastercard Token Unique Reference (TUR) and Visa Token reference ID.)	Omit	Mandatory
<PANT>	N	16	19	PAN for the card linked to the MDES or VTS card.	Omit	Mandatory
<Payment_Token>	N	16	19	Payment token Device PAN for the MDES or VTS card.	Omit	Mandatory
<Payment_Token_ExpDate >	Date	10	10	Expiry date of the payment token.	Omit	Optional
<Payment_Token_ID>	N	1	20	Payment token identifier for the MDES or VTS card.	Omit	Mandatory
<Payment_Token_Type >	AN	1	2	Payment token type. See Payment Token Types.	Omit	Mandatory
<Wallet_ID>	AN	1	10	Name of the wallet provider this payment token uses (For example: APPLE, ANDROID, SAMSUNG, MRCHTOKEN).	Omit	Mandatory
<gps_status>	N	2	2	The Thredd status of the payment token for transacting. See Status Codes.	Omit	Mandatory
<Tokenised_Datetime>	DateTime	19	19	Date and time when tokenised, in the format: *yyyy-mm-ddhhmmss*.	Omit	Optional
<Tokenised_Status>	AN	1	1	Tokenised status of this payment token: U = unknown; 0 = not tokenised; 1=tokenised.	Omit	Mandatory
<Txn_Status>	AN	1	1	Status of the payment token as received from	Omit	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				the payment token creator (normally Visa or Mastercard). After tokenisation, this is not changed by Thredd. A = Active D = Deleted (once in this status, it is normally never changed) I = Inactive N = Not Tokenised P = Pending S = Suspended U = Unknown X = Deactivated		
<Txn_Status_ Actor>	AN	1	10	Indicates which system last changed the transaction status.	Omit	Mandatory
<Txn_Status_ Change_ Datetime>	DateTime	16	16	Date and time that the transaction status was last changed. In the format: *yyyy-mm-ddhhmmss*.	Omit	Mandatory
<Accepted_ Terms_Date_ GMT>	DateTime	16	16	Date (in GMT) that terms and conditions were accepted by the cardholder (as received from the network).	Omit	Mandatory
<Accepted_ Terms_Version>	AN	1	32	Version of the terms and conditions which were accepted by the cardholder (as received from the network).	Omit	Mandatory
<Auth_Datetime>	DateTime	16	16	Date and time when the tokenisation request was last responded to.	Omit	Mandatory
<Auth_Decision>	AN	1	1	Final tokenisation decision: U = unknown 0 = approve digitisation request A = approve digitisation request (with additional authentication).	Omit	Mandatory
<Auth_RSPSRC>	AN	10	10	Name of the system or process that approved the tokenisation (e.g., MC-MDES and ISSUER).	Omit	Mandatory
<Auth_Status>	AN	1	1	Status of the authorisation to digitise this payment token:	Omit	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				U = unknown 0 = approve digitisation request A = approve digitisation request (with additional authentication) 1 = decline digitisation request **Note**: this is not the same as a transaction authorisation.		
<Digitisation_ Ref>	AN	1	64	Unique reference (per payment_token_issuer_id) which all digitisation messages use, to link them together.	Omit	Mandatory
<Wallet_ Account_Score>	N	1	1	Risk score for the account, received from the wallet provider during digitisation: 1 = highest risk; 2 = higher risk 3 = neutral; 4 = lower risk; 5 = least risk	Omit	Mandatory
<Wallet_Device_ Score>	N	1	1	Risk score for the device received from the wallet provider during digitisation: 1 = highest risk; 2 = higher risk 3 = neutral; 4 = lower risk; 5 = least risk	Omit	Mandatory
<Wallet_ Reasons>	AN	0	24	Wallet service provider tokenization recommendation reason codes. This field can be null. See Wallet Tokenisation Reason Codes.	Omit	Optional.
<Activation_ Code>	AN	1	40	Activation code to be sent directly to the cardholder to activate this payment token.	Omit	Mandatory
<Activation_ Code_Expdate	DateTime	16	16	Date and time when the activation code expires, in GMT (UTC) in the format: *yyyy-mm-ddhhmmss*.	Omit	Mandatory
<Activation_ Method>	N	1	1	Which activation method was used: 0 = none; 1 = SMS to mobile	Omit	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				phone; 2 = email; 3 = cardholder called an automated call centre; 4 = cardholder called a human call centre; 5 = website; 6 = mobile application; 7 = voice phone call		
<Device_ID>	AN	1	48	Unique ID of the secure element in the device.	Omit	Mandatory
<Device_IP>	AN	1	15	IP address (full or last part only) of the device at time of binding / digitisation.	Omit	Mandatory
<Device_Lang2>	AN	1	2	Device language code as ISO 639-1 (2 letter lowercase) code.	Omit	Mandatory
<Device_ Latitude>	N	1	3	Device latitude in degrees at time of digitisation request: -90 (south pole) to +90 (north pole). +ve=North, -ve=South (from equator). Example: +63.2 = North 63.2 degrees, -82.6 = South 82.6 degrees.	Omit	Mandatory
<Device_ Longitude>	N	1	3	Device longitude in degrees at time of digitisation request: -180 to +180; +ve = East, -ve = West (of Greenwich). Example: 176.2 = East 176.2 degrees, -98.5 = West 98.5 degrees.	Omit	Mandatory
<Device_Name>	AN	1	20	Name the cardholder assigned to the device in the wallet.	Omit	Mandatory
<Device_Tel_ Num>	AN	1	15	Device telephone number (full or last part only).	Omit	Mandatory
<Device_Type>	AN	1	1	The type of device used at the terminal. See Device Types.	Omit	Mandatory
<FirstName>	AN	1	40	Cardholder's first name as provided by the wallet provider during digitisation. May not be provided, or just the	Omit	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				initial letter.		
<LastName>	AN	1	40	Cardholder's last name as provided by wallet provider during digitisation. May not be provided, or just the initial letter.	Omit	Mandatory
<Wallet_ Account_Hash>	AN	1	64	Wallet provider hash of account details (optional)or PBKDF2 hash of the cardholder's account ID with the wallet provider.	Omit	Mandatory

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_Payment_Token_Get>
         <hyp:WSID>202112345678967890</hyp:WSID>
         <hyp:IssCode>PMT</hyp:IssCode>
         <hyp:TxnCode>2</hyp:TxnCode>
         <hyp:PAN></hyp:PAN>
         <hyp:PublicToken>123456789</hyp:PublicToken>
         <hyp:DPAN>0987654321012</hyp:DPAN>
         <hyp:Payment_Token_ID></hyp:Payment_Token_ID>
         <hyp:LocDate>2017-01-01</hyp:LocDate>
         <hyp:LocTime>123456</hyp:LocTime>
      </hyp:Ws_Payment_Token_Get>
   </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_Payment_Token_GetResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_Payment_Token_GetResult>
            <WSID>202112345678967890</WSID>
            <IssCode>PMT</IssCode>
            <TxnCode>2</TxnCode>
            <PublicToken>123456789</PublicToken>
            <PaymentTokenGetResInfo>
               <PaymentTokenGetResInfo>
                  <Creator>PMT</Creator>
                  <Creator_PAN_Ref/>
                  <Creator_Token_Ref/>
                  <PANT>1234567890123456</PANT>
                  <Payment_Token>*****1234</Payment_Token>
                  <Payment_Token_ExpDate/>
                  <Payment_Token_ID>2</Payment_Token_ID>
                  <Payment_Token_Type>C</Payment_Token_Type>
                  <Wallet_ID>APPLE</Wallet_ID>
                  <GPS_Status>00</GPS_Status>
```

```
                <Tokenised_Datetime/>
                <Tokenised_Status>1</Tokenised_Status>
                <Txn_Status>X</Txn_Status>
                <Txn_Status_Actor></Txn_Status_Actor>
                <Txn_Status_Change_Datetime/>
                <Accepted_Terms_Date_GMT/>
                <Accepted_Terms_Version/>
                <Auth_Datetime/>
                <Auth_Decision/>
                <Auth_RSPSRC/>
                <Auth_Status>1</Auth_Status>
                <Digitisation_Ref>11111111111111</Digitisation_Ref>
                <Wallet_Account_Score/>
                <Wallet_Device_Score/>
                <Wallet_Reasons/>
                <Activation_Code/>
                <Activation_Code_Expdate/>
                <Activation_Method/>
                <Device_ID/>
                <Device_IP/>
                <Device_Lang2/>
                <Device_Latitude/>
                <Device_Longitude/>
                <Device_Name/>
                <Device_Tel_Num/>
                <Device_Type>M</Device_Type>
                <FirstName/>
                <LastName/>
                <Wallet_Account_Hash/>
             </PaymentTokenGetResInfo>
          </PaymentTokenGetResInfo>
          <LocDate>2017-01-01</LocDate>
          <LocTime>123456</LocTime>
          <SysDate>2017-11-17</SysDate>
          <ActionCode>000</ActionCode>
       </Ws_Payment_Token_GetResult>
    </Ws_Payment_Token_GetResponse>
  </soap:Body>
</soap:Envelope>
```

Payment Token Status Change

API: Ws_Payment_Token_StatusChange

This web service changes the status of an MDES (Mastercard Digital Enablement Service) or Visa Token Service (VTS) payment token card. The web service also changes the Usage Group of the card.

Record Description

Tag	Type	Minimum Len	Maximum Len	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every request. For details, see the FAQs.	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<TxnCode>	AN	1	2	The Transaction Code. See Transaction Codes. Default value 2.	Mandatory	Mandatory
<PAN>	AN	14	19	Card Number. Unique card identifier. The PAN is Mandatory if <PublicToken> is not supplied.	Conditional	Omit
<PublicToken>	AN	1	9	Thredd 9-digit public token of the card. Mandatory if the PAN is not supplied.	Conditional	Mandatory
<DPAN>	AN	16	19	Digital PAN value for the card. Mandatory if <PaymentTokenId> is not supplied.	Conditional	Mandatory
<PaymentTokenId>	AN	1	20	Payment token identifier for the MDES or VTS Card. Mandatory if the DPAN is not supplied.	Conditional	Mandatory
<LocDate>	YYYY-MM-DD	10	10	The local current date in *year-month-date* format.	Mandatory	Mandatory
<LocTime>	HHMMSS	6	6	The local current time, in *hour-minute-second* format.	Mandatory	Mandatory
<NewStatCode>	AN	2	2	New status code you want to change to. The Card Scheme is notified of the status change. See Status Codes. **Note**: You must specify a value for either	Conditional	Omit

Tag	Type	Minimum Len	Maximum Len	Description	Request	Response
				<NewStatCode> or *<UsageGroup>*. If both fields are left blank or not specified in the request, then the error message *712-invalid filter* is returned. **Note**: To temporary *Suspend* a Card Scheme payment token, you can use status code values of 02, 05, 57, 59, 62, 63, G1, G2, G3 or G4. To permentantly *Delete* or *Deactivate* a Card Scheme payment token, you can use status code values of: 04, 41, 43, 46, 83 or 99. We recommend using a value which corresponds best to the suspension or deactivation/deletion reason.		
<TerminalID>	AN	1	15	Point of Sale (POS) or other terminal identifier, such as a hostname.	Optional	Omit
<SysDate>	YYYY-MM-DD	10	10	The system processing date.	Omit	Mandatory
<ActionCode>	AN	3	3	The action code for the response. See Action Codes.	Omit	Mandatory
<NetworkError>	AN	1	6	Error code give if there is a problem sending the MDES 0302 message.	Omit	Conditional
<UsageGroup>	AN	1	15	Updates the usage group of the card linked to the payment token. The usage group determines where the payment token can be used (e.g., Point of Sale terminal, ATM, ecommerce).This corresponds to the <PERMSGroup> field in the Card Create web	Conditional	Omit

Tag	Type	Minimum Len	Maximum Len	Description	Request	Response
				service. **Note**: You must specify a value for either *<NewStatCode>* or *<UsageGroup>*. If both fields are left blank or not specified in the request, then the error message *712-invalid filter* is returned. **Note**: If an invalid usage group is specified, then the error message *866 - Invalid Usage group code* is returned.		
<Activate>	Boolean	1	1	Whether to activate the payment token on the MDES system (Mastercard tokens only). 1= activate the token; 0 = do not activate the token. **Note**: If no value is specified, this will default to 0. **Note**: If you receive a 951 action code in the response you can retry the web service call or else use the Mastercard Portal to update the token status.	Conditional	Omit
<WebServiceResult>	AN			Parameter group describing the result of the Web Service call. Only has values if the current request returns an action code of *868 Duplicate WSID*. See WebServiceResult.	Omit	Mandatory

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
```

```
      <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_Payment_Token_StatusChange>
         <hyp:WSID>202112345678967890</hyp:WSID>
         <hyp:IssCode>PMT</hyp:IssCode>
         <hyp:TxnCode>2</hyp:TxnCode>
         <hyp:PAN></hyp:PAN>
         <hyp:PublicToken>123456789</hyp:PublicToken>
         <hyp:DPAN>0987654321012</hyp:DPAN>
         <hyp:PaymentTokenId></hyp:PaymentTokenId>
         <hyp:LocDate>2017-01-01</hyp:LocDate>
         <hyp:LocTime>123456</hyp:LocTime>
         <hyp:NewStatCode>00</hyp:NewStatCode>
         <hyp:TerminalID></hyp:TerminalID>
         <hp:UsageGroup>GROUP1</hyp:UsageGroup>
         <hp:Activate>1</hyp:Activate>
      </hyp:Ws_Payment_Token_StatusChange>
   </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_Payment_Token_StatusChangeResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_Payment_Token_StatusChangeResult>
            <WSID>202112345678967890</WSID>
            <IssCode>PMT</IssCode>
            <TxnCode>2</TxnCode>
            <PublicToken>123456789</PublicToken>
            <PaymentTokenId>2</PaymentTokenId>
            <LocDate>2017-01-01</LocDate>
            <LocTime>123456</LocTime>
            <SysDate>2017-11-17</SysDate>
            <ActionCode>000</ActionCode>
            <WebServiceResult/>
         </Ws_Payment_Token_StatusChangeResult>
      </Ws_Payment_Token_StatusChangeResponse>
   </soap:Body>
</soap:Envelope>
```

Managing Transactions Overview

You can use the following web services to view and manage your card transactions:

Transaction Void: Ws_Transaction_Void
Clear Accumulator: Ws_ResetAccumulator

Clear Accumulator

API: Ws_ResetAccumulator

This web service allows you to reset transaction and amount counters (since the last strongly-cardholder-authenticated transaction) on a card or payment-token, Resetting transaction and amount counters re-enables transactions which are blocked as a result of the transaction and amount counters exceeding the defined maximum limits for not-secure-enough transactions.

A successful call sets the transaction count (<TxnCount>) and accumulator value (<AccumValue>) for contactless transactions to *zero*. If the <accumulator type> tag is invalid, the web service is declined and an action code of *425 (Invalid Accumulator Type)* is returned.

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every request. For details, see the FAQs.	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<AuthType>	AN	1	1	Parameter to specify how the card is authenticated. See Authentication Methods.	Mandatory	Omit
<PAN>	AN	14	19	Card Number. Unique card identifier. Mandatory in request if <PublicToken> is not present.	Conditional	Omit
<PublicToken>	AN	1	9	The card's public token. Mandatory in request if <PAN> is not present. Mandatory in the response.	Conditional	Mandatory
<DOB>	YYYY-MM-DD	10	10	Date of Birth. Mandatory if value of <AuthType> is '2' or '6'.	Conditional	Omit
<CVV>	AN	3	3	Card Verification Value, the 3-digit code printed on the back of the card. Mandatory if the value of <AuthType> is '3'.	Conditional	Omit
<AccCode>	AN	0	6	Access code or passcode. If provided, must be 6 digits, leading zeroes are acceptable. Leave empty if not required. Mandatory if the value of	Conditional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				<AuthType> is ‘4’.		
<LastName>	AN	1	20	Cardholder's last name for authenticating the cardholder if the value of <AuthType> is ‘6’.	Conditional	Omit
<AccumulatorType>	N	1	1	The type of accumulator to be cleared. See Accumulator Type.	Mandatory	Omit
<DPAN>	AN	0	19	Optional DPAN value for the MDES card. If provided, clears the accumulator for the supplied DPAN.	Optional	Omit
<PaymentTokenId>	AN	0	16	Optional payment token ID for the MDES card. If provided, clears the accumulator for the supplied payment token ID.	Optional	Omit
<ClearAllDPANs>	AN	0	1	Whether to clear all accumulators: 0 or empty string = No; 1 = Yes.	Optional	Omit
<ActionCode>	AN	3	3	The action code for the response. See Action Codes.	Omit	Mandatory
<WebServiceResult>	AN			Parameter group describing the result of the Web Service call. Only has values if the current request returns an action code of *868 Duplicate WSID*. See WebServiceResult.	Omit	Mandatory

Accumulator Type

The <AccumulatorType> defines which transation counter or accumulator is being reset, as follows:

Type	Used for	Standard upper limits *	Automatically reset when
1	Contactless non strongly-authenticated transactions.	5 transactions Or EUR 150.00 accumulated amount (whichever reached first). (Note the single item limit is EUR 50.00, but that does not affect counters/accumulators.)	A card-present Strongly Authenticated Transactions occurs
2	e-commerce non strongly-authenticated transactions	5 transactions Or EUR 100.00 accumulated amount (whichever reached first). (Note the	A 3D-secure e-commerce transaction occurs

Type	Used for	Standard upper limits *	Automatically reset when
		single item limit is EUR 30.00, but that does not affect counters/accumulators.)	
3	Maximum Acquirer TRA exemption limit value	Maximum Acquirer Transaction Risk Analysis (TRA) exemption limit value	A Strongly Authenticated Transaction occurs
4	Maximum Acquirer Low-Value exemption limit value	Maximum Acquirer Low-Value exemption limit value	A Strongly Authenticated Transaction occurs

*This is defined by the European Banking Authority in under PSD2 rules for countries in its jurisdiction. You may have chosen alternative limits, especially if your card product is not euro currency. For more information on PSD2 configuration, see the PSD2 and SCA Guide.

Strongly Authenticated Transaction

A strongly-cardholder-authenticated transaction has at least two of the following characteristics:

- A physical property of the cardholder (such as fingerprint, Iris scan, vein scan) is verified
- Cardholder uses something only they should possess to verify the transaction (e.g. chip card, payment-token device or number generating key-fob)
- Cardholder provides data only they should know to verify the transaction (e.g. PIN, passcode or pattern to unlock a payment-token such as smartphone, or secret 3D-secure data)

In practice, a “strongly-cardholder-authenticated” transaction normally means that...

- For card present transactions:
  - Chip has been used (contact or contactless)
  - Cardholder verified by online PIN or offline PIN
- For payment token transactions (e.g. Apple Pay on a smartphone):
  - Cardholder used Contactless
  - Cardholder verified by either:
    - online PIN
    - secret information or biometric to unlock the smartphone (e.g. passcode/pattern/fingerprint)
- For e-commerce transactions, 3D-secure cardholder authentication occurred.

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
  <soapenv:Header>
    <hyp:AuthSoapHeader>
      <hyp:strUserName>******</hyp:strUserName>
      <hyp:strPassword>******</hyp:strPassword>
    </hyp:AuthSoapHeader>
  </soapenv:Header>
  <soapenv:Body>
    <hyp:Ws_ResetAccumulator>
      <hyp:WSID>7243844685484652544</hyp:WSID>
      <hyp:IssCode>PMT</hyp:IssCode>
      <hyp:AuthType>1</hyp:AuthType>
      <hyp:PAN>9999999999999999</hyp:PAN>
      <hyp:PublicToken></hyp:PublicToken>
      <hyp:DOB></hyp:DOB>
      <hyp:CVV></hyp:CVV>
      <hyp:AccCode></hyp:AccCode>
      <hyp:LastName></hyp:LastName>
      <hyp:AccumulatorType>1</hyp:AccumulatorType>
      <hyp:DPAN></hyp:DPAN>
      <hyp:PaymentTokenId></hyp:PaymentTokenId>
      <hyp:ClearAllDPANs>1</hyp:ClearAllDPANs>
    </hyp:Ws_ResetAccumulator>
```

```
  </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <Ws_ResetAccumulatorResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
      <Ws_ResetAccumulatorResponse>
        <Ws_ResetAccumulatorResult>
          <WSID>7243844685484652544</WSID>
          <IssCode>PMT</IssCode>
          <PublicToken>888888888</PublicToken>
          <ActionCode>000</ActionCode>
          <WebServiceResult/>
        </Ws_ResetAccumulatorResult>
    </Ws_ResetAccumulatorResponse>
  </soap:Body>
</soap:Envelope>
```

Transaction Void

API: Ws_Transaction_Void

This web service cancels or voids any transaction which has been created via a web service, allowing you to remove uncleared authorisations.

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every request. For details, see the FAQs.	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<TxnCode>	AN	1	2	The Transaction Code. See Transaction Codes. Default value 12	Mandatory	Mandatory
<ClientCode>	AN	1	64	User ID of the customer using the service. Only applicable to systems using member logins. Returned in the response if present in the request. **Note**: Legacy field. Not used.	Optional	Conditional
<AuthType>	AN	1	1	Parameter to specify how the card is authenticated. See Authentication Methods.	Mandatory	Omit
<PAN>	AN	14	19	Card Number. Unique card identifier.	Conditional	Omit
<Track2>	AN	1	40	The card's Track 2. Mandatory in request if <PAN> and <PublicToken> are not present or when <AuthType> is '7'.	Conditional	Omit
<PublicToken>	AN	1	9	The card's public token, Mandatory in request if <PAN> and <Track2> are not present. Mandatory in the response.	Conditional	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<DOB>	YYYY-MM-DD	10	10	Date of Birth. Mandatory if value of <AuthType> is '2' or '6'.	Conditional	Omit
<CVV>	AN	3	3	Card Verification Value, the 3-digit code printed on the back of the card. Mandatory if the value of <AuthType> is '3'.	Conditional	Omit
<AccCode>	AN	0	6	Access code or passcode. If provided, must be 6 digits, leading zeroes are acceptable. Leave empty if not required. Mandatory if the value of <AuthType> is '4'.	Conditional	Omit
<LastName>	AN	1	20	Cardholder's last name for authenticating the cardholder if the value of <AuthType> is '6'.	Conditional	Omit
<LocDate>	YYYY-MM-DD	10	10	The local current date in *year-month-date* format.	Mandatory	Mandatory
<LocTime>	HHMMSS	6	6	The local current time, in *hour-minute-second* format.	Mandatory	Mandatory
<OrgItemId>	AN	1	20	The unique item ID of the transaction to void.	Mandatory	Mandatory
<Note>	AN	1	1000	Optional description of the void.	Optional	Omit
<SysDate>	YYYY-MM-DD	10	10	The system processing date.	Omit	Mandatory
<ItemId>	AN	1	20	The unique item ID returned for this void.	Omit	Mandatory
<ActionCode>	AN	3	3	The action code for the response. See Action Codes.	Omit	Mandatory

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_Transaction_Void>
         <hyp:WSID>2021123456789</hyp:WSID>
         <hyp:IssCode>PMT</hyp:IssCode>
         <hyp:TxnCode>12</hyp:TxnCode>
         <hyp:ClientCode></hyp:ClientCode>
         <hyp:AuthType>1</hyp:AuthType>
         <hyp:PAN></hyp:PAN>
         <hyp:Track2></hyp:Track2>
         <hyp:PublicToken>123456789</hyp:PublicToken>
         <hyp:DOB></hyp:DOB>
         <hyp:CVV></hyp:CVV>
         <hyp:AccCode></hyp:AccCode>
         <hyp:LastName></hyp:LastName>
         <hyp:LocDate>2013-01-01</hyp:LocDate>
         <hyp:LocTime>120000</hyp:LocTime>
         <hyp:OrgItemId>1234</hyp:OrgItemId>
         <hyp:Note>Transaction Void - 1234</hyp:Note>
      </hyp:Ws_Transaction_Void>
   </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_Transaction_VoidResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_Transaction_VoidResult>
            <WSID>2021123456789</WSID>
            <IssCode>PMT</IssCode>
            <TxnCode>12</TxnCode>
            <PublicToken>123456789</PublicToken>
            <LocDate>2013-01-01</LocDate>
            <LocTime>173400</LocTime>
            <ClientCode/>
            <OrgItemId>1234</OrgItemId>
            <SysDate>2013-01-01</SysDate>
            <ItemId>4321</ItemId>
            <ActionCode>000</ActionCode>
         </Ws_Transaction_VoidResult>
      </Ws_Transaction_VoidResponse>
   </soap:Body>
</soap:Envelope>
```

3D Secure Overview

You can use the following web services to enrol your cardholders in 3D Secure schemes and manage your 3D Secure enrolment:

Real-time Data Exchange (RDX) for Cardinal and Apata

3D Secure RDX Credentials (Cardinal and Apata): Ws_AddUpDelCredentials

For additional information on 3D Secure support, see our 3D Secure FAQs.

The web services listed below are for legacy use only, and are not available to new clients.

Cardinal Batch File Interface (legacy option)

3D Secure Enrol (Cardinal): Ws_Insert3DSecureDetails
3D Secure Update Details (Cardinal): ws_Update3DSecureDetails
3D Secure Query Details (Cardinal): Ws_Query3DSecureDetails
3D Secure Delete Details (Cardinal): Ws_Delete3DSecureDetails
3D Secure Update Last Modified Type (Cardinal): Ws_UpdateLastModifiedType

3D Secure Credentials (Cardinal and Apata)

API: Ws_AddUpDelCredentials

This web service enables you to enrol a cardholder in the Cardinal or Apata 3D Secure service and get, add, update and delete the user's credentials.

Note: For more information on implementation of 3D Secure, refer to the *3D Secure Guide (Apata)* or *3D Secure Guide (Cardinal)*.

Request Fields

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every request. For details, see the FAQs.	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<PublicToken>	AN	1	9	The card's public token. Mandatory in the request and response.	Mandatory	Mandatory
<Action>	Enum			The type of action: *Get*, *Add*, *Update*, *Delete*. **Note:** Each Action is represented as a numerical value in the SmartClient log: • Add - 1 • Update - 2 • Delete - 3 • Get - 4	Mandatory	Mandatory
<Credentials>	ListOf Credential objects			Contains one or more *credential* objects. There can be more than one credential in the same call when <Action> is *Get*, *Add* or *Update*. **Note:** When <Action> is *Delete* and <Credentials> is empty then all credentials of <PublicToken> are deleted.	Conditional	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				Note: When <Action> is *Delete* and there are no existing credentials, then Action Code 598 is returned.		
<ActionCode>	AN	3	3	The action code for the response. See Action Codes.	Omit	Mandatory
<WebServiceResult>	AN			Parameter group describing the result of the Web Service call. Only has values if the current request returns an action code of *868 Duplicate WSID*. See WebServiceResult.	Omit	Mandatory
Credentials						
<Credential>				If the action is *Add*, you should include the credential *<ID>* of 0 and *<Type>*. If the action is *Get*, you should include an empty *<hyp:Credentials/>* tag. If the action is *<Delete>* and you specify the *<ID>* then only that credential will be deleted.		
<ID>	N	1	8	Credential ID. If <Action> is *Add* the ID is not mandatory, but input 0 since the data type is numeric. Thredd generates a unique ID and returns it in the response. ID is mandatory when <Action> is *Update*. ID is not mandatory when <Action> is *Delete*, unless a specific credential needs to be deleted.	Conditional	Mandatory
<Type>	Enum			Credential type: • RBA (done via Cardinal) • OTPSMS	Conditional	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				• OTPEMAIL • BIOMETRIC • OUTOFBAND • KBA For details, see the 3D Secure FAQs. **Note**: OTPEMAIL is only available for the Apata 3DS Service. **Note**: Discuss with your Implementation Manager before implementing the OUTOFBAND method. There is no need to enrol cards into RBA; this is automatic once the cards are enrolled at the scheme and can be configured in the Cardinal portal. **Note**: For a *Get* request - returns the specified type if present, or else returns all types. If no credentials are found for that token then the action code 437 is returned. **Note**: For an *Add* request - adds the specified type. If the credential type already exists, then returns the action code 438. **Note**: For an *Update* request - does not change the type. You cannot edit the credential *type*, only the *value*.		
<Value>	AN	1	256	Credential value (e.g.	Conditional	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				a phone number, email address or KBA question ID). For OTPSMS enter a phone number, for sending the OTP SMS. (For valid phone number formats, see Processing of Phone Numbers). For OTPEMAIL enter a valid email address, for sending the OTP email. **Note**: OTPEMAIL is only available for 3DS Apata. For more information, see the 3D Secure Guide (Apata). For KBA enter the ID to be used as the customer's question choice (e.g., 5). See KBA Question ID. For BIOMETRIC and OUTOFBAND this field is optional and you can include a reference. The value will not be used.		
<KBA_Answer>	AN	1	45	The cardholder's answer to the KBA question (e.g., for Value= *5*, KBA_Answer = *London*.) **Note**: Mandatory for an *Add* or *Update* if Type is *KBA*. If not provided, returns action code 594.	Conditional	Conditional
<KBA_ AnswerOldValue>	AN	1	45	You can use this optional field when changing the saved KBA answer (i.e.,Action is *Update* and Type is *KBA*) if you want to supply the old answer to check that it matches what is currently held in the Thredd system. If it does not match then no update will happen and Thredd returns the action	Optional	Optional

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				code 599. If no value is supplied then the update will be done without any comparison.		

KBA Question ID

If using Knowledge Based Authentication (KBA) , enter one of the IDs below in the value field. This identifies which predefined KBA question to use.

KBA ID	KBA Question
1	What was your first pet's name?
2	What is your maternal grandmother's maiden name?
3	What is the name of your favourite childhood friend?
4	What was the make of your first car?
5	In what city or town did your mother and father meet?

Example Add Request - Biometric

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
<soapenv:Header>
   <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_AddUpDelCredentials>
         <hyp:WSID>14012021141223</hyp:WSID>
         <hyp:IssCode>PMT</hyp:IssCode>
         <hyp:PublicToken>123456789</hyp:PublicToken>
         <hyp:Action>Add</hyp:Action>
         <hyp:Credentials>
            <hyp:Credential>
               <hyp:ID>0</hyp:ID>
               <hyp:Type>BIOMETRIC</hyp:Type>
               <hyp:Value>+5858585858588</hyp:Value>
               <KBA_Answer></hyp:KBA_Answer>
               <KBA_AnswerOldValue></hyp:KBA_AnswerOldValue>
            </hyp:Credential>
         </hyp:Credentials>
      </hyp:Ws_AddUpDelCredentials>
</soapenv:Body></soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
 <soap:Body>
  <Ws_AddUpDelCredentialsResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
```

```
 <Ws_AddUpDelCredentialsResult>
  <WSID>14012021141223</WSID>
  <IssCode>PMT</IssCode>
  <ActionCode>000</ActionCode>
  <PublicToken>123456789</PublicToken>
  <Action>Add</Action>
  <Credentials>
    <Credential>
       <ID>123456</ID>
       <Type>BIOMETRIC</Type>
       <Value>Customer Biometric app</Value>
       <KBA_Answer></hyp:KBA_Answer>
       <KBA_AnswerOldValue></hyp:KBA_AnswerOldValue>
    </Credential>
  </Credentials>
  <WebServiceResult/>
</Ws_AddUpDelCredentialsResult>
</Ws_AddUpDelCredentialsResponse>
</soap:Body>
</soap:Envelope>
```

Example Get Request

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
<soapenv:Header>
   <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_AddUpDelCredentials>
         <hyp:WSID>15012021151223</hyp:WSID>
         <hyp:IssCode>PMT</hyp:IssCode>
         <hyp:PublicToken>123456789</hyp:PublicToken>
         <hyp:Action>Get</hyp:Action>
         <hyp:Credentials/>
      </hyp:Ws_AddUpDelCredentials>
</soapenv:Body></soapenv:Envelope>
```

Response

Customer Biometric app

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
 <soap:Body>
  <Ws_AddUpDelCredentialsResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
   <Ws_AddUpDelCredentialsResult>
    <WSID>15012021151223</WSID>
    <IssCode>PMT</IssCode>
    <ActionCode>000</ActionCode>
    <PublicToken>123456789</PublicToken>
    <Action>Add</Action>
    <Credentials>
      <Credential>
         <ID>123456</ID>
         <Type>BIOMETRIC</Type>
         <Value>Customer Biometric app</Value>
         <KBA_Answer></hyp:KBA_Answer>
         <KBA_AnswerOldValue></hyp:KBA_AnswerOldValue>
      </Credential>
   </Credentials>
   <WebServiceResult/>
  </Ws_AddUpDelCredentialsResult>
```

```
  </Ws_AddUpDelCredentialsResponse>
  </soap:Body>
</soap:Envelope>
```

Example Add Request - KBA

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
<soapenv:Header>
   <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_AddUpDelCredentials>
         <hyp:WSID>04012022121223</hyp:WSID>
         <hyp:IssCode>PMT</hyp:IssCode>
         <hyp:PublicToken>123456789</hyp:PublicToken>
         <hyp:Action>Add</hyp:Action>
         <hyp:Credentials>
            <hyp:Credential>
               <hyp:ID>0</hyp:ID>
               <hyp:Type>KBA</hyp:Type>
               <hyp:Value>5</hyp:Value>
               <KBA_Answer>London</hyp:KBA_Answer>
               <KBA_AnswerOldValue></hyp:KBA_AnswerOldValue>
            </hyp:Credential>
         </hyp:Credentials>
      </hyp:Ws_AddUpDelCredentials>
</soapenv:Body></soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
 <soap:Body>
  <Ws_AddUpDelCredentialsResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
   <Ws_AddUpDelCredentialsResult>
    <WSID>04012022121223</WSID>
    <IssCode>PMT</IssCode>
    <ActionCode>000</ActionCode>
    <PublicToken>123456789</PublicToken>
    <Action>Add</Action>
    <Credentials>
      <Credential>
         <ID>123456</ID>
         <Type>KBA</Type>
         <Value>5</Value>
         <KBA_Answer>London</hyp:KBA_Answer>
         <KBA_AnswerOldValue></hyp:KBA_AnswerOldValue>
      </Credential>
   </Credentials>
   <WebServiceResult/>
  </Ws_AddUpDelCredentialsResult>
  </Ws_AddUpDelCredentialsResponse>
  </soap:Body>
</soap:Envelope>
```

3D Secure Configuration (Apata)

API: Ws_ApataCardLevelConfigurations

This web service enables you to add, update or delete card level configurations for Apata, such as the language of the Apata Challenge screens and the Challenge Profile to use.

Note: This service works for Apata products only. For more information on implementation of 3D Secure, refer to the *3D Secure Guide (Apata)*.

Note: All Apata fields are optional, but at least one field must be populated. Thredd will respond with action code 441 if all five fields are blank.

Request Fields

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every request. For details, see the FAQs.	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<PAN>	AN	14	19	Card Number. Mandatory if <PublicToken> is not provided.	Conditional	Omit
<PublicToken>	AN	1	9	The card's public token. Mandatory in the request and response.	Mandatory	Mandatory
<Apata3DSLanguage>	AN	1	10	The language to apply to the 3DS challenge screens displayed to the cardholder. (In BCP-47 format. For example: *en-EN*,*fr-FR*.) **Note**: The language content must first be set up for your card products; once this is done, your 3DS Implementation Manager will share with you the language codes to use. **Note**: Default language is	Optional	Optional

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				English. If card level value is not provided, then the product level setting will be used. **Note**: If no value is provided, then this field is ignored. If you provide an empty space as a value, then this will delete any existing database values.		
<ApataChallengeProfileId>	AN	1	255	Unique ID configured by Apata to represent the challenge profile (default and fallback challenge options). **Note**: If no value is provided, then this field is ignored. If no value is provided, then this field is ignored. If you provide an empty space as a value, then this will delete any existing database values.	Optional	Optional
<ApataCardProgramId>	AN	1	255	Unique ID configured by Apata to represent the specific card program and associated BIN ranges. **Note**: If no value is provided, then this field is ignored. If no value is provided, then this field is ignored. If you provide an empty space as a value,	Optional	Optional

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				then this will delete any existing database values.		
<ApataKBANumberOfQuestionsToAnswer>	N	8	8	Number of KBA questions to answer correctly across all questions presented to the cardholder. **Note**If no value is provided, then this field is ignored. If you provide an empty space as a value, then this will update the database value to 0.	Optional	Optional
<ApataKBANumberOfIncorrectPermissible>	N	8	8	Number of incorrect answers permissible for KBA across all questions presented to the cardholder. **Note**: If no value is provided, then this field is ignored.If you provide an empty space as a value, then this will update the database value to 0.	Optional	Optional
<ActionCode>	AN	3	3	The action code for the response. See Action Codes.	Omit	Mandatory

Example Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
<soapenv:Header>
<hyp:AuthSoapHeader>
<!--Optional:-->
<hyp:strUserName>*****</hyp:strUserName>
<!--Optional:-->
<hyp:strPassword>**********</hyp:strPassword>
</hyp:AuthSoapHeader>
</soapenv:Header>
<soapenv:Body>
```

```
<hyp:Ws_ApataCardLevelConfigurations>
<hyp:WSID>15012024123478</hyp:WSID>
<!--Optional:-->
<hyp:IssCode>PMT</hyp:IssCode>
<!--Optional:-->
<hyp:PAN></hyp:PAN>
<!--Optional:-->
<hyp:PublicToken>123456754</hyp:PublicToken>
<!--Optional:-->
<hyp:Apata3DSLanguage>en-EN</hyp:Apata3DSLanguage>
<!--Optional:-->
<hyp:ApataChallengeProfileId>123ab-4fdfd443-43434f352</hyp:ApataChallengeProfileId>
<!--Optional:-->
<hyp:ApataCardProgramId>5456</hyp:ApataCardProgramId>
<!--Optional:-->
<hyp:ApataKBANumberOfQuestionsToAnswer>10</hyp:ApataKBANumberOfQuestionsToAnswer>
 <!--Optional:-->
 <hyp:ApataKBANumberOfIncorrectPermissible>10</hyp:ApataKBANumberOfIncorrectPermissible>
</hyp:Ws_ApataCardLevelConfigurations>
</soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_ApataCardLevelConfigurationsResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_ApataCardLevelConfigurationsResult>
            <WSID>15012024123478</WSID>
            <IssCode>PMT</IssCode>
            <PublicToken>123456754</PublicToken>
            <ActionCode>000</ActionCode>
            <Apata3DSLanguage>en-EN</Apata3DSLanguage>
            <ApataChallengeProfileId>123ab-4fdfd443-43434f352</ApataChallengeProfileId>
            <ApataCardProgramId>5456</ApataCardProgramId>
            <ApataKBANumberOfQuestionsToAnswer>10</ApataKBANumberOfQuestionsToAnswer>
            <ApataKBANumberOfIncorrectPermissible>10</ApataKBANumberOfIncorrectPermissible>
         </Ws_ApataCardLevelConfigurationsResult>
      </Ws_ApataCardLevelConfigurationsResponse>
   </soap:Body>
</soap:Envelope>
```

3D Secure Get Card Level Configuration (Apata)

API: Ws_GetApataCardLevelConfigurations

This web service retrieves the card level configuration for Apata.

Note: This service works for Apata products only. For more information on implementation of 3D Secure, refer to the *3D Secure Guide (Apata)*.

Request Fields

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every request. For details, see the FAQs.	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<PAN>	AN	14	19	Card Number. Mandatory if <PublicToken> is not provided.	Conditional	Omit
<PublicToken>	AN	1	9	The card's public token. Mandatory in the request if <PAN> is not present. Mandatory in the response.	Conditional	Mandatory
<Apata3DSLanguage>	AN	1	10	The language to apply to the 3DS challenge screens displayed to the cardholder. (In BCP-47 format. For example: *en-EN,fr-FR*.)	Omit	Optional
<ApataChallengeProfileId>	AN	1	255	Unique ID configured by Apata to represent the challenge profile (default and fallback challenge options).	Omit	Optional
<ApataCardProgramId>	AN	1	255	Unique ID configured by Apata to represent the specific card	Omit	Optional

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				program and associated BIN ranges.		
<ApataKBANumberOfQuestionsToAnswer>	N	8	8	Number of KBA questions to answer correctly across all questions presented to the cardholder.	Omit	Optional
<ApataKBANumberOfIncorrectPermissible>	N	8	8	Number of incorrect answers permissible for KBA across all questions presented to the cardholder.	Omit	Optional
<ActionCode>	AN	3	3	The action code for the response. See Action Codes.	Omit	Mandatory

Example Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <!--Optional:-->
         <hyp:strUserName>***************</hyp:strUserName>
         <!--Optional:-->
         <hyp:strPassword>***********</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_GetApataCardLevelConfigurations>
         <hyp:WSID>2502320253543353</hyp:WSID>
         <!--Optional:-->
         <hyp:IssCode>PMT</hyp:IssCode>
         <!--Optional:-->
         <hyp:PAN></hyp:PAN>
         <!--Optional:-->
         <hyp:PublicToken>123090776</hyp:PublicToken>
      </hyp:Ws_GetApataCardLevelConfigurations>
   </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_GetApataCardLevelConfigurationsResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_GetApataCardLevelConfigurationsResult>
            <WSID>730744995595027456</WSID>
            <PublicToken>123090776</PublicToken>
            <Apata3DSLanguage>en-EN</Apata3DSLanguage>
            <ApataChallengeProfileId>ProfileId</ApataChallengeProfileId>
            <ApataCardProgramId>ProgramId</ApataCardProgramId>
```

```
            <ApataKBANumberOfQuestionsToAnswer>10</ApataKBANumberOfQuestionsToAnswer>
            <ApataKBANumberOfIncorrectPermissible>5</ApataKBANumberOfIncorrectPermissible>
            <ActionCode>000</ActionCode>
         </Ws_GetApataCardLevelConfigurationsResult>
      </Ws_GetApataCardLevelConfigurationsResponse>
   </soap:Body>
</soap:Envelope>
```

3D Secure Enrol (Cardinal Batch)

API: Ws_Insert3DSecureDetails

This web service enables you to enrol a specified cardholder onto 3D Secure using the Cardinal 3D Secure service.

Note: This web service uses the Cardinal batch file interface. (Legacy Option)

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<Token>	AN	1	9	The card's public token. Mandatory in the request and response.	Mandatory	Mandatory
<MemorableName>	AN	1	20	The cardholder's specified *Memorable Name* as VDE for 3D Secure. No longer used - ensure you populate with "notavailable" (no spaces)	Mandatory	Omit
<MemorablePlace>	AN	1	20	Cardholder's specified Memorable Place as VDE for 3D Secure. No longer used. Ensure you populate with "notavailable" (no spaces).	Mandatory	Omit
<MemorableDate>	YYYY-MM-DD	10	10	Memorable date as VDE for 3D Secure. No longer used. Ensure you populate with "1900-01-01".	Mandatory	Omit
<ActivationCode>	AN	6	6	Programme Manager specified activation code as VDE for 3D Secure. No longer used. Ensure you	Mandatory	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				populate with “notavailable” (no spaces).		
<Phone>	AN	1	20	Telephone number. See Processing of Phone Numbers.	Conditional	Omit
<ActionCode>	AN	3	3	The action code for the response. See Action Codes.	Omit	Mandatory

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_Insert3DSecureDetails>
        <hyp:IssCode>PMT</hyp:IssCode>
         <hyp:Token>123456789</hyp:Token>
         <hyp:MemorableName>notavailable</hyp:MemorableName>
         <hyp:MemorablePlace>notavailable</hyp:MemorablePlace>
         <hyp:MemorableDate>1900-01-01</hyp:MemorableDate>
         <hyp:ActivationCode>notavailable</hyp:ActivationCode>
         <hyp:Phone>07123456789</hyp:Phone>
      </hyp:Ws_Insert3DSecureDetails>
   </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_Insert3DSecureDetailsResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_Insert3DSecureDetailsResult>
            <IssCode>PMT</IssCode>
            <ActionCode>000</ActionCode>
         </Ws_Insert3DSecureDetailsResult>
      </Ws_Insert3DSecureDetailsResponse>
   </soap:Body>
</soap:Envelope>
```

3D Secure Delete Details (Cardinal Batch)

API: Ws_Delete3DSecureDetails

This web service enables you to delete 3D secure details for a card (where you are using the Cardinal 3D Secure service).

Note: This web service uses the Cardinal batch file interface. (Legacy Option)

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<Token>	AN	1	9	The card's public token. Mandatory in the request and response.	Mandatory	Mandatory
<ActionCode>	AN	3	3	The action code for the response. See Action Codes.	Omit	Mandatory

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
       <soapenv:Header>
           <hyp:AuthSoapHeader>
               <hyp:strUserName>******</hyp:strUserName>
               <hyp:strPassword>******</hyp:strPassword>
           </hyp:AuthSoapHeader>
       </soapenv:Header>
       <soapenv:Body>
           <hyp:Ws_Delete3DSecureDetails>
               <hyp:IssCode>PMT</hyp:IssCode>
               <hyp:Token>123456789</hyp:Token>
           </hyp:Ws_Delete3DSecureDetails>
       </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_Delete3DSecureDetailsResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_Delete3DSecureDetailsResult>
            <IssCode>PMT</IssCode>
            <ActionCode>000</ActionCode>
         </Ws_Delete3DSecureDetailsResult>
      </Ws_Delete3DSecureDetailsResponse>
   </soap:Body>
</soap:Envelope>
```

3D Secure Query Details (Cardinal Batch)

API: Ws_Query3DSecureDetails

This web service enables you to view the phone number of a particular user's token that has been enrolled for 3D secure. The service also returns the stored Thredd 3D Secure details for the token.

Note: This web service uses the Cardinal batch file interface. (Legacy Option)

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<QueryType>	AN	1	1	Query Type. Valid values are: 0 = Return the responses of all tokens 1 = Return the response of this token only. Default is 0.	Mandatory	Omit
<Token>	N	9	9	The card's public token. Mandatory in the request and response.	Optional	Omit
<ActionCode>	AN	3	3	The action code for the response. See Action Codes.	Omit	Mandatory
<Tokens>				An array of token results. See Token Results below.	Optional	Omit

Token Results

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<Token>	N	9	9	The card's public token.	Omit	Mandatory
<Phone>	AN	1	15	The phone number linked to the token.	Omit	Mandatory
<ResponseCode>	AN	1	1	Response code.	Omit	Mandatory
<LastModifiedType>	AN	1	1	Specify the last modified type: 1 = Create; 2 = Amend; 3 = Delete	Omit	Mandatory
<ResponseDescription>	AN	1	50	Response description.	Omit	Mandatory
<LastApprovedPhone>	AN	1	15	Legacy field. Not used.	Omit	Optional

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
<soapenv:Header>
    <hyp:AuthSoapHeader>
    <hyp:strUserName>******</hyp:strUserName>
    <hyp:strPassword>******</hyp:strPassword>
    </hyp:AuthSoapHeader>   </soapenv:Header>
    <soapenv:Body>
    <hyp:Ws_Query3DSecureDetails>
     <hyp:IssCode>PMT</hyp:IssCode>
     <hyp:QueryType>0</hyp:QueryType>
      <hyp:Token>123456789</hyp:Token>
     </hyp:Ws_Query3DSecureDetails>
 </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
    <soap:Body>
     <Ws_Query3DSecureDetailsResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
     <Ws_Query3DSecureDetailsResult>
        <IssCode>PMT</IssCode>
        <ActionCode>000</ActionCode>
        <Tokens>
          <Token>
          <Token>123456789</Token>
          <Phone>+440123456789</Phone>
          <ResponseCode>-1</ResponseCode>
          <LastModifiedType>2</LastModifiedType>
          <ResponseDescription>PENDING_RESPONSE_CODE</ResponseDescription>
          <LastApprovedPhone/>
         </Token>
       </Tokens>
     </Ws_Query3DSecureDetailsResult>
     </Ws_Query3DSecureDetailsResponse>
     </soap:Body>
 </soap:Envelope>
```

3D Secure Update Details (Cardinal Batch)

API: Ws_Update3DSecureDetails

This web service enables you to amend the 3D secure phone number for sending the 3D Secure verification code for a given card.

Note: This web service uses the Cardinal batch file interface. (Legacy Option)

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<Token>	AN	1	9	The card's public token. Mandatory in the request and response.	Mandatory	Mandatory
<MemorableName>	AN	1	20	The cardholder's specified *Memorable Name* to be used as VDE for 3D Secure. No longer used. Ensure you opulate with "notavailable" (no spaces)	Conditional	Omit
<MemorablePlace>	AN	1	20	Cardholder's specified Memorable Place to be used as VDE for 3D Secure. No longer used. Ensure you populate with "notavailable" (no spaces).	Conditional	Omit
<MemorableDate>	YYYY-MM-DD	10	10	Memorable date to be used as VDE for 3D Secure. No longer used. Ensure you populate with "1900-01-01"	Conditional	Omit
<ActivationCode>	AN	6	6	Programme Manager specified activation code to be used as VDE for 3D Secure.	Conditional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				No longer used. Ensure you populate with “notavailable” (no spaces)		
<Phone>	AN	1	20	Telephone number. See Processing of Phone Numbers.	Conditional	Omit
<ActionCode>	AN	3	3	The action code for the response. See Action Codes.	Omit	Mandatory

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
          <hyp:strUserName>******</hyp:strUserName>
          <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_Update3DSecureDetails>
         <hyp:IssCode>PMT</hyp:IssCode>
         <hyp:Token>123456789</hyp:Token>
         <hyp:MemorableName>notavailable</hyp:MemorableName>
         <hyp:MemorablePlace>notavailable</hyp:MemorablePlace>
         <hyp:MemorableDate>1900-01-01</hyp:MemorableDate>
         <hyp:ActivationCode>notavailable</hyp:ActivationCode>
         <hyp:Phone></hyp:Phone>
      </hyp:Ws_Update3DSecureDetails>
   </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_Update3DSecureDetailsResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_Update3DSecureDetailsResult>
            <IssCode>PMT</IssCode>
            <ActionCode>000</ActionCode>
         </Ws_Update3DSecureDetailsResult>
      </Ws_Update3DSecureDetailsResponse>
   </soap:Body>
</soap:Envelope>
```

3D Secure Update Last Modified Type (Cardinal Batch)

API: Ws_UpdateLastModifiedType

This web service lets you clear the <LastModifiedType> flag so that you can resend another enrolment for the same card to Cardinal. For example, you can use it to re-enrol a deleted card or to update the status of a card which has an incorrectly sent status. To do this, set the LastModifiedType> for the token to 1.

Note: This web service uses the Cardinal batch file interface. (Legacy Option)

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<LastModifiedType>	AN	1	1	Specify the last modified type: 1 = Create; 2 = Amend; 3 = Delete	Mandatory	Mandatory
<Token>	AN	1	9	The card's public token. Mandatory in the request and response.	Mandatory	Mandatory
<ActionCode>	AN	3	3	The action code for the response. See Action Codes.	Omit	Mandatory

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_UpdateLastModifiedType>
          <hyp:IssCode>PMT</hyp:IssCode>
          <hyp:LastModifiedType>3</hyp:LastModifiedType>
          <hyp:Token>123456789</hyp:Token>
       </hyp:Ws_UpdateLastModifiedType>
   </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_UpdateLastModifiedTypeResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_UpdateLastModifiedTypeResult>
            <IssCode>PMT</IssCode>
            <ActionCode>000</ActionCode>
         </Ws_UpdateLastModifiedTypeResult>
```

```
      </Ws_UpdateLastModifiedTypeResponse>
   </soap:Body>
</soap:Envelope>
```

Wallets Overview

You can use the following web services to view and manage your wallets:

Wallet Create: Ws_CreateWallet
Wallet Bulk Create: Ws_BulkWalletCreation
Regenerate the Wallet: ws_RegenerateWallet
Wallet Balance Enquiry: Ws_Balance_Enquiry_Wallet

Wallet Create

API: Ws_CreateWallet

This web service lets you create virtual wallets as well as wallets with links to physical cards.

Wallet Create constructs a jpeg image for the wallet with PAN, Public Token and expiry date embossed on it.

- For a virtual wallet: sends an SMS to the client mobile number with the CVV of the card.
- For a physical card wallet: creates an XML file for this card for sending to the card manufacturer.

If a replacement wallet is required, the cardholder's name and address details can be left blank, in which case the existing details held in Thredd is used. Replacement wallet will be issued with the same PAN as the original card, but a different CVV.

A replacement wallet is not a valid request if the current card status is *Lost* or *Stolen*. In such cases, use the Regenerate card request, and a different PAN is issued. The replacement wallet automatically has the same balance as the original at the time when the replacement wallet is activated.

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every request. For details, see the FAQs.	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<TxnCode>	AN	1	2	The Transaction Code. See Transaction Codes. Default value is 10.	Mandatory	Mandatory
<ClientCode>	AN	1	64	User ID of the customer using the service. Only applicable to systems using member logins. Returned in the response if present in the request. **Note**: Legacy field. Not used.	Optional	Conditional
<Title>	AN	1	4	Cardholder's title. Also used as the card purchaser's title if no delivery address is supplied.	Optional	Omit
<LastName>	AN	1	30	Cardholder's last name. If no delivery address is supplied, this is the card purchaser's last name.	Conditional	Omit
<MiddleName>	AN	1	100	Cardholder's middle name. The <MiddleName> is not part of the <EmbossName> and therefore, does not check manufacture-approved characters. If a delivery address is not supplied, the cardholder's middle name will be the card purchaser's middle name.	Conditional	Omit
<FirstName>	AN	1	30	Cardholder's first name. If no delivery address is supplied it is also assumed to be the card purchaser's first name	Conditional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				Mandatory if <lastName> is present.		
<Addrl1>	AN	1	50	Cardholder's address line 1. Also used as the card purchaser's address line 1 if no delivery address is supplied. Mandatory if 'Address' fields are specified.	Conditional	Omit
<Addrl2>	AN	1	50	Cardholder's address line 2. Also used as the card purchaser's address line 2 if no delivery address is supplied.	Optional	Omit
<Addrl3>	AN	1	50	Cardholder's address line 3. Also used as the card purchaser's address line 3 if no delivery address is supplied.	Optional	Omit
<City>	AN	1	50	Cardholder's home city. Also used as the card purchaser's city if no delivery address is supplied. Mandatory if <addrL1> is present, and <postcode> is not present.	Conditional	Omit
<Postcode>	AN	1	10	Cardholder's home postcode. Also used as the card purchaser's postcode if no postcode is supplied. Mandatory if <addrL1> is present, and <city> is not present. See Postcode Permitted Characters.	Conditional	Omit
<Country>	AN	1	3	Cardholder's country of residence. This is represented as a 3 digit ISO country code (e.g. 826 for UK). Mandatory if <addrL1> is present.	Conditional	Omit
<Mobile>	AN	1	15	Cardholder's mobile phone number (including dialing code if applicable). See Processing of Telephone Numbers.	Optional	Omit
<PublicToken>	AN	1	9	The card's public token. The response always returns the public token of the newly-created card.	Omit	Mandatory
<CardDesign>	AN	1	8	The identifier of the card product, or Product ID, within Thredd. For details, check with your Implementation Manager. **Note**: this is not the same field as the **CrdDesign** or **ProductRef**.	Conditional	Omit
<DOB>	YYYY-MM-DD	10	10	The cardholder's date of birth.	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<LocDate>	YYYY-MM-DD	10	10	The local current date in *year-month-date* format.	Mandatory	Mandatory
<LocTime>	HHMMSS	6	6	The local current time, in *hour-minute-second* format.	Mandatory	Mandatory
<LoadValue>	D	1	20	Load value to put on the card. The amount can include up to four decimal places, depending on the currency exponent (e.g., 10.99 for EUR which has a currency exponent of 2). See Currency Codes.	Mandatory	Mandatory
<CurCode>	AN	3	3	3-letter ISO currency code for the currency to load (e.g. EUR). This must match the card's currency or the action fails (**Note**: For a Multi-FX card, the card can be loaded in any of the card's currencies). If not provided, then the card uses its billing currency. See Currency Codes.	Conditional	Omit
<Reason>	AN	1	60	Reason for the card's status change. Overrides default of 'Card Activated' that is shown in the card processor. Text is shown in the Smart Client **Tracker** screen. On Thredd Portal, this information is captured in the Notes column in Transaction Search results.	Optional	Omit
<AccCode>	AN	0	6	Access code. If provided, must be 6 digits, leading zeroes are acceptable. Leave empty if not required.	Optional	Omit
<ItemSrc>	N	1	5	Source field to define alternate fees. Legacy field for information purposes only; see Item Source Types. Suggest using 0.	Mandatory	Omit
<SysDate>	YYYY-MM-DD	10	10	The system processing date.	Omit	Mandatory
<LoadFundsType>	AN	1	3	Payment method for loading funds onto the card. See Load Fund Types.	Optional	Omit
<LoadSrc>	AN	1	3	The source of the load request for determining the fee of the load, if applicable. If omitted, defaults to 14 "Unknown". See Load Sources.	Optional	Omit
<LoadFee>	D	1	20	Fixed fee amount charged to the card purchaser for handling the card purchase and load. The	Mandatory	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				amount can include up to four decimal places, depending on the currency exponent (e.g., 10.99 for EUR which has a currency exponent of 2). See Currency Codes. If no load fee is required, specify 0. The load fee does not affect the card balance. It is only reported in the XML.		
<LoadedBy>	AN	1	30	User who loaded the card.	Optional	Omit
<CreateImage>	N	1	1	Specifies whether to create a card image. 1= yes, 0 = No. Images are returned in the <Image> response parameter, encrypted by a pre-shared PGP encryption key.	Mandatory	Omit
<CreateType>	N	1	1	This field is mandatory unless it is a replacement card request. There are five possible values: 1 = Create a virtual card. Can be converted to a physical card at a later stage using the Convert Card web service. 2 = Create physical card. Also triggers the creation of a card file which is sent to the manufacturer. 3 = Create a virtual card. Works in the same way as option 1. 4 = Create a Master Virtual Card which is a deposit account that can be used to load other cards from. 5 = Create a virtual card and convert to a physical card. Triggers the creation of a card file which is sent to the manufacturer. **Note**: To use create type 5, the card must be created under a virtual product. **Note**: If the virtual card is activated then the physical card will also be active, so you should consider the security implications of this. Please speak to your implementation manager. Create types 3, 4 and 5 does not work if Quantity is greater than 1.	Conditional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<CustAccount>	AN	1	25	Cardholder account number or reference number. You can use this reference to find the cards linked to a cardholder. Also displayed in Smart Client and in Thredd Portal as *Customer Reference*.	Optional	Omit
<ActivateNow>	N	1	1	Whether to activate the card. 1= Yes, 0=No. When <Quantity> is greater than 1 then creation of <Quantity> numbers of identical cards will trigger a batch process that starts within minutes of the request. If <ActivateNow> is 1 in such requests then the issued tokens are sent to the customer already activated. This parameter only applies if the request is for a new card.	Mandatory	Omit
<StartDate>	AN	5	5	Start date printed on the card in the format *MM/YY*.	Omit	Mandatory
<ExpDate>	YYYY-MM-DD	10	10	Card expiry date. If left blank, updates with the default expiry date, based on the Card Scheme's validity period in months, otherwise updates with the input value. The date returned of the actual physical expiry is in *MM/YY*.	Optional	Mandatory
<CVV>	AN	3	3	Card Verification Value, the 3-digit code printed on the back of the card.	Omit	Mandatory
<CardName>	AN	1	27	The embossed name on the card. If present in the request then the embossed name on the card should be the given value. If it is not available and <Firstname> and <Lastname> are available then <Title> + <Firstname> + <Lastname> is the embossed name. If all the above parameters are unavailable in the request then the default embossed name remains as the embossed name. If a blank embossed name is required, then pass a single space character. See Card Name Permitted Characters.	Optional	Omit
<MaskedPAN>	AN	16	19	Card number displayed as masked (e.g., 675926******1234). **Note**. The full PAN can be returned if you are PCI DSS compliant. Contact your Implementation Manager.	Omit	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<LimitsGroup>	AN	1	10	Group code of the Limits Group. If this parameter is not supplied and this is a new card request, then the default group for the card's product is used. If the default group is not required, you can remove it by passing a space character ' '. **Note**: The Limits Group is set up and configured in Smart Client and in Thredd Portal.	Optional	Omit
<MCCGroup>	AN	1	10	Group code of the MCC Group. If this parameter is not supplied and this is a new card request then the default group for the cards product is used. If the default group is not required, you can remove it by passing a space character ' '. The MCC group allows the card to be linked to a list of Merchant Category Codes (MCCs) that the card is allowed to or conversely is NOT allowed to transact at. **Note**: The MCC Group is set up and configured in Smart Client and in Thredd Portal.	Optional	Omit
<PERMSGroup>	AN	1	10	Group code of the Usage Group. If this parameter is not supplied and this is a new card request then the default group for the card's product is used. If the default group is not required, you can remove it passing a space character ' '. **Note**: The Usage Group is set up and configured in Smart Client and in Thredd Portal.	Optional	Omit
<FeeGroup>	AN	1	10	Group code of the Fee Group. If this parameter is not supplied and this is a new card request then the default group for the cards product is used. If the default group is not required, you can remove it by passing a space character ' '. **Note**: The Fee Group is set up and configured in Smart Client and in Thredd Portal.	Optional	Omit
<SchedFeeGroup>	AN	1	10	Group code of the Scheduled Fee Group. If this parameter is not supplied and this is a new card request then the default group for the cards product is used. If the default group is not required, you remove it by passing a space character ' '.**Note**: The Scheduled Fee Group is set up and configured in Smart Client and in Thredd Portal.	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSFeeGroup>	AN	1	10	Code of the Web Service Fee Group (). If this parameter is not supplied and this is a new card request then the default group for the cards product is used. If the default group is not required, you can remove it by passing a space character ‘ ‘. WSFeeGroup allows the card to be linked to a set of web service fees that are set up on the system. **Note**: The Web Service Fee Group is set up and configured in Smart Client and in Thredd Portal.	Optional	Omit
<ProductRef>	AN	1	50	The physical card design reference as used by the Card Manufacturer. Identifies the *PRODUCT_REF* field in the XML file sent to the card manufacturer.	Optional	Omit
<CarrierType>	AN	1	30	The Carrier Product design reference as used by the Card Manufacturer. This is the letter onto which the card is attached when sent to the cardholder. Identifies the Carrier Product type of the Card Manufacturer.	Optional	Omit
<Fulfil1>	AN	1	50	Free text field for transferring extra information to the card manufacturer, for example, to be printed on the Carrier. Identifies the *FULFIL1* field in the XML file sent to the card manufacturer.	Optional	Omit
<Fulfil2>	AN	1	50	Free text field for transferring extra information to the card manufacturer, for example, to be printed on the Carrier. Identifies the *FULFIL2* field in the XML file sent to the card manufacturer.	Optional	Omit
<DelvMethod>	AN	1	1	The delivery method for the card. Options include: 0 = Standard delivery; 1 = Registered mail; 2 = Direct delivery; 3 = Customized DelvMethod 1; 4 = Customized DelvMethod 2; 5 = Customized DelvMethod 3; 6= Customized DelvMethod 4; 7 = Customized DelvMethod 5; Default value is 0	Optional	Omit
<ThermalLine1>	AN	1	120	Free text field for transferring extra information to be printed on the card. For example, to add a customer service phone	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				number.		
<ThermalLine2>	AN	1	70	Free text field for transferring extra information to be printed on the card. For example, to add a link to your service terms and conditions.	Optional	Omit
<Lang>	AN	1	2	Two digit ISO 639-1 Language code for card mailers (e.g., En = English; Fr = French). **Note**: The available languages depend on the card manufacturer support. Also used if bespoke SMS templates are set up.	Optional	Omit
<EmbossLine4>	AN	1	27	The card's embossed line 4 on the front of the card. Could be used for example, to add an account number or sort code.	Optional	Omit
<ImageId>	AN	1	16	Reference which identifies the card manufacturer's image file that is printed on the face of the card.	Optional	Omit
<LogoFrontId>	AN	1	30	Reference which identifies the card manufacturer's logo file that is printed on the face of the card.	Optional	Omit
<LogoBackId>	AN	1	30	Reference which identifies the card manufacturer's logo file that is printed on the back of the card, if supported.	Optional	Omit
<Replacement>	N	1	1	Whether the card is a new card or a replacement. The possible values are: 0 = new card; 1 = replacement card. Needs to be agreed with the card manufacturer. **Note**: Do not use a value '1', which is for legacy usage only; to replace a card, we recommend you use Card Renew: `ws_renew_card`.	Mandatory	Omit
<PrimaryToken>	AN	16	19	The primary card's public token. If it is blank then the newly created card is a primary card, otherwise it is the secondary card in a primary/secondary relationship. Cannot be the token of a card that is already linked as a secondary card.	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<Delv_AddrL1>	AN	1	50	Card purchaser's /delivery address line 1. Mandatory if 'Delivery Address' fields are specified.	Optional	Omit
<Delv_AddrL2>	AN	1	50	Card purchaser's/delivery address line 2.	Optional	Omit
<Delv_AddrL3>	AN	1	50	Card purchaser's /delivery address line 3.	Optional	Omit
<Delv_City>	AN	1	50	Card purchaser's /delivery address delivery city. Mandatory if <Delv_AddrL1> is present, and <Delv_PostCode> is not present.	Optional	Omit
<Delv_Postcode>	AN	1	10	Card purchaser's /delivery address postcode. Mandatory if <Delv_AddrL1> is present, and <Delv_City> is not present. See Postcode Permitted Characters.	Optional	Omit
<Delv_County>	AN	1	20	Card purchaser's /delivery address county.	Optional	Omit
<Delv_Country>	AN	1	3	Card purchaser's /delivery address country 3-digit ISO country code (e.g., 826 for UK). Mandatory if <Delv_AddrL1> is present.	Optional	Omit
<Delv_Code>	AN	1	12	The delivery code for the card. If specified, the card manufacturer sends all cards with the same delivery code to the specified delivery address.	Optional	Omit
<Sms_Required>	AN	1	1	Whether an SMS is sent to the cardholder with the card's CVV. 1 = yes; 0 =No. The default is '0'. The SMS is configurable.	Optional	Omit
<IsLive>	N	1	1	Specifies whether the card is active or not. 1 or True = Active; 0 or False = Not Active.	Omit	Mandatory
<CardManufacturer>	AN	1	50	The manufacturer to send the card generation request to. For example: *TCT*, *AllPay*, *GNC*, *Gemalto*, *Nitecrest* and *Exceet*. For a full list, see Card Manufacturers. If omitted, the default for the Card Scheme (payment network) will be used.	Optional	Omit
<CoBrand>	AN	1	6	The Co-Brand code for the card. If supplied it replaces the *PROGRAMID* field in the *Balance XML* file.	Optional	Omit
<ExternalAuth>	AN	1	1	External Authorisation flag.		

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				Possible values are: 0 = Do not set External Authorisation on; 1 = Set External Authorisation. Empty value defaults to 0. **Note**: For legacy use only. Not applicable if using EHI.		
<ActionCode>	AN	3	3	The action code for the response. See Action Codes.	Omit	Mandatory
<Image>	Base64 Binary			PGP-encrypted image of the card. Requires configuration within Smart Client. Check with your Implementation Manager.	Omit	Conditional
<FeeWaiver>	N	1	1	Indicates whether to waive any web service fee set up on the system: 0 = No, 1=Yes. Default is 0.	Optional	Omit
<BlackList>	AN	1	10	Group code of the card acceptor Deny list. See Card Acceptor Deny list.	Optional	Omit
<WhiteList>	AN	1	10	Group code of the card acceptor Allow list. See Card Acceptor Allow list.	Optional	Omit
<EWALLET>	-	-	-	See eWallet Description.	Omit	Mandatory
<PaymentTokenUsageGroup>	AN	1	10	Payment token usage group code. Defines configuration options specific to the provisioning of a digital payment token. For details, see the *Tokenisation Guide*. This is a numeric value; only digits 0-9 are valid. Leave empty if no usage group is required.	Optional	Omit
<VirtualCardImage>	AN	1	16	The Image ID for the virtual image for the new card. You can set up Image IDs in Smart Client in the **Image Master** and **Virtual Card Images** screens. **Note**: If you do not provide an image ID, the default virtual card image for the product is used.	Optional	Omit
<ImageSize>	N	1	1	The size of the virtual image: 1 = 100%; 2 = 200%; 3 = 300%; 4 = 400%; 5 = 500%. Default is 1.	Optional	Omit
<PBlock>	AN	4	12	The initial card PIN value.	Optional	Omit
<IsSingleUse>	AN	1	5	Enables you to specify whether the card is single use only.	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				Boolean values of either 1, 0 or *true*, *false* are accepted. (1= true, 0 = false). If not specified, then the default value from the card Product is used.		
<IsNonReloadable>	AN	1	5	Enables you to specify whether the card is non-reloadable. Boolean values of either 1, 0 or *true*, *false* are accepted. (1= true, 0 = false). If not specified, then the default value from the card Product is	Optional	Omit
<Url>	AN	1	100	This value is included in the Thredd Card Generation file, in the <QRCode> field. For example: *https://www.your-e-card.com/balance/2909680989632389* For details, see the Card Generation Interface Specifications.	Optional	Omit
<OOBAppURL>	AN	1	2048	Out Of Band app URL used in a 3D Secure authentication session. The Card Scheme (e.g., Mastercard) requires issuers using Out of Band/Biometric authentication to support the automatic redirection of cardholders from the merchant app to the authenticator app. OOBAppURL is the URL of this authenticator app.	Optional	Omit

eWallet Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<IDENTITY>	AN	1	9	The Thredd 16-digit public token. Mandatory in the response.	Omit	Mandatory
<CARDS>				An array of cards. See CARD Description below.	Omit	Mandatory
<ACCOUNTS>				An array of accounts. See ACCOUNT Description below; may occur multiple times.	Omit	Mandatory

CARD Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<PAN>	AN	1	9	Card Number. Unique card identifier.	Omit	Mandatory
<CRDCURRCODE>	AN	3	3	3-letter ISO currency code for the account billing currency.	Omit	Mandatory
<CRDPRODUCT>	AN	1	50	The identifier of the card product, or Product ID, within Thredd. For details, check with your Implementation Manager.	Omit	Mandatory
<CUSTCODE>	AN	1	50	Customer account number. Mandatory in the response if present. Also displayed in Smart Client as *Customer Reference* and *Customer Reference Number* in Thredd Portal.	Omit	Conditional
<PRIMARY>	AN	1	1	Indicates if the card is the Primary card. Default value 'Y'.	Omit	Mandatory
<PROGRAMID>	AN	1	50	The ID of the Program this card belongs to.	Omit	Mandatory
<STATCODE>	AN	2	2	The status code of the card. See Status Codes.	Omit	Mandatory
<EXPDATE>	AN	10	10	Expiry date of the card in *YYYY-MM-DD* format.	Omit	Mandatory

ACCOUNT Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<ACCNO>	AN	1	9	Account number.	Omit	Mandatory
<ACCTYPE>	AN	2	2	Type of card account. See Account Types.	Omit	Mandatory
<CURRCODE>	AN	3	3	3-letter ISO currency code for the account billing currency.	Omit	Mandatory
<FINAMT>	D	1	20	Balance of the account,	Omit	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				excluding blocked amount.		
<BLKAMT>	D	1	20	Amount of funds blocked on the card account as a result of all outstanding authorisations. The balance amount can include up to four decimal places, depending on the currency exponent (e.g., 10.99 for EUR which has a currency exponent of 2). See Currency Codes.	Omit	Mandatory
<AMTAVL>	D	1	20	Balance of the card account. This includes all financials and outstanding authorisations.	Omit	Mandatory

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
  <soapenv:Header>
    <hyp:AuthSoapHeader>
      <hyp:strUserName>******</hyp:strUserName>
      <hyp:strPassword>******</hyp:strPassword>
    </hyp:AuthSoapHeader>
  </soapenv:Header>
  <soapenv:Body>
    <hyp:Ws_CreateWallet>
      <hyp:WSID>2021123456789</hyp:WSID>
      <hyp:IssCode>PMT</hyp:IssCode>
      <hyp:TxnCode>10</hyp:TxnCode>
      <hyp:ClientCode></hyp:ClientCode>
      <hyp:Title>Mr</hyp:Title>
      <hyp:LastName>Lastname</hyp:LastName>
      <hyp:MiddleName>Middlename</hyp:MiddleName>
      <hyp:FirstName>Firstname</hyp:FirstName>
      <hyp:Addrl1>Office 13, Telfords Yard</hyp:Addrl1>
      <hyp:Addrl2>6-8 The Highway, Wapping </hyp:Addrl2>
      <hyp:City>London</hyp:City>
      <hyp:PostCode>E1W 2BS</hyp:PostCode>
      <hyp:Country>826</hyp:Country>
      <hyp:Mobile></hyp:Mobile>
      <hyp:CardDesign>123</hyp:CardDesign>
      <hyp:DOB></hyp:DOB>
      <hyp:LocDate>2013-01-01</hyp:LocDate>
      <hyp:LocTime>120000</hyp:LocTime>
      <hyp:TerminalID></hyp:TerminalID>
      <hyp:LoadValue>10</hyp:LoadValue>
      <hyp:CurCode>GBP</hyp:CurCode>
      <hyp:Reason></hyp:Reason>
      <hyp:AccCode>123456</hyp:AccCode>
      <hyp:ItemSrc>2</hyp:ItemSrc>
      <hyp:LoadFundsType>4</hyp:LoadFundsType>
      <hyp:LoadSrc>10</hyp:LoadSrc>
      <hyp:LoadFee>0.0</hyp:LoadFee>
      <hyp:LoadedBy>Admin</hyp:LoadedBy>
      <hyp:CreateImage>1</hyp:CreateImage>
      <hyp:CreateType>1</hyp:CreateType>
      <hyp:CustAccount></hyp:CustAccount>
      <hyp:ActivateNow>0</hyp:ActivateNow>
      <hyp:ExpDate></hyp:ExpDate>
```

```
      <hyp:CardName>GIFT CARD</hyp:CardName>
      <hyp:LimitsGroup>PMT-VL-002</hyp:LimitsGroup>
      <hyp:MCCGroup></hyp:MCCGroup>
      <hyp:PERMSGroup>PMT-CU-002</hyp:PERMSGroup>
      <hyp:ProductRef></hyp:ProductRef>
      <hyp:CarrierType></hyp:CarrierType>
      <hyp:Fulfil1></hyp:Fulfil1>
      <hyp:Fulfil2></hyp:Fulfil2>
      <hyp:DelvMethod>0</hyp:DelvMethod>
      <hyp:ThermalLine1></hyp:ThermalLine1>
      <hyp:ThermalLine2></hyp:ThermalLine2>
      <hyp:EmbossLine4></hyp:EmbossLine4>
      <hyp:ImageId></hyp:ImageId>
      <hyp:LogoFrontId></hyp:LogoFrontId>
      <hyp:LogoBackId></hyp:LogoBackId>
      <hyp:Replacement>0</hyp:Replacement>
      <hyp:FeeGroup></hyp:FeeGroup>
      <hyp:PrimaryToken></hyp:PrimaryToken>
      <hyp:Delv_AddrL1></hyp:Delv_AddrL1>
      <hyp:Delv_AddrL2></hyp:Delv_AddrL2>
      <hyp:Delv_AddrL3></hyp:Delv_AddrL3>
      <hyp:Delv_City></hyp:Delv_City>
      <hyp:Delv_County></hyp:Delv_County>
      <hyp:Delv_PostCode></hyp:Delv_PostCode>
      <hyp:Delv_Country></hyp:Delv_Country>
      <hyp:Sms_Required>    </hyp:Sms_Required>
      <hyp:SchedFeeGroup></hyp:SchedFeeGroup>
      <hyp:WSFeeGroup></hyp:WSFeeGroup>
      <hyp:CardManufacturer></hyp:CardManufacturer>
      <hyp:CoBrand></hyp:CoBrand>
      <hyp:PublicToken></hyp:PublicToken>
      <hyp:ExternalAuth></hyp:ExternalAuth>
      <hyp:FeeWaiver></hyp:FeeWaiver>
      <hyp:BlackList>Deny list</hyp:BlackList>
      <hyp:WhiteList></hyp:WhiteList>      <hyp:PaymentTokenUsageGroup></hyp:PaymentTokenUsageGroup>
      <hyp:VirtualCardImage></hyp:VirtualCardImage>
      <hyp:ImageSize></hyp:ImageSize>
      <hyp:PBlock>12345</hyp:PBlock>
      <hyp:IsSingleUse>false</hyp:IsSingleUse>
      <hyp:IsNonReloadable>false</hyp:IsNonReloadable>
      <hyp:Url></hyp:Url>
      <hyp:OOBAppURL>https://login.app.bank1.com/</hyp:OOBAppURL>
    </hyp:Ws_CreateWallet>
  </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_CreateWalletResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_CreateWalletResult>
            <WSID>2021123456789</WSID>
            <IssCode>PMTD</IssCode>
            <TxnCode>10</TxnCode>
            <PublicToken>123456789</PublicToken>
            <LocDate>2014-02-04</LocDate>
            <LocTime>130700</LocTime>
            <ItemID>0</ItemID>
            <ClientCode>0</ClientCode>
            <SysDate>2014-08-29</SysDate>
            <ActionCode>000</ActionCode>
            <LoadValue>0</LoadValue>
            <IsLive>false</IsLive>
            <StartDate>08/14</StartDate>
            <ExpDate>08/17</ExpDate>
            <CVV>076</CVV>
            <MaskedPAN>123456******7890</MaskedPAN>
            <EWALLET>
```

```
                <EWALLET xmlns="">
                   <IDENTITY>9876543212345678</IDENTITY>
                   <CARDS>
                      <CARD>
                         <PAN>9876543212345678</PAN>
                         <CRDCURRCODE>GBP</CRDCURRCODE>
                         <CRDPRODUCT>MCRD</CRDPRODUCT>
                         <CUSTCODE/>
                         <PRIMARY>Y</PRIMARY>
                         <PROGRAMID>PRG123</PROGRAMID>
                         <STATCODE>00</STATCODE>
                         <EXPDATE>2017-08-31</EXPDATE>
                      </CARD>
                   </CARDS>
                   <ACCOUNTS>
                      <ACCOUNT>
                         <ACCNO>9876543212345676</ACCNO>
                         <ACCTYPE>01</ACCTYPE>
                         <CURRCODE>EUR</CURRCODE>
                         <FINAMT>0.00</FINAMT>
                         <BLKAMT>0.00</BLKAMT>
                         <AMTAVL>0.00</AMTAVL>
                      </ACCOUNT>
                      <ACCOUNT>
                         <ACCNO>9876543212345677</ACCNO>
                         <ACCTYPE>01</ACCTYPE>
                         <CURRCODE>USD</CURRCODE>
                         <FINAMT>0.00</FINAMT>
                         <BLKAMT>0.00</BLKAMT>
                         <AMTAVL>0.00</AMTAVL>
                      </ACCOUNT>
                      <ACCOUNT>
                         <ACCNO>9876543212345678</ACCNO>
                         <ACCTYPE>01</ACCTYPE>
                         <CURRCODE>GBP</CURRCODE>
                         <FINAMT>0.00</FINAMT>
                         <BLKAMT>0.00</BLKAMT>
                         <AMTAVL>0.00</AMTAVL>
                      </ACCOUNT>
                   </ACCOUNTS>
                </EWALLET>
             </EWALLET>
          </Ws_CreateWalletResult>
       </Ws_CreateWalletResponse>
    </soap:Body>
</soap:Envelope>
```

Regenerate the Wallet

API: Ws_RegenerateWallet

This web service regenerates an MFX card. For regenerating the wallet, you can select whether to create a new physical linked card, regenerate the image for the virtual card or return the CVV.

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every request. For details, see the FAQs.	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<PAN>	AN	14	19	Card Number. Mandatory if <PublicToken> is not provided. Mandatory in response. Card number is displayed as masked (e.g., 675926******1234). If you are PCI compliant, the full PAN can be returned. Check with your Implementation Manager.	Conditional	Mandatory
<PublicToken>	AN	1	9	The card's public token. Mandatory in request if <PAN> is not present. Mandatory in the response.	Conditional	Mandatory
<RegenType>	N	1	1	The type of card regeneration: 0 = only return the CVV. 1 = regenerate the physical card if its status is *Lost* or *Stolen* (for other card status, this regenerates the card image). 2 = only regenerate the card image.	Mandatory	Omit
<Sms_Required>	N	1	1	Whether an SMS is sent to the cardholder with the card's CVV. 1	Mandatory	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				= yes; 0 =No. The default is ‘0’. The SMS is configurable.		
<Sms_Content>	N	1	1	Reserved for future use; set to 0.	Mandatory	Omit
<CVV>	AN	3	3	Card Verification Value, the 3-digit code printed on the back of the card.	Omit	Mandatory
<ActionCode>	AN	3	3	The action code for the response. See Action Codes.	Omit	Mandatory
<Image>	Base64 Binary			PGP-encrypted image of the card. Is only returned if a PGP key has been shared and configured.	Omit	Conditional
<ExternalRef>	AN	1	30	Enables you to add your own external customer reference.	Optional	Omit
<TerminalID>	AN	1	15	Point of Sale (POS) or other terminal identifier, such as a hostname.	Optional	Omit
< MailOrSMS>	AN	1	1	The cardholder's preferred contact method. 0 = SMS; 1 = email. 2 = SMS and email. Default value is ‘0’.	Optional	Omit
<FeeWaiver>	N	1	1	Indicates whether to waive any web service fee set up on the system: 0 = No, 1=Yes. Default is 0.	Optional	Omit
<ImageSize>	N	1	1	The size of the virtual image: 1 = 100%; 2 = 200%; 3 = 300%; 4 = 400%; 5 = 500%. Default is 1.	Optional	Omit
<WebServiceResult>	AN			Parameter group describing the result of the Web Service call. Only has values if the current request returns an action code of *868 Duplicate WSID*. See WebServiceResult.	Omit	Mandatory

EWALLET Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<IDENTITY>	AN	1	9	The Thredd 16-digit public token. Mandatory in the response.	Omit	Mandatory
<CARDS>				An array of cards. See CARD Description below.	Omit	Mandatory
<ACCOUNTS>				An array of accounts. See ACCOUNT Description below; may occur multiple times.	Omit	Mandatory

CARD Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<PAN>	AN	1	9	Card Number. Unique card identifier.	Omit	Mandatory
<CRDCURRCODE>	AN	3	3	3-letter ISO currency code for the account billing currency.	Omit	Mandatory
<CRDPRODUCT>	AN	1	50	The identifier of the card product, or Product ID, within Thredd. For details, check with your Implementation Manager.	Omit	Mandatory
<CUSTCODE>	AN	1	50	Customer account number. Mandatory in the response if present. Also displayed in Smart Client as *Customer Reference Number* in Thredd Portal.	Omit	Conditional
<PRIMARY>	AN	1	1	Indicates if the card is the Primary card. Default value 'Y'.	Omit	Mandatory
<PROGRAMID>	AN	1	50	The ID of the Program this card belongs to.	Omit	Mandatory
<STATCODE>	AN	2	2	The status code of the card. See Status Codes.	Omit	Mandatory
<EXPDATE>	AN	10	10	Expiry date of the card in *YYYY-MM-DD* format.	Omit	Mandatory

ACCOUNT Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<ACCNO>	AN	1	9	Account number of the card.	Omit	Mandatory
<ACCTYPE>	AN	2	2	Type of card account. See Account Types.	Omit	Mandatory
<CURRCODE>	AN	3	3	3-letter ISO currency code for the currency (e.g. EUR).	Omit	Mandatory
<FINAMT>	D	1	20	Balance of the account, excluding blocked amount.	Omit	Mandatory
<BLKAMT>	D	1	20	Amount of funds blocked on the card account as a result of all outstanding authorisations. The balance amount can include up to four decimal places, depending on the currency exponent (e.g., 10.99 for EUR which has a currency exponent of 2). See Currency Codes.	Omit	Mandatory
<AMTAVL>	D	1	20	Balance of the card account. This includes all financials and outstanding authorisations.	Omit	Mandatory

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
  <soapenv:Header>
    <hyp:AuthSoapHeader>
      <hyp:strUserName>******</hyp:strUserName>
      <hyp:strPassword>******</hyp:strPassword>
    </hyp:AuthSoapHeader>
  </soapenv:Header>
  <soapenv:Body>
    <hyp:Ws_RegenerateWallet>
      <hyp:WSID>2021123456789</hyp:WSID>
      <hyp:IssCode>PMT</hyp:IssCode>
      <hyp:PAN></hyp:PAN>
      <hyp:PublicToken>123456789</hyp:PublicToken>
      <hyp:RegenType>1</hyp:RegenType>
      <hyp:Sms_Required>0</hyp:Sms_Required>
      <hyp:Sms_Content>0</hyp:Sms_Content>
      <hyp:ExternalRef>ABCD001</hyp:ExternalRef>
      <hyp:TerminalID>POS-TEST</hyp:TerminalID>
      <hyp:MailOrSMS>0</hyp:MailOrSMS>
      <hyp:FeeWaiver>0</hyp:FeeWaiver>
      <hyp:ImageSize>1</hyp:ImageSize>
    </hyp:Ws_RegenerateWallet>
  </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <Ws_RegenerateWalletResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
      <Ws_RegenerateWalletResult>
        <WSID>2021123456789</WSID>
        <IssCode>PMT</IssCode>
        <PAN/>
        <PublicToken>123456789</PublicToken>
        <ActionCode>000</ActionCode>
        <CVV>123</CVV>
        <WebServiceResult/>
      </Ws_RegenerateWalletResult>
    </Ws_RegenerateWalletResponse>
  </soap:Body>
</soap:Envelope>
```

Wallet Bulk Create

API: Ws_BulkWalletCreation

This web service creates a bulk number of wallets in a single request. It takes an XML document as its input parameter with the information needed to create wallets. It produces another XML document with the list of newly created wallets as a response.

Note: Tags marked as optional do not need to be supplied.

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<Isscode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Omit
<Req>	XML	1	1024	XML document that contains the details of the cards to be created. Such as the customer details and the card design. See XML File Record Description below.	Mandatory	Omit
<WalletCreated>	N	1	5	Number of wallets created.	Omit	Mandatory
<WalletNotCreated>	N	1	5	Number of wallets failed to create.	Omit	Mandatory
<RequestWithError>	AN	1	100	Details of the request which caused the error in card creation. It is mandatory when an error occur in card creation.	Omit	Conditional
<ActionCode>	AN	3	3	The action code for the response	Omit	Mandatory
<Wallets>	-	-	-	Returns an array of Wallets. See Wallets Description below. Can occur multiple times within the message.	Omit	Optional

Wallets Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Omit	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<PublicToken>	AN	1	9	The card's public token. Mandatory in the response.	Omit	Mandatory
<ExternalRef>	AN	1	30	Enables you to add your own external customer reference.	Omit	Conditional
<ItemId>	AN	1	20	The unique item ID returned for this request.	Omit	Mandatory
<ClientCode>	AN	1	64	User ID of the customer using the service. Only applicable to systems using member logins. Returned in the response if present in the request. **Note**: Legacy field. Not used.	Omit	Conditional
<SysDate>	YYYY-MM-DD	10	10	The system processing date.	Omit	Mandatory
<ActionCode>	AN	3	3	The action code for the response. See Action Codes.	Omit	Mandatory
<LoadValue>	D	1	20	Load value to put on the card. The amount can include up to four decimal places, depending on the currency exponent (e.g., 10.99 for EUR which has a currency exponent of 2). See Currency Codes.	Omit	Mandatory
<IsLive>	N	1	1	Specifies whether the card is active or not. 1 or True = Active; 0 or False = Not Active.	Omit	Mandatory
<StartDate>	AN	5	5	Start date printed on the card in the format *MM/YY*.	Omit	Mandatory
<EndDate>	AN	5	5	Physical end date printed on the card in the format *MM/YY*.	Omit	Mandatory
<ExpDate>	MM/YY	5	10	Card expiry date. If left blank, updates with the default expiry date, based on the Card Scheme's validity period in months, otherwise updates with the input value. The date returned of the actual physical expiry is in *MM/YY*.	Omit	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<CVV>	AN	3	3	Card Verification Value, the 3-digit code printed on the back of the card.	Omit	Mandatory
<MaskedPAN>	AN	14	19	Card number displayed as masked (e.g., 675926******1234). **Note**. The full PAN can be returned if you are PCI DSS compliant. Contact your Implementation Manager.	Omit	Mandatory
<EWALLET>	-	-	-	An array of eWallets.		

eWallet Response

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<IDENTITY>	AN	1	9	The Thredd 16-digit public token. Mandatory in the response.	Omit	Mandatory
<CARD>				See CARD Description below	Omit	Mandatory
<ACCOUNT>				See ACCOUNT Description below. May occur multiple times.	Omit	Mandatory

ACCOUNT Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<ACCNO>	AN	1	9	Account number.	Omit	Mandatory
<ACCTYPE>	AN	2	2	Type of card account. See Account Types.	Omit	Mandatory
<CURCODE>	AN	3	3	3-letter ISO currency code for the account billing currency.	Omit	Mandatory
<FINAMT>	D	1	20	Balance of the account, excluding blocked amount.	Omit	Mandatory
<BLKAMT>	D	1	20	Amount of funds blocked on the card account as a result of all outstanding authorisations. The balance amount can include up to four decimal places, depending on the currency exponent (e.g., 10.99 for EUR which has a currency exponent of 2). See	Omit	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				Currency Codes.		
<AMTAVL>	D	1	20	Balance of the card account. This includes all financials and outstanding authorisations.	Omit	Mandatory

CARD Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<PAN>	AN	1	9	Plastic card's PAN	Omit	Mandatory
<PRIMARY>	AN	1	1	Primary indicator - Default value "Y"	Omit	Mandatory
<CRDPRODUCT>	AN	1	50	Product type	Omit	Mandatory
<PROGRAMID>	AN	1	50	Card's program id	Omit	Mandatory
<CUSTACCOUNT>	AN	1	50	Customer account number. Mandatory in the response if present.	Omit	Conditional
<STATCODE>	AN	2	2	Card's status	Omit	Mandatory

XML File Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request
<ClientCode>	AN	1	64	User ID of the customer using the service. Only applicable to systems using member logins. Returned in the response if present in the request. **Note**: Legacy field. Not used.	Optional
<Title>	AN	1	4	Cardholder's title. Also used as the card purchaser's title if no delivery address is supplied.	Optional
<LastName>	AN	1	30	Cardholder's last name. If no delivery address is supplied, this is the card purchaser's last name.	Conditional
<MiddleName>	AN	1	100	Cardholder's middle name. The <MiddleName> is not part of the <EmbossName> and therefore, does not check manufacture-approved characters. If a delivery address is not supplied, the cardholder's middle name will be the card purchaser's middle name.	Optional

Tag	Type	Minimum Length	Maximum Length	Description	Request
<FirstName>	AN	1	30	Cardholder's first name. If no delivery address is supplied it is also assumed to be the card purchaser's first name Mandatory if <lastName> is present.	Conditional
<Addrl1>	AN	1	50	Cardholder's address line 1. Also used as the card purchaser's address line 1 if no delivery address is supplied. Mandatory if 'Address' fields are specified.	Conditional
<Addrl2>	AN	1	50	Cardholder's address line 2. Also used as the card purchaser's address line 2 if no delivery address is supplied.	Optional
<Addrl3>	AN	1	50	Cardholder's address line 3. Also used as the card purchaser's address line 3 if no delivery address is supplied.	Optional
<City>	AN	1	50	Cardholder's home city. Also used as the card purchaser's city if no delivery address is supplied. Mandatory if <addrL1> is present, and <postcode> is not present.	Conditional
<Postcode>	AN	1	10	Cardholder's home postcode. Also used as the card purchaser's postcode if no postcode is supplied. Mandatory if <addrL1> is present, and <city> is not present. See Postcode Permitted Characters.	Conditional
<Country>	AN	1	3	Cardholder's country of residence. This is represented as a 3 digit ISO country code (e.g. 826 for UK). Mandatory if <addrL1> is present.	Conditional
<Mobile>	AN	1	15	Cardholder's mobile phone number (including dialing code if applicable). See Processing of Telephone Numbers.	Optional
<PublicToken>	AN	1	9	The card's public token. The response always returns the public token of the newly-created card.	Omit
<CardDesign>	AN	1	8	The identifier of the card product, or Product ID, within Thredd. For details, check with your Implementation Manager. **Note**: this is not the same field as the **CrdDesign** or **ProductRef**.	Conditional
<DOB>	YYYY-MM-	10	10	The cardholder's date of birth.	Optional

Tag	Type	Minimum Length	Maximum Length	Description	Request
	DD				
<LocDate>	YYYY-MM-DD	10	10	The local current date in *year-month-date* format.	Mandatory
<LocTime>	HHMMSS	6	6	The local current time, in *hour-minute-second* format.	Mandatory
<LoadValue>	D	1	20	Load value to put on the card. The amount can include up to four decimal places, depending on the currency exponent (e.g., 10.99 for EUR which has a currency exponent of 2). See Currency Codes.	Mandatory
<CurCode>	AN	3	3	3-letter ISO currency code for the currency to load (e.g. EUR). This must match the card's currency or the action fails (**Note**: For a Multi-FX card, the card can be loaded in any of the card's currencies). If not provided, then the card uses its billing currency. See Currency Codes.	Conditional
<Reason>	AN	1	60	Reason for the card's status change. Overrides default of 'Card Activated' that is shown in the card processor. Text is shown in the Smart Client **Tracker** screen. On Thredd Portal, this information is captured in the Notes column in Transaction Search results.	Optional
<AccCode>	AN	0	6	Access code. If provided, must be 6 digits, leading zeroes are acceptable. Leave empty if not required.	Optional
<ItemSrc>	N	1	5	Source field to define alternate fees. Legacy field for information purposes only; see Item Source Types. Suggest using 0.	Mandatory
<LoadFundsType>	AN	1	3	Payment method for loading funds onto the card. See Load Fund Types.	Optional
<LoadSrc>	AN	1	3	The source of the load request for determining the fee of the load, if applicable. If omitted, defaults to 14 "Unknown". See Load Sources.	Optional
<LoadFee>	D	1	20	Fixed fee amount charged to the card purchaser for handling the card purchase and load. The amount can include up to four decimal places, depending on the currency exponent (e.g., 10.99 for EUR which has a currency exponent of 2). See Currency	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request
				Codes. If no load fee is required, specify 0. The load fee does not affect the card balance. It is only reported in the XML.	
<LoadedBy>	AN	1	30	User who loaded the card.	Optional
<CreateImage>	N	1	1	Specifies whether to create a card image. 1= yes, 0 = No. Images are returned in the <Image> response parameter, encrypted by a pre-shared PGP encryption key.	Mandatory
<CreateType>	N	1	1	This field is mandatory unless it is a replacement card request. There are five possible values: 1 = Create a virtual card. Can be converted to a physical card at a later stage using the Convert Card web service. 2 = Create physical card. Also triggers the creation of a card file which is sent to the manufacturer. 3 = Create a virtual card. Works in the same way as option 1. 4 = Create a Master Virtual Card which is a deposit account that can be used to load other cards from. 5 = Create a virtual card and convert to a physical card. Triggers the creation of a card file which is sent to the manufacturer. **Note**: To use create type 5, the card must be created under a virtual product. **Note**: If the virtual card is activated then the physical card is also active, so you should consider the security implications of this. Please speak to your implementation manager. Create types 3, 4 and 5 does not work if Quantity is greater than 1.	Conditional
<CustAccount>	AN	1	25	Cardholder account number or reference number. You can use this reference to find the cards linked to a cardholder. Also displayed in Smart Client and in Thredd Portal as *Customer Reference*.	Optional

Tag	Type	Minimum Length	Maximum Length	Description	Request
<ActivateNow>	N	1	1	Whether to activate the card. 1= Yes, 0=No. When <Quantity> is greater than 1 then creation of <Quantity> numbers of identical cards will trigger a batch process that starts within minutes of the request. If <ActivateNow> is 1 in such requests then the issued tokens are sent to the customer already activated. This parameter only applies if the request is for a new card.	Mandatory
<ExpDate>	YYYY-MM-DD	10	10	Card expiry date. If left blank, updates with the default expiry date, based on the Card Scheme's validity period in months, otherwise updates with the input value. The date returned of the actual physical expiry is in *MM/YY*.	Optional
<CardName>	AN	1	27	The embossed name on the card. If present in the request then the embossed name on the card should be the given value. If it is not available and <Firstname> and <Lastname> are available then <Title> + <Firstname> + <Lastname> is the embossed name. If all the above parameters are unavailable in the request then the default embossed name remains as the embossed name. If a blank embossed name is required, then pass a single space character. See Card Name Permitted Characters.	Optional
<LimitsGroup>	AN	1	10	Group code of the Limits Group. If this parameter is not supplied and this is a new card request, then the default group for the card's product is used. If the default group is not required, you can remove it by passing a space character ' '. **Note**: The Limits Group is set up and configured in Smart Client and in Thredd Portal.	Optional
<MCCGroup>	AN	1	10	Group code of the MCC Group. If this parameter is not supplied and this is a new card request then the default group for the cards product is used. If the default group is not required, you can remove it by passing a space character ' '. The MCC group allows the card to be linked to a list of Merchant Category Codes (MCCs) that the card is allowed to or conversely is NOT allowed to transact at. **Note**: The MCC Group is set up and configured in Smart Client and in Thredd Portal.	Optional

Tag	Type	Minimum Length	Maximum Length	Description	Request
<PERMSGroup>	AN	1	10	Group code of the Usage Group. If this parameter is not supplied and this is a new card request then the default group for the card's product is used. If the default group is not required, you can remove it passing a space character ‘ ‘. **Note**: The Usage Group is set up and configured in Smart Client and in Thredd Portal.	Optional
<FeeGroup>	AN	1	10	Group code of the Fee Group. If this parameter is not supplied and this is a new card request then the default group for the cards product is used. If the default group is not required, you can remove it by passing a space character ‘ ‘. **Note**: The Fee Group is set up and configured in Smart Client and in Thredd Portal.	Optional
<SchedFeeGroup>	AN	1	10	Group code of the Scheduled Fee Group. If this parameter is not supplied and this is a new card request then the default group for the cards product is used. If the default group is not required, you remove it by passing a space character ‘ ‘.**Note**: The Scheduled Fee Group is set up and configured in Smart Client and in Thredd Portal.	Optional
<WSFeeGroup>	AN	1	10	Code of the Web Service Fee Group (). If this parameter is not supplied and this is a new card request then the default group for the cards product is used. If the default group is not required, you can remove it by passing a space character ‘ ‘. WSFeeGroup allows the card to be linked to a set of web service fees that are set up on the system. **Note**: The Web Service Fee Group is set up and configured in Smart Client and in Thredd Portal.	Optional
<ProductRef>	AN	1	50	The physical card design reference as used by the Card Manufacturer. Identifies the *PRODUCT_REF* field in the XML file sent to the card manufacturer.	Optional
<CarrierType>	AN	1	30	The Carrier Product design reference as used by the Card Manufacturer. This is the letter onto which the card is attached when sent to the cardholder. Identifies the Carrier Product type of the Card Manufacturer.	Optional

Tag	Type	Minimum Length	Maximum Length	Description	Request
<Fulfil1>	AN	1	50	Free text field for transferring extra information to the card manufacturer, for example, to be printed on the Carrier. Identifies the *FULFIL1* field in the XML file sent to the card manufacturer.	Optional
<Fulfil2>	AN	1	50	Free text field for transferring extra information to the card manufacturer, for example, to be printed on the Carrier. Identifies the *FULFIL2* field in the XML file sent to the card manufacturer.	Optional
<DelvMethod>	AN	1	1	The delivery method for the card. Options include: 0 = Standard delivery; 1 = Registered mail; 2 = Direct delivery; 3 = Customized DelvMethod 1; 4 = Customized DelvMethod 2; 5 = Customized DelvMethod 3; 6= Customized DelvMethod 4; 7 = Customized DelvMethod 5; Default value is 0	Optional
<ThermalLine1>	AN	1	120	Free text field for transferring extra information to be printed on the card. For example, to add a customer service phone number.	Optional
<ThermalLine2>	AN	1	70	Free text field for transferring extra information to be printed on the card. For example, to add a link to your service terms and conditions.	Optional
<Lang>	AN	1	2	Two digit ISO 639-1 Language code for card mailers (e.g., En = English; Fr = French). **Note**: The available languages depend on the card manufacturer support. Also used if bespoke SMS templates are set up.	Optional
<EmbossLine4>	AN	1	27	The card's embossed line 4 on the front of the card. Could be used for example, to add an account number or sort code.	Optional
<ImageId>	AN	1	16	Reference which identifies the card manufacturer's image file that is printed on the face of the card.	Optional
<LogoFrontId>	AN	1	30	Reference which identifies the	Optional

Tag	Type	Minimum Length	Maximum Length	Description	Request
				card manufacturer's logo file that is printed on the face of the card.	
<LogoBackId>	AN	1	30	Reference which identifies the card manufacturer's logo file that is printed on the back of the card, if supported.	Optional
<Replacement>	N	1	1	Whether the card is a new card or a replacement. The possible values are: 0 = new card; 1 = replacement card. Needs to be agreed with the card manufacturer. **Note**: Do not use a value '1', which is for legacy usage only; to replace a card, we recommend you use Card Renew: ws_renew_card.	Mandatory
<PrimaryToken>	AN	16	19	The primary card's public token. If it is blank then the newly created card is a primary card, otherwise it is the secondary card in a primary/secondary relationship. Cannot be the token of a card that is already linked as a secondary card.	Optional
<Delv_AddrL1>	AN	1	50	Card purchaser's /delivery address line 1. Mandatory if 'Delivery Address' fields are specified.	Optional
<Delv_AddrL2>	AN	1	50	Card purchaser's/delivery address line 2.	Optional
<Delv_AddrL3>	AN	1	50	Card purchaser's /delivery address line 3.	Optional
<Delv_City>	AN	1	50	Card purchaser's /delivery address delivery city. Mandatory if <Delv_AddrL1> is present, and <Delv_PostCode> is not present.	Optional
<Delv_Postcode>	AN	1	10	Card purchaser's /delivery address postcode. Mandatory if <Delv_AddrL1> is present, and <Delv_City> is not present. See Postcode Permitted Characters.	Optional
<Delv_County>	AN	1	20	Card purchaser's /delivery address county.	Optional
<Delv_Country>	AN	1	3	Card purchaser's /delivery address country 3-digit ISO country code (e.g., 826 for UK). Mandatory if <Delv_AddrL1> is present.	Optional

Tag	Type	Minimum Length	Maximum Length	Description	Request
<Delv_Code>	AN	1	12	The delivery code for the card. If specified, the card manufacturer sends all cards with the same delivery code to the specified delivery address.	Optional
<Sms_Required>	AN	1	1	Whether an SMS is sent to the cardholder with the card's CVV. 1 = yes; 0 =No. The default is '0'. The SMS is configurable.	Optional
<CardManufacturer>	AN	1	50	The manufacturer to send the card generation request to. For example: *TCT*, *AllPay*, *GNC*, *Gemalto*, *Nitecrest* and *Exceet*. For a full list, see Card Manufacturers. If omitted, the default for the Card Scheme (payment network) will be used.	Optional
<CoBrand>	AN	1	6	The Co-Brand code for the card. If supplied it replaces the *PROGRAMID* field in the *Balance XML* file.	Optional
<ExternalAuth>	AN	1	1	External Authorisation flag. Possible values are: 0 = Do not set External Authorisation on; 1 = Set External Authorisation. Empty value defaults to 0. **Note**: For legacy use only. Not applicable if using EHI.	Omit
<FeeWaiver>	N	1	1	Indicates whether to waive any web service fee set up on the system: 0 = No, 1=Yes. Default is 0.	Optional
<BlackList>	AN	1	10	Group code of the card acceptor Deny list. See Card Acceptor Deny list.	Optional
<WhiteList>	AN	1	10	Group code of the card acceptor Allow list. See Card Acceptor Allow list.	Optional
<PaymentTokenUsageGroup>	AN	1	10	Payment token usage group code. Defines configuration options specific to the provisioning of a digital payment token. For details, see the *Tokenisation Guide*. This is a numeric value; only digits 0-9 are valid. Leave empty if no usage group is required.	Optional
<VirtualCardImage>	AN	1	16	The Image ID for the virtual image for the new card. You can set up Image IDs in Smart Client in the **Image Master** and **Virtual Card Images** screens.	Optional

Tag	Type	Minimum Length	Maximum Length	Description	Request	
				Note: If you do not provide an image ID, the default virtual card image for the product is used.		
<ImageSize>	N	1	1	The size of the virtual image: 1 = 100%; 2 = 200%; 3 = 300%; 4 = 400%; 5 = 500%. Default is 1.	Optional	
<IsSingleUse>	AN	1	5	Enables you to specify whether the card is single use only. Boolean values of either 1, 0 or *true*, *false* are accepted. (1= true, 0 = false). If not specified, then the default value from the card Product is used.	Optional	Omit
<IsNonReloadable>	AN	1	5	Enables you to specify whether the card is non-reloadable. Boolean values of either 1, 0 or *true*, *false* are accepted. (1= true, 0 = false). If not specified, then the default value from the card Product is used.	Optional	Omit
<Url>	AN	1	100	This value is included in the Thredd Card Generation file, in the `<QRCode>` field. For example: *https://www.your-e-card.com/balance/2909680989632389* For details, see the Card Generation Interface Specifications.	Optional	
<OOBAppURL>	AN	1	2048	Out Of Band app URL used in a 3D Secure authentication session. The Card Scheme (e.g., Mastercard) requires issuers using Out of Band/Biometric authentication to support the automatic redirection of cardholders from the merchant app to the authenticator app. OOBAppURL is the URL of this authenticator app.	Optional	Omit

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
```

```
<hyp:Ws_BulkWalletCreation>
   <hyp:IssCode>PMT</hyp:IssCode>
   <hyp:Req>
<WALLETREQ>
 <WALLET>
  <ClientCode>[User Id]</ClientCode>
  <Title>[Card holder’s Title]</Title>
  <LastName>[Last name]</LastName>
  <MiddleName>[Middle name]</MiddleName>
  <FirstName>[First name]</FirstName>
  <Addrl1>[Address Line 1]</Addrl1>
  <Addrl2>[Address Line 2]</Addrl2>
  <City>[City]</City>
  <PostCode>[Postcode]</PostCode>
  <Country>[Numeric Country code]</Country>
  <Mobile>[Card holder’s Mobile number]</Mobile>
  <CardDesign>[Numeric Card Dedign Code]</CardDesign>
  <ExternalRef>[External Reference Number of the card]</ExternalRef>
  <DOB>[Card Holder’s date of birth]</DOB>
 <TerminalID>[Identification number of the card terminal]</TerminalID>
<LoadValue>[Amount load to the card]</LoadValue>
<CurCode>[Alphabetic currency code]</CurCode>
<Reason>[Notes]</Reason>
 <AccCode>[6 digit passcode]</AccCode>
<ItemSrc>[Item source]</ItemSrc>
<LoadFundsType>[Load fund type]</LoadFundsType>
<LoadSrc>[Load source]</LoadSrc>
<LoadFee>[Load fee]</LoadFee>
<LoadedBy>[User who load the card]</LoadedBy>
<CreateImage>[Numeric code for image creation]</CreateImage>
<CreateType>[Type of the card Virtual/Physical]</CreateType>
<CustAccount>[Customer account number]</CustAccount>
<ActivateOrNot>[Parameter to specify the card is activate or not 1/0]</ActivateOrNot>
<ExpDate>[Cards expiry date]</ExpDate>
<CardName>[Card’s Emboss name]</CardName>
<LimitsGroup>[Group code of the group limit]</LimitsGroup>
<MCCGroup>[Group code of the MCC group]</MCCGroup>
<PERMSGroup>[Group code of the Usage group]</PERMSGroup>
     <ProductRef>[Product reference code]</ProductRef>
     <CarrierType>[Carrier Type]</CarrierType>
     <Fulfil1>[FULFIL1]</Fulfil1>
     <Fulfil2>[FULFIL2]</Fulfil2>
      <DelvMethod>[Delivery method]</DelvMethod>
      <ThermalLine1>[Thermal line 1]</ThermalLine1>
     <ThermalLine2>[Thermal line 2]</ThermalLine2>
     <EmbossLine4>[Emboss line 4]</EmbossLine4>
      <ImageId>[Image file id]</ImageId>
      <LogoFrontId>[Front logo id]</LogoFrontId>
      <LogoBackId>[Back logo id]</LogoBackId>
           <Replacement>[Replacement flag]</Replacement>
      <FeeGroup>[Group code of fee group]</FeeGroup>
      <PrimaryToken>[Public token of primary card]</PrimaryToken>
      <Delv_AddrL1>[Delivery Address Line 1]</Delv_AddrL1>
      <Delv_AddrL2>[Delivery Address Line 2]</Delv_AddrL2>
  <Delv_AddrL3>[Delivery Address Line 3]</Delv_AddrL3>
  <Delv_City>[Delivery City]</Delv_City>
  <Delv_PostCode> [Delivery Postcode]</Delv_PostCode>
  <Delv_County>[Delivery County]</Delv_County>
  <Delv_Country>[Delivery Country]</Delv_Country>
  <Sms_Required>[SMS Required(1/0)]</Sms_Required>
  <SchedFeeGroup>[Group code of schedule or recurring fee]</SchedFeeGroup>
  <WSFeeGroup>[Group code of web service fee]</WSFeeGroup>
  <CardManufacturer>[Card manufacturer code]</CardManufacturer>
  <CoBrand>[Cobrand]</CoBrand>
  <BlackList>[Card acceptor Deny list]</BlackList>
  <WhiteList>[Card acceptor Allow list]</WhiteList>
  <PaymentTokenUsageGroup>[Payment Token Usage Id - Numeric]</PaymentTokenUsageGroup>
   <IsSingleUse>false</IsSingleUse>
   <IsNonReloadable>false</IsNonReloadable>
  <Url>[link to add to QRC code field in card generation file]</Url>
</WALLET>
```

```
<WALLET>
      <ClientCode>[User Id]</ClientCode>
      <Title>[Card holder’s Title]</Title>
      <LastName>[Last name]</LastName>
      <MiddleName>[Middle name]</MiddleName>
      <FirstName>[First name]</FirstName>
      <Addrl1>[Address Line 1]</Addrl1>
      <Addrl2>[Address Line 2]</Addrl2>
      <City>[City]</City>
      <PostCode>[Postcode]</PostCode>
      <Country>[Numeric Country code]</Country>
      <Mobile>[Card holder’s Mobile number]</Mobile>
      <CardDesign>[Numeric Card Dedign Code]</CardDesign>
      <ExternalRef>[External Reference Number of the card]</ExternalRef>
      <DOB>[Card Holder’s date of birth]</DOB>
       <TerminalID>[Identification number of the card terminal]</TerminalID>
      <LoadValue>[Amount load to the card]</LoadValue>
      <CurCode>[Alphabetic currency code]</CurCode>
      <Reason>[Notes]</Reason>
       <AccCode>[6 digit passcode]</AccCode>
      <ItemSrc>[Item source]</ItemSrc>
      <LoadFundsType>[Load fund type]</LoadFundsType>
      <LoadSrc>[Load source]</LoadSrc>
      <LoadFee>[Load fee]</LoadFee>
      <LoadedBy>[User who load the card]</LoadedBy>
      <CreateImage>[Numeric code for image creation]</CreateImage>
      <CreateType>[Type of the card Virtual/Physical]</CreateType>
      <CustAccount>[Customer account number]</CustAccount>
      <ActivateOrNot>[Parameter to specify the card is activate or not 1/0]</ActivateOrNot>
      <ExpDate>[Cards expiry date]</ExpDate>
      <CardName>[Card’s Emboss name]</CardName>
      <LimitsGroup>[Group code of the group limit]</LimitsGroup>
      <MCCGroup>[Group code of the MCC group]</MCCGroup>
      <PERMSGroup>[Group code of the Usage group]</PERMSGroup>
           <ProductRef>[Product reference code]</ProductRef>
           <CarrierType>[Carrier Type]</CarrierType>
           <Fulfil1>[FULFIL1]</Fulfil1>
           <Fulfil2>[FULFIL2]</Fulfil2>
            <DelvMethod>[Delivery method]</DelvMethod>
            <ThermalLine1>[Thermal line 1]</ThermalLine1>
           <ThermalLine2>[Thermal line 2]</ThermalLine2>
           <EmbossLine4>[Emboss line 4]</EmbossLine4>
            <ImageId>[Image file id]</ImageId>
            <LogoFrontId>[Front logo id]</LogoFrontId>
            <LogoBackId>[Back logo id]</LogoBackId>
            <Replacement>[Replacement flag]</Replacement>
      <FeeGroup>[Group code of fee group]</FeeGroup>
      <PrimaryToken>[Public token of primary card]</PrimaryToken>
      <Delv_AddrL1>[Delivery Address Line 1]</Delv_AddrL1>
          <Delv_AddrL2>[Delivery Address Line 2]</Delv_AddrL2>
     <Delv_AddrL3>[Delivery Address Line 3]</Delv_AddrL3>
     <Delv_City>[Delivery City]</Delv_City>
     <Delv_PostCode> [Delivery Postcode]</Delv_PostCode>
     <Delv_County>[Delivery County]</Delv_County>
     <Delv_Country>[Delivery Country]</Delv_Country>
          <Sms_Required>[SMS Required(1/0)]</Sms_Required>
     <SchedFeeGroup>[Group code of schedule or recurring fee]</SchedFeeGroup>
     <WSFeeGroup>[Group code of web service fee]</WSFeeGroup>
     <CardManufacturer>[Card manufacturer code]</CardManufacturer>
     <CoBrand>[Cobrand]</CoBrand>
     <BlackList>[Card acceptor Deny list]</BlackList>
     <WhiteList>[Card acceptor Allow list]</WhiteList>
     <PaymentTokenUsageGroup>[Payment Token Usage Id - Numeric]</PaymentTokenUsageGroup>
     <Url>[link to add to QRC code field in card generation file]</Url>
     <OOBAppURL>[link to Out of Band app URL used for 3D Secure sessions]</OOBAppURL>
               </WALLET>
            </WALLETREQ>
         </hyp:Req>
       </hyp:Ws_BulkWalletCreation>
    </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_BulkWalletCreationResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_BulkWalletCreationResult>
            <WalletCreated>2</WalletCreated>
            <WalletNotCreated>0</WalletNotCreated>
            <ActionCode>000</ActionCode>
            <RequestWithError/>
            <Wallets>
               <Wallets xmlns="">
                  <Wallet>
                     <IssCode>PMT</IssCode>
                     <PublicToken>123456789</PublicToken>
                     <ItemID>123456</ItemID>
                     <ClientCode>0</ClientCode>
                     <SysDate>2014-09-01</SysDate>
                     <ActionCode>000</ActionCode>
                     <LoadValue>10</LoadValue>
                     <IsLive>false</IsLive>
                     <StartDate>09/14</StartDate>
                     <ExpDate>09/17</ExpDate>
                     <CVV>130</CVV>
                     <MaskedPAN>987654******3210</MaskedPAN>
                     <EWALLET>
                        <EWALLET>
                           <IDENTITY>9876543210123456</IDENTITY>
                           <CARDS>
                              <CARD>
                                 <PAN>9876543210123456</PAN>
                                 <CRDCURRCODE>GBP</CRDCURRCODE>
                                 <CRDPRODUCT>MCRD</CRDPRODUCT>
                                 <CUSTCODE/>
                                 <PRIMARY>Y</PRIMARY>
                                 <PROGRAMID>ABCD123</PROGRAMID>
                                 <STATCODE>00</STATCODE>
                                 <EXPDATE>2017-09-30</EXPDATE>
                              </CARD>
                           </CARDS>
                           <ACCOUNTS>
                              <ACCOUNT>
                                 <ACCNO>9876543210123457</ACCNO>
                                 <ACCTYPE>01</ACCTYPE>
                                 <CURRCODE>EUR</CURRCODE>
                                 <FINAMT>0.00</FINAMT>
                                 <BLKAMT>0.00</BLKAMT>
                                 <AMTAVL>0.00</AMTAVL>
                              </ACCOUNT>
                              <ACCOUNT>
                                 <ACCNO>9876543210123458</ACCNO>
                                 <ACCTYPE>01</ACCTYPE>
                                 <CURRCODE>USD</CURRCODE>
                                 <FINAMT>10.00</FINAMT>
                                 <BLKAMT>0.00</BLKAMT>
                                 <AMTAVL>10.00</AMTAVL>
                              </ACCOUNT>
                              <ACCOUNT>
                                 <ACCNO>9876543210123456</ACCNO>
                                 <ACCTYPE>01</ACCTYPE>
                                 <CURRCODE>GBP</CURRCODE>
                                 <FINAMT>0.00</FINAMT>
                                 <BLKAMT>0.00</BLKAMT>
                                 <AMTAVL>0.00</AMTAVL>
                              </ACCOUNT>
                           </ACCOUNTS>
                        </EWALLET>
                     </EWALLET>
                  </Wallet>
```

```
                  <Wallet>
                     <IssCode>ORWL</IssCode>
                     <PublicToken>123456788</PublicToken>
                     <ItemID>89031</ItemID>
                     <ClientCode>0</ClientCode>
                     <SysDate>2014-09-01</SysDate>
                     <ActionCode>000</ActionCode>
                     <LoadValue>10</LoadValue>
                     <IsLive>false</IsLive>
                     <StartDate>09/14</StartDate>
                     <ExpDate>09/17</ExpDate>
                     <CVV>589</CVV>
                     <MaskedPAN>987654******1230</MaskedPAN>
                     <EWALLET>
                        <EWALLET>
                           <IDENTITY>9876543210123459</IDENTITY>
                           <CARDS>
                              <CARD>
                                 <PAN>9876543210123459</PAN>
                                 <CRDCURRCODE>GBP</CRDCURRCODE>
                                 <CRDPRODUCT>MCRD</CRDPRODUCT>
                                 <CUSTCODE/>
                                 <PRIMARY>Y</PRIMARY>
                                 <PROGRAMID>ABCD123</PROGRAMID>
                                 <STATCODE>00</STATCODE>
                                 <EXPDATE>2017-09-30</EXPDATE>
                              </CARD>
                           </CARDS>
                           <ACCOUNTS>
                              <ACCOUNT>
                                 <ACCNO>9876543210123461</ACCNO>
                                 <ACCTYPE>01</ACCTYPE>
                                 <CURRCODE>EUR</CURRCODE>
                                 <FINAMT>10.00</FINAMT>
                                 <BLKAMT>0.00</BLKAMT>
                                 <AMTAVL>10.00</AMTAVL>
                              </ACCOUNT>
                              <ACCOUNT>
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                                 <ACCTYPE>01</ACCTYPE>
                                 <CURRCODE>USD</CURRCODE>
                                 <FINAMT>0.00</FINAMT>
                                 <BLKAMT>0.00</BLKAMT>
                                 <AMTAVL>0.00</AMTAVL>
                              </ACCOUNT>
                              <ACCOUNT>
                                 <ACCNO>9876543210123459</ACCNO>
                                 <ACCTYPE>01</ACCTYPE>
                                 <CURRCODE>GBP</CURRCODE>
                                 <FINAMT>0.00</FINAMT>
                                 <BLKAMT>0.00</BLKAMT>
                                 <AMTAVL>0.00</AMTAVL>
                              </ACCOUNT>
                           </ACCOUNTS>
                        </EWALLET>
                     </EWALLET>
                  </Wallet>
               </Wallets>
            </Wallets>
         </Ws_BulkWalletCreationResult>
      </Ws_BulkWalletCreationResponse>
   </soap:Body>
</soap:Envelope>
```

Wallet Balance Enquiry

API: Ws_Balance_Enquiry_Wallet

This web service returns the current available balance on each of the currency wallets for a multi-FX card.

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every request. For details, see the FAQs.	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<TxnCode>	AN	1	2	The Transaction Code. See Transaction Codes. Default value is '3'.	Mandatory	Mandatory
<ClientCode>	AN	1	64	User ID of the customer using the service. Only applicable to systems using member logins. Returned in the response if present in the request. **Note**: Legacy field. Not used.	Conditional	Conditional
<ItemSrc>	N	1	5	Source field which defines the item source type. See Item Source Types. If used, overrides any existing fees for using this web service.	Mandatory	Omit
<AuthType>	AN	1	1	Parameter to specify how the card is authenticated. See Authentication Methods.	Mandatory	Omit
<PAN>	AN	14	19	Card Number. Mandatory if <PublicToken> is not provided.	Conditional	Omit
<PublicToken>	AN	1	9	The card's public token. Mandatory in request if <PAN> is not present. Mandatory in the	Conditional	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				response.		
<DOB>	YYYY-MM-DD	10	10	Date of Birth. Mandatory if value of <AuthType> is '2' or '6'.	Conditional	Omit
<CVV>	AN	3	3	Card Verification Value, the 3-digit code printed on the back of the card. Mandatory if the value of <AuthType> is '3'.	Conditional	Omit
<AccCode>	AN	0	6	Access code or passcode for setting a code which is validated during activation (e.g. via the Thredd IVR system). If provided, must be 6 digits; leading zeroes are acceptable. Mandatory if the value of <AuthType> is '4'. Leave empty if not required.	Conditional	Omit
<LastName>	AN	1	20	Cardholder's last name for authenticating the cardholder if the value of <AuthType> is '6'.	Conditional	Omit
<LocDate>	YYYY-MM-DD	10	10	The local current date in *year-month-date* format.	Mandatory	Mandatory
<LocTime>	HHMMSS	6	6	The local current time, in *hour-minute-second* format.	Mandatory	Mandatory
<SysDate>	YYYY-MM-DD	10	10	The system processing date.	Omit	Mandatory
<ActionCode>	AN	3	3	The action code for the response. See Action Codes.	Omit	Mandatory
<PINStatus>	N	1	1	Indicates whether the allowed number of card PIN tries has been exceeded. 0 = No; 1 = Yes.	Omit	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<EWALLET>				See EWALLET Details below.	Omit	Mandatory

EWALLET Details

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<IDENTITY>	AN	1	16	The Thredd 16-digit public token. Mandatory in the response.	Omit	Mandatory
<CARD>				See CARD Details below.	Omit	Mandatory
<ACCOUNT>				See ACCOUNT Details below; may occur multiple times.	Omit	Mandatory

ACCOUNT Details

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<ACCNO>	AN	1	9	Account number.	Omit	Mandatory
<ACCTYPE>	AN	2	2	Type of card account. See Account Types.	Omit	Mandatory
<CURRCODE>	AN	3	3	Alpha currency code of the account.	Omit	Mandatory
<FINAMT>	D	1	20	Balance of the account excluding blocked amount.	Omit	Mandatory
<BLKAMT>	D	1	20	Amount of funds blocked on the card account as a result of all outstanding authorisations. The balance amount can include up to four decimal places, depending on the currency exponent (e.g., 10.99 for EUR which has a currency exponent of 2). See Currency Codes.	Omit	Mandatory
<AMTAVL>	D	1	20	Balance of the card account. This includes all financials and outstanding authorisations.	Omit	Mandatory

CARD Details

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<PAN>	AN	1	9	The Thredd 16-digit	Omit	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				public token. Mandatory in the response.		
<CRDCURRCODE>	AN	3	3	Physical card alpha-currency code.	Omit	Mandatory
<CRDPRODUCT>	AN	1	50	Card product type: MCRD (Mastercard), VISA, MAES (Maestro).	Omit	Mandatory
<PROGRAMID>	AN	1	50	Card’s program ID.	Omit	Mandatory
<CUSTCODE>	AN	1	50	Customer account number. Mandatory in the response if present.	Omit	Conditional
<PRIMARY>	AN	1	1	Indicates if the card is the Primary card. Y = Yes. N= No.	Omit	Mandatory
<STATCODE>	AN	2	2	Card’s status.	Omit	Mandatory
<EXPDATE>	AN	10	10	Expiry date.	Omit	Mandatory

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_Balance_Enquiry_Wallet>
         <hyp:WSID>2021123456789</hyp:WSID>
         <hyp:IssCode>PMT</hyp:IssCode>
         <hyp:TxnCode>3</hyp:TxnCode>
         <hyp:ClientCode></hyp:ClientCode>
         <hyp:ItemSrc>0</hyp:ItemSrc>
         <hyp:AuthType>1</hyp:AuthType>
         <hyp:PAN></hyp:PAN>
         <hyp:PublicToken>100432911</hyp:PublicToken>
         <hyp:DOB></hyp:DOB>
         <hyp:CVV></hyp:CVV>
         <hyp:AccCode></hyp:AccCode>
         <hyp:LastName></hyp:LastName>
         <hyp:LocDate>2014-09-01</hyp:LocDate>
         <hyp:LocTime>105000</hyp:LocTime>
      </hyp:Ws_Balance_Enquiry_Wallet>
   </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
```

```
<soap:Body>
   <Ws_Balance_Enquiry_WalletResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
      <Ws_Balance_Enquiry_WalletResult>
         <WSID>2021123456789</WSID>
         <IssCode>PMT</IssCode>
         <TxnCode>3</TxnCode>
         <PublicToken>123456789</PublicToken>
         <LocDate>2014-09-01</LocDate>
         <LocTime>105000</LocTime>
         <ClientCode/>
         <SysDate>2014-09-01</SysDate>
         <ActionCode>000</ActionCode>
         <PINStatus>0</PINStatus>
         <EWALLET>
            <EWALLET xmlns="">
               <IDENTITY>9876543210123456</IDENTITY>
               <CARDS>
                  <CARD>
                     <PAN>9876543210123456</PAN>
                     <CRDCURRCODE>GBP</CRDCURRCODE>
                     <CRDPRODUCT>MCRD</CRDPRODUCT>
                     <CUSTCODE/>
                     <PRIMARY>Y</PRIMARY>
                     <PROGRAMID>ABC123</PROGRAMID>
                     <STATCODE>00</STATCODE>
                     <EXPDATE>2017-09-30</EXPDATE>
                  </CARD>
               </CARDS>
               <ACCOUNTS>
                  <ACCOUNT>
                     <ACCNO>9876543210123458</ACCNO>
                     <ACCTYPE>01</ACCTYPE>
                     <CURRCODE>EUR</CURRCODE>
                     <FINAMT>0.00</FINAMT>
                     <BLKAMT>0.00</BLKAMT>
                     <AMTAVL>0.00</AMTAVL>
                  </ACCOUNT>
                  <ACCOUNT>
                     <ACCNO>9876543210123457</ACCNO>
                     <ACCTYPE>01</ACCTYPE>
                     <CURRCODE>USD</CURRCODE>
                     <FINAMT>10.00</FINAMT>
                     <BLKAMT>0.00</BLKAMT>
                     <AMTAVL>10.00</AMTAVL>
                  </ACCOUNT>
                  <ACCOUNT>
                     <ACCNO>9876543210123456</ACCNO>
                     <ACCTYPE>01</ACCTYPE>
                     <CURRCODE>GBP</CURRCODE>
                     <FINAMT>0.00</FINAMT>
                     <BLKAMT>0.00</BLKAMT>
                     <AMTAVL>0.00</AMTAVL>
                  </ACCOUNT>
               </ACCOUNTS>
            </EWALLET>
         </EWALLET>
      </Ws_Balance_Enquiry_WalletResult>
   </Ws_Balance_Enquiry_WalletResponse>
</soap:Body>
</soap:Envelope>
```

Banking Services Overview

You can use the following web services to manage your Modulr Agency Banking services:

Register a Customer for Banking: Ws_Banking_CreateCustomer
Create Card with Agency Banking: Ws_CreateCard_V2
Register a Customer for Banking Actions: Ws_Banking_RegisterNotification
Make External Payment: Ws_Banking_TransferFunds
Retrieve Direct Debit Mandates: Ws_Banking_DD_GetMandate
Cancel a Direct Debit Mandate: Ws_Banking_DD_CancelMandate

Legacy Bottomline Agency Banking Services

The web services listed below are for legacy use only with Bottomline Agency Banking, and are not available to new clients.

Bank Account Change: Ws_Banking_ChangeAccountBankingFeaturesStatus
Bank Account Check Number: Ws_Banking_AccountModulusCheck
Return Sort Code and Account Number: Ws_Banking_ReturnBankDetailsFromToken
Get Direct Debits: Ws_Banking_GetDirectDebitInstructionsBankingEnabledCard
Get Pending Direct Debits: Ws_Banking_GetPendingDirectDebits
Cancel a Direct Debit: Ws_Banking_CancelDirectDebitBankingEnabledCard

Register a Customer for Banking

API: Ws_Banking_CreateCustomer

For Modulr Agency Banking integrations, you must register the customer prior to calling Ws_CreateCard_V2 to create the bank account. This web service enables you to register customer details without creating associated bank accounts.

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every request. For details, see the FAQs.	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<CardDesign>	AN	1	8	The Thredd Product ID. For details, check with your Implementation Manager.	Mandatory	
<Associates>	A list of Associate			A list of associates (for business customer accounts). Must contain at least one associate. For example, this could contain the details of the company directors for a limited company, or the partners for a partnership. For details, see Associate.	Mandatory	
<DocumentInfo>	A list of DocumentInfo			A list of document information (for business customer accounts). Examples of documents could be proof of a company director's identity or address, articles of association or a partnership agreement. For details, see DocumentInfo.	Optional	
<ExpectedMonthlySpend>	N			An expected monthly spend must be included. If this is unknown, select an approximate amount.	Mandatory	

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<ExternalReference>	AN	1	30	Enables you to add your own external customer reference.	Optional	
<IndustryCode>	AN			Industry code if this is a business customer. Mandatory for all <Type>except for 'INDIVIDUAL'.	Conditional	
<RegisteredAddress>	A Banking Address			The address of the company's registered office (for a business customer). For details, see RegisteredAddress.	Optional	
<TCSVersion>	N			The version of the Modulr terms and conditions that you have agreed to.	Mandatory	
<TradingAddress>	A Banking Address			Business customer trading address. Mandatory for all <Type> except for INDIVIDUAL. For details, see TradingAddress.	Conditional	
<Type>	Enum (see desc)			Type of the account to be opened. Takes values of: INDIVIDUAL, CHARITY, LLP, LPARTNRSHP, OPARTNRSHP, SOLETRADER, PLC, LLC, PCM_ INDIVIDUAL, PCM_ BUSINESS, TRUST and PREQUALIFIED.	Mandatory	
<Name>	AN			Customer's company name (for a business customer). You can provide alpha-numeric characters plus: [_ ' @ , & £ $ € ¥ = # % ‘ ’ : ; \ / < > « » ! ‘ “ ” . ? - *{ } + % ( )]. Mandatory for all <Type> except 'INDIVIDUAL'.	Conditional	
<CompanyRegNumber>	AN			The company registration or incorporation number for a	Optional	

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				business customer. Only applicable for companies registered with Companies House.		
<ActionCode>	N	3	3	The action code for the response. See Action Codes. If the action code is 576, full details can be found in <Messages>.	Omit	Mandatory
<Messages>	A list of BankingError			If the action code returned is 576, then full details of any Modulr errors are returned. See BankingError.	Omit	Optional
<CustomerID>	AN	10	10	Unique identifier for the newly registered customer, returned in the response. Begins with 'C'. This must be used in all subsequent web service requests relating to this customer.	Omit	Mandatory
ComplianceData	Object			If <Type> is *PREQUALIFIED* then ComplianceData is mandatory and all fields under it should have a value. See ComplianceData Fields.	Conditional	

ComplianceData Fields

These fields are mandatory if <Type> is *PREQUALIFIED*.

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<TypeDescription>	AN	1	200	Description of the compliance data type. Expecting a string value of maximum length 200.	Conditional	
<RiskLevel>	AN	3	20	Value can be LOW, MEDIUM, HIGH or UNDETERMINED. If any value other than these is submitted,	Conditional	

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				then a default value UNDETERMINED is used.		
<VulnerabilityReasons>	AN	6	30	Expecting a string array of maximum length 30 per string element. Value can be one or more of the following elements: LIFE_EVENTS, HEALTH, RESILIENCE, CAPABILITY, FINANCIAL_ DIFFICULTY.	Conditional	

Request

```
<soap:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:soap="h-
ttp://schemas.xmlsoap.org/soap/envelope/">
  <soap:Header>
    <AuthSoapHeader xmlns="http://www.globalprocessing.ae/HyperionWeb">
      <strUserName>******</strUserName>
      <strPassword>******</strPassword>
    </AuthSoapHeader>
  </soap:Header>
  <soap:Body>
    <Ws_Banking_CreateCustomer xmlns="http://www.globalprocessing.ae/HyperionWeb">
      <request>
        <WSID>2021123456789</WSID>
        <IssCode>PMT</IssCode>
        <CardDesign>string</CardDesign>
        <Associates>
          <Associate>
            <applicant>boolean</applicant>
            <dateOfBirth>dateTime</dateOfBirth>
            <documentInfo xsi:nil="true" />
            <email>string</email>
            <firstName>string</firstName>
            <middleName>string</middleName>
            <lastName>string</lastName>
            <ownership>int</ownership>
            <phone>string</phone>
            <type>string</type>

<homeAddress>
          <addressLine1>string</addressLine1>
          <addressLine2>string</addressLine2>
          <posttown>string</posttown>
          <postCode>string</postCode>
          <country>string</country>
        </homeAddress>
          </Associate>
        </Associates>
        <DocumentInfo>
          <DocumentInfo>
            <filename>string</filename>
            <filepath>string</filepath>
            <uploadDate>dateTime</uploadDate>
          </DocumentInfo>
```

```
        </DocumentInfo>
        <ExpectedMonthlySpend>decimal</ExpectedMonthlySpend>
        <ExternalReference>string</ExternalReference>
        <IndustryCode>string</IndustryCode>
        <RegisteredAddress>
          <addressLine1>string</addressLine1>
          <addressLine2>string</addressLine2>
          <posttown>string</posttown>
          <postCode>string</postCode>
          <country>string</country>
        </RegisteredAddress>
        <TCSVersion>int</TCSVersion>
        <TradingAddress>
          <addressLine1>string</addressLine1>
          <addressLine2>string</addressLine2>
          <posttown>string</posttown>
          <postCode>string</postCode>
          <country>string</country>
        </TradingAddress>
        <Type>INDIVIDUAL or CHARITY or LLP or LPARTNRSHP or OPARTNRSHP or SOLETRADER or PLC, LLC,  PCM_INDIVIDUAL, PCM_BUSINESS,
TRUST and PREQUALIFIED.</Type>
        <Name>string</Name>
        <CompanyRegNumber>string</CompanyRegNumber>
      <ComplianceData>
         <hTypeDescription>Prequalified<TypeDescription>
         <RiskLevel>HIGH<RiskLevel>
         <VulnerabilityReasons>
           <string>LIFE_EVENTS</string>
           <string>HEALTH</string>
         </VulnerabilityReasons>
       </ComplianceData>
      </request>
    </Ws_Banking_CreateCustomer>
  </soap:Body>
</soap:Envelope>
```

Response

```
<Ws_Banking_CreateCustomerResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
      <Ws_Banking_CreateCustomerResult>
        <WSID>2021123456789</WSID>
        <IssCode> PMT </IssCode>
        <ActionCode>string</ActionCode>
        <CustomerID>string</CustomerID>
        <Messages>
            <BankingError>
            <field>string</field>
            <code>string</code>
            <message>string</message>
            <error>string</error>
          </BankingError>
        </Messages>
      </Ws_Banking_CreateCustomerResult>
    </Ws_Banking_CreateCustomerResponse>
```

Create Card with Agency Banking

API: Ws_CreateCard_V2

This web service creates a card which has a bank account linked to it, with Agency Banking features enabled. It will also upgrade an existing card to have banking features. This service applies only to programmes using Agency Banking.

Note: Before using this web service, use Ws_Banking_CreateCustomer to register the customer and obtain the unique CustomerID. See Register a Customer for Banking.

Note: To replace a card, you must use the Card Renew web service (Ws_Renew_Card).

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Should be unique for every web service request sent	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<TxnCode>	AN	1	2	The Transaction Code. Default value 10.	Mandatory	Mandatory
<clientCode>	AN	1	64	User ID of the customer using the service. Only applicable to systems using member logins. Returned in the response if present in the request	Optional	Conditional
<Title>	AN	1	4	Cardholder's title. If no delivery address is supplied it is also assumed to be the card purchaser’s title	Optional	Omit
<LastName>	AN	1	30	Cardholder's last name. If no delivery address is supplied it is also assumed to be the card purchaser’s last name	Conditional	Omit
<MiddleName>	AN	1	100	Cardholder's middle name. The <MiddleName> is not part of the <EmbossName> and therefore, does not check manufacture-approved characters. If a delivery address is not supplied, the cardholder's middle name will be the card purchaser's middle name.	Conditional	Omit
<FirstName>	AN	1	30	Cardholder's first name. If no delivery address is supplied it is also assumed to be the card purchaser’s first name Mandatory if <lastName> is present.	Conditional	Omit
<Address1>	AN	1	50	Cardholder's address line 1. If	Condition	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				no delivery address is supplied it is also assumed to be the card purchaser's address line 1 Mandatory if 'Address' fields are being specified	al	
<Address2>	AN	1	50	Cardholder's Address line 2. If no delivery address is supplied it is also assumed to be the card purchaser's Address line 2.	Optional	Omit
<Address3>	AN	1	35	Cardholder's Address line 3. If no delivery address is supplied it is also assumed to be the card purchaser's Address line 3.	Optional	Omit
<City>	AN	1	50	Cardholder's home city. If no delivery address is supplied it is also assumed to be the card purchaser's home city Mandatory if <addrL1> is present, and <postcode> is not present.	Conditional	Omit
<Postcode>	AN	1	10	Cardholder's home postcode. If no delivery address is supplied it is also assumed to be the card purchaser's home postcode Mandatory if <addrL1> is present, and <city> is not present. Post code supports following characters only. The Arabic numerals "0" to "9" Letters of the ISO basic Latin alphabet (A-Z, a-z) Spaces, hyphens(-).	Conditional	Omit
<ISOCountryCode>	AN	1	3	Cardholder's Country of Residence. This is represented as ISO numeric country code e.g. 826 for UK. Mandatory if <addrL1> is present.	Conditional	Omit
<Mobile>	AN	1	15	Cardholder's mobile phone number (including dialing code if applicable). See Processing of Telephone Numbers.	Optional	Omit
<PublicToken>	AN	1	9	The card's public token. The public token of the newly-created card will always be returned in the response.	Omit	Mandatory
<CardDesign>	AN	1	8	The Thredd Product ID. For details, check with your Implementation Manager.	Conditional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<ExternalRef>	AN	1	30	Enables you to add your own external customer reference.	Optional	Conditional
<DateOfBirth>	YYYY-MM-DD	10	10	Date of Birth.	Optional	Omit
<AccCode>	AN	1	6	Access code. If provided, must be 6 digits, leading zeroes are acceptable. Leave empty if not required. Can be used to set a code which is validated during activation e.g. via the IVR	Optional	Omit
<LocDate>	YYYY-MM-DD	10	10	The current date	Mandatory	Mandatory
<LocTime>	HHMMSS	6	6	The current time	Mandatory	Mandatory
<TerminalID>	AN	1	15	POS or other Terminal Identifier	Optional	Omit
<LoadValue>	D	1	20	Load value to put on card. If no load value is required, specify 0.	Mandatory	Mandatory
<CurCode>	AN	3	3	Currency of the amount to load as ISO Alpha code e.g. EUR This must match the card's currency or the action fails. Mandatory only when LoadValue is specified and not zero.	Conditional	Omit
<Reason>	AN	1	60	Reason for card status change. Overrides default of 'Card Activated' that is shown in card Processor	Optional	Omit
<ItemSrc>	N	1	5	Source field to define alternate fees. It is used in conjunction with existing fee server Item. See Item Source Types	Mandatory	Omit
<SysDate>	YYYY-MM-DD	10	10	The processing system date	Optional	Mandatory
<LoadFundsType>	AN	1	3	Payment method of funds for the load. See Load Fund Types	Optional	Omit
<LoadSrc>	AN	1	3	The source of the load request Load Sources.. If omitted, defaults to 14 "Unknown"	Optional	Omit
<LoadFee>	D	1	20	Fixed fee amount charged to the card purchaser for handling the card purchase and load. If no Load Fee is required, specify 0. The LoadFee does not affect the card balance. It is only	Mandatory	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				reported in the XML reports.		
<LoadedBy>	AN	1	30	User who loads amount to the card	Optional	Omit
<CreateImage>	N	1	1	If this is 1 then generate an image for the card. If it is 0 then do not create the image. Images are returned in the “Image” response parameter, encrypted by a pre-shared PGP encryption key.	Mandatory	Omit
<CreateType>	N	1	1	There are 4 possible values for the CreateType. Type Description 1 Create a virtual card for the customer with the given amount. 2 Create physical card with the given amount. The web service also creates a card file and send the card file to the manufactures for activate the card later. 3 Create a virtual card. Works in the same way as option 1. 4 Create a Master Virtual Card which is a deposit account that can be used to load other cards from. Note: CreateType 1 also allows a virtual card to be converted to a physical card.	Mandatory	Omit
<CustAccount>	AN	1	25	Client reference for the Card.	Optional	Omit
<ActivateNow>	N	1	1	If it is 1 then card is activated, otherwise not. When <Quantity> is greater than 1 then creation of <Quantity> numbers of identical cards triggers in a batch process that starts within minutes of the request. If <ActivateNow> is 1 in such requests then the issued tokens are sent to the customer with active flag ON otherwise not. This parameter only takes effect if the request is for a new card.	Mandatory	Omit
<SourceDesc>	AN	1	50	Load source description, normally the address of the web site or the POS machine.	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<StartDate>	AN	5	5	Physical start date printed on the card in format MM/YY.	Optional	Mandatory
<ExpDate>	YYYY-MM-DD	10	10	Card Physical Expiry date. If it is blank then update with the default expiry date otherwise update with the input value **Note:** The actual physical expiry is returned in MM/YY format.	Optional	Omit
<CVV>	AN	3	3	Card Verification Value, the 3-digit code printed on the back of the card.	Optional	Omit
<CardName>	AN	1	27	Card's Emboss name. This is an optional parameter. If present in the request then emboss name of card should be the given value. If it's not available and <Firstname> and <Lastname> are available then <Title> + <Firstname> + <Lastname> is the emboss name. If all the above parameters are unavailable in the request then default emboss name remains as the emboss name. If a blank emboss name is required, then pass a single space character. The list of allowed characters is: abcdefghijklmnopqrstuvwxyz ABCDEFGHIJKLMNOPQRSTUVWXYZ 0123456789 Some non-english characters i.e. "äöüÄÖÜ" "\" (backslash) "-" (hyphen) "^" (caret) "." (full stop) " " (space character) "'" (apostrophe)	Optional	Omit
<MaskedPAN>	AN	14	19	Card Number displayed as masked. i.e. 675926******1234. N.B. The full PAN can be returned if required, ask for details.	Optional	Omit
<LimitsGroup>	AN	1	10	Group code of the group limit. If this parameter is not supplied and this is a new card request then the default group for the cards product is used. If the default group is not desired, it can be removed by passing a	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				space character ‘ ‘		
<MCCGroup>	AN	1	10	Group code of the MCC group. If this parameter is not supplied and this is a new card request then the default group for the cards product is used. If the default group is not desired, it can be removed by passing a space character ‘ ‘. The MCC group allows the card to be linked to a list of Merchant Category Codes that the card is allowed to or conversely is NOT allowed to transact at. The MCCGroup is setup and configured via smart client.	Optional	Omit
<PERMSGroup>	AN	1	10	Group code of the Usage group. If this parameter is not supplied and this is a new card request then the default group for the cards product is used. If this parameter is not supplied and this is a new card request then the default group for the cards product is used. If the default group is not desired, it can be removed by passing a space character ‘ ‘	Optional	Omit
<FeeGroup>	AN	1	10	Group code of the Fee Group. If this parameter is not supplied and this is a new card request then the default group for the cards product is used. If the default group is not desired, it can be removed by passing a space character ‘ ‘	Optional	Omit
<ScheduledFeeGroup>	AN	1	10	Group code of the Scheduled Fee Group. If this parameter is not supplied and this is a new card request then the default group for the cards product is used. If the default group is not desired, it can be removed by passing a space character ‘ ‘	Optional	Omit
<WSFeeGroup>	AN	1	10	Group code of the Web Service Fee Group. If this parameter is not supplied and this is a new card request then the default group for the cards product is used. If the default group is not desired, it can be removed by passing a space character ‘ ‘. WSFeeGroup allows the card to be linked to a set of Web Service fees that are already set up on the system. These fees can be configured and altered by using the smart	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				client.		
<FXGroup>	AN	1	10	Group code of the FX Fee Group. If this parameter is not supplied and this is a new card request then the default group for the cards product is used. If the default group is not desired, it can be removed by passing a space character ‘ ‘	Optional	Omit
<ProductRef>	AN	1	50	Identifies Product. N.B. This is the Physical Card Design Reference as used by the card printer.	Optional	Omit
<CarrierType>	AN	1	30	Defines carrier product. N.B. This is the Carrier Product Design reference as used by the card printer.	Optional	Omit
<Fulfil1>	AN	1	50	Card’s FULFIL1. Can be used for transferring extra information to be printed on the Carrier	Optional	Omit
<Fulfil2>	AN	1	50	Card’s FULFIL2 Can be used for transferring extra information to be printed on the Carrier	Optional	Omit
<DelvMeth>	AN	1	1	The delivery method for the card: 0- Standard delivary 1- Registered mail 2- Direct delivery (Courier) Default value is 0 - Standard delivery.	Optional	Omit
<ThermalLine1>	AN	1	120	Can be used for transferring extra information to be printed on the card.	Optional	Omit
<ThermalLine2>	AN	1	70	Can be used for transferring extra information to be printed on the card.	Optional	Omit
<Lang>	AN	1	2	Language to be used for Card Mailers. Uses ISO 639-1 standard for two-character language codes e.g.: En - English Fr - French Not all languages are available with all manufacturers, it depends on card manufacturer support. Also used if bespoke SMS	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				templates are set up		
<EmbossLine4>	AN	1	27	Card's emboss_line_4.	Optional	Omit
<ImageID>	AN	1	16	Identifies the image file that will be printed on the face of the card.	Optional	Omit
<LogoFrontID>	AN	1	30	Identifies the logo file that will be printed on the face of the card.	Optional	Omit
<LogoBackID>	AN	1	30	Identifies the image file that will be printed on the back of the card, if supported.	Optional	Omit
<PrimaryToken>	AN	16	19	The primary card's public token. If it is blank then the newly created card is a primary card otherwise it is the secondary card in a primary/secondary relationship. Cannot be the token of a card that is already linked as a secondary card.	Optional	Omit
<DelvAddrL1>	AN	1	50	Delivery address line 1. Mandatory if 'Delivery Address' fields are being specified.	Optional	Omit
<DelvAddrL2>	AN	1	50	Delivery Address line 2	Optional	Omit
<DelvAddrL3>	AN	1	50	Delivery Address line 3	Optional	Omit
<DelvCity>	AN	1	50	Delivery City. Mandatory if <Delv_AddrL1> is present, and <Delv_PostCode> is not present.	Optional	Omit
<DelvPostcode>	AN	1	10	Delivery Post code. Mandatory if <Delv_AddrL1> is present, and <Delv_City> is not present. Delivery postcode supports following characters only. The Arabic numerals "0" to "9" Letters of the ISO basic Latin alphabet (A-Z, a-z) Spaces, hyphens(-).	Optional	Omit
<DelvCounty>	AN	1	20	Delivery County	Optional	Omit
<DelvCountry>	AN	1	3	Delivery Country code. ISO numeric code E.g. 826 for UK Mandatory if <Delv_AddrL1> is present.	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<DelvCode>	AN	1	12	The delivery code for the card: If specified, all cards with the same delivery code are to be sent together to the specified delivery address.	Optional	Omit
<SMSRequired>	AN	1	1	If it is 1 then sends an SMS to the customer with the cards CVV otherwise not. By default it is '1'. If set to 0, no message - SMS or Email - is sent to the cardholder.	Optional	Omit
<IsLive>	N	1	1	Indicates the card in active or not. 1/True - Active 0/False - Not Active	Optional	Mandatory
<CardManufacturer>	AN	1	50	The manufacturer to send the card generation request to. If omitted, the default for the Scheme will be used. Examples of valid choices are: TCT AllPay GNC Gemalto Nitecrest Exceet Idemia	Optional	Omit
<CoBrand>	AN	1	6	The CoBrand code for the card. If supplied it will replace PROGRAMID in the Balance XML.	Optional	Omit
<ExternalAuth>	AN	1	1	External Authorisation flag. Possible values are: 0 - Do not set External Authorisation on 1 - Set External Authorisation Empty value defaults to 0. Not applicable if using EHI	Optional	Omit
<LinkageGroup>	AN	1	10	Group code of the Card Linkage Group. If this parameter is not supplied and this is a new card request then the default group for the cards product will be used. If the default group is not desired, it can be removed by passing a space character ' '.	Optional	Omit
<VanityName>	AN	1	32	Vanity Name. Alternative form of title e.g. "Company Director"	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<PBlock>	AN	4	12	Initial value of PIN	Optional	Omit
<PINMailer>	AN	1	1	PIN Mailer: 0 -> Do not send PIN Mailer (default) 1 -> Do send PIN Mailer If 1, Thredd sends instructions in the file to the manufacturer for them to create a PIN Mailer letter.	Optional	Omit
<Email>	AN	1	50	E-mail address of the cardholder	Optional	Omit
<MailOrSMS>	AN	1	1	Flag to choose the alert type. 0 = send alert SMS to the cardholder mobile. 1 = send e-mail alert to the cardholder mail address 2 = send SMS and e-mail. Default value is '0'.	Optional	Omit
<AuthCalendarGroup>	AN	1	10	Group code of the Card Auth Calender Group. If this parameter is not supplied and this is a new card request then the default group for the cards product will be used. If the default group is not desired, it can be removed by passing a space character ' '	Optional	Omit
<Quantity>	N	1	5	If specified, will trigger the creation of <Quantity> numbers of identical cards in a batch process that starts within minutes of the request. The issued tokens are sent to the customer in an xml file over SFTP. If the cards are physical, a manufacturer file is also sent to the printer.	Optional	Omit
<LoadToken>	N	1	9	If specified, LoadToken is the 9-digit Public Token of the (usually an MVC) card that the initial Load Amount is to be taken from. The load will show as an MVC Balance Transfer (Unload + Load) in smart client.	Optional	Omit
<RequiredBankingFeatures>	BankingFeatures			The required banking features that are required. You must pass in, *BankinInEnabled*, *BankingOutEnabled*, *DirectDebitInEnabled*, *DirectDebitOutEnabled*, *SEPAInEnabled*, *SEPAOutEnabled* and *CardEnabled*. Other features	Mandatory	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				are optional. See BankingFeatures.		
<IsActive>	B			Setting this flag to true will create a physical card from the virtual card and the card will be instantly active allowing payments out via the banking functionality.	Mandatory	Omit
<CustomerID>	AN			The ID of the customer that this account is to be associated with. This can be obtained by calling Ws_Banking_CreateCustomer.	Optional	Omit
<PaymentTokenUsageGroup>	AN	1	10	Payment token usage group code. **Note**: This is a numeric value, only digits 0-9 are valid. Leave empty if no group required.	Optional	Omit
<IsSingleUse>	AN	1	5	Enables you to specify whether the card is single use only. Boolean values of either 1, 0 or *true*, *false* are accepted. (1= true, 0 = false). If not specified, then the default value from the card Product is used.	Optional	Omit
<IsNonReloadable>	AN	1	5	Enables you to specify whether the card is non-reloadable. Boolean values of either 1, 0 or *true*, *false* are accepted. (1= true, 0 = false). If not specified, then the default value from the card Product is used.	Optional	Omit
<Url>	AN	1	100	This value is included in the Thredd Card Generation file, in the <QRCode> field. For example: *https://www.your-e-card.com/balance/2909680989632389* For details, see the Card Generation Interface Specifications.	Optional	Omit
<OOBAppURL>	AN	1	2048	Out Of Band app URL used in a 3D Secure authentication session. The Card Scheme (e.g., Mastercard) requires issuers using Out of Band/Biometric authentication to support the automatic	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				redirection of cardholders from the merchant app to the authenticator app. OOBAppURL is the URL of this authenticator app.		
<SortCode>	N	6	6	The sort code from the associated product that was supplied in the request.	Omit	Optional
<AccountNumber>	N	8	8	A unique account number is returned in the response.	Omit	Optional
<AccountName>	AN	0	50	Account name.	Omit	Optional
<ErrorText>	AN			Readable text of the error. Should be read in conjunction with the ActionCode	Omit	Optional
<ActionCode>	N	3	3	The action code for the response. See Action Codes.	Omit	Mandatory
<Messages>	List of BankingError			If the ActionCode returned is 576, then full details of any errors can be found here. See Banking Error.	Omit	Mandatory

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_CreateCard_V2>
         <hyp:request>
            <hyp:WSID>2021123456789</hyp:WSID>
            <hyp:IssCode>PMT</hyp:IssCode>
            <hyp:TxnCode>?</hyp:TxnCode>
            <hyp:clientCode>?</hyp:clientCode>
            <hyp:Title>?</hyp:Title>
            <hyp:LastName>?</hyp:LastName>
            <hyp:MiddleName>?</hyp:MiddleName>
            <hyp:FirstName>?</hyp:FirstName>
            <hyp:Address1>?</hyp:Address1>
            <hyp:Address2>?</hyp:Address2>
            <hyp:Address3>?</hyp:Address3>
            <hyp:City>?</hyp:City>
            <hyp:Postcode>?</hyp:Postcode>
            <hyp:ISOCountryCode>?</hyp:ISOCountryCode>
            <hyp:Mobile>?</hyp:Mobile>
            <hyp:CardDesign>?</hyp:CardDesign>
            <hyp:ExternalRef>?</hyp:ExternalRef>
            <hyp:DateOfBirth>?</hyp:DateOfBirth>
            <hyp:AccCode>?</hyp:AccCode>
            <hyp:LocDate>?</hyp:LocDate>
            <hyp:LocTime>?</hyp:LocTime>
```

```
            <hyp:TerminalID>?</hyp:TerminalID>
            <hyp:LoadValue>?</hyp:LoadValue>
            <hyp:CurCode>?</hyp:CurCode>
            <hyp:Reason>?</hyp:Reason>
            <hyp:ItemSrc>?</hyp:ItemSrc>
            <hyp:SysDate>?</hyp:SysDate>
            <hyp:LoadFundsType>?</hyp:LoadFundsType>
            <hyp:LoadSrc>?</hyp:LoadSrc>
            <hyp:LoadFee>?</hyp:LoadFee>
            <hyp:LoadedBy>?</hyp:LoadedBy>
            <hyp:CreateImage>?</hyp:CreateImage>
            <hyp:CreateType>?</hyp:CreateType>
            <hyp:CustAccount>?</hyp:CustAccount>
            <hyp:ActivateNow>?</hyp:ActivateNow>
            <hyp:SourceDesc>?</hyp:SourceDesc>
            <hyp:StartDate>?</hyp:StartDate>
            <hyp:ExpDate>?</hyp:ExpDate>
            <hyp:CVV>?</hyp:CVV>
            <hyp:CardName>?</hyp:CardName>
            <hyp:MaskedPAN>?</hyp:MaskedPAN>
            <hyp:LimitsGroup>PMT-VL-002</hyp:LimitsGroup>
            <hyp:MCCGroup></hyp:MCCGroup>
            <hyp:PERMSGroup>PMT-CU-002</hyp:PERMSGroup>
            <hyp:FeeGroup></hyp:FeeGroup>
            <hyp:ScheduledFeeGroup></hyp:ScheduledFeeGroup>
            <hyp:WSFeeGroup>?</hyp:WSFeeGroup>
            <hyp:ProductRef>?</hyp:ProductRef>
            <hyp:CarrierType>?</hyp:CarrierType>
            <hyp:Fulfil1>?</hyp:Fulfil1>
            <hyp:Fulfil2>?</hyp:Fulfil2>
            <hyp:DelvMeth>?</hyp:DelvMeth>
            <hyp:ThermalLine1>?</hyp:ThermalLine1>
            <hyp:ThermalLine2>?</hyp:ThermalLine2>
            <hyp:Lang>?</hyp:Lang>
            <hyp:EmbossLine4>?</hyp:EmbossLine4>
            <hyp:ImageID>?</hyp:ImageID>
            <hyp:LogoFrontID>?</hyp:LogoFrontID>
            <hyp:LogoBackID>?</hyp:LogoBackID>
            <hyp:PrimaryToken>?</hyp:PrimaryToken>
            <hyp:DelvAddrL1>?</hyp:DelvAddrL1>
            <hyp:DelvAddrL2>?</hyp:DelvAddrL2>
            <hyp:DelvAddrL3>?</hyp:DelvAddrL3>
            <hyp:DelvCity>?</hyp:DelvCity>
            <hyp:DelvPostcode>?</hyp:DelvPostcode>
            <hyp:DelvCounty>?</hyp:DelvCounty>
            <hyp:DelvCountry>?</hyp:DelvCountry>
            <hyp:DelvCode>?</hyp:DelvCode>
            <hyp:SMSRequired>?</hyp:SMSRequired>
            <hyp:IsLive>?</hyp:IsLive>
            <hyp:CardManufacturer>?</hyp:CardManufacturer>
            <hyp:CoBrand>?</hyp:CoBrand>
            <hyp:ExternalAuth>?</hyp:ExternalAuth>
            <hyp:LinkageGroup>?</hyp:LinkageGroup>
            <hyp:VanityName>?</hyp:VanityName>
            <hyp:PBlock>?</hyp:PBlock>
            <hyp:PINMailer>?</hyp:PINMailer>
            <hyp:FXGroup>?</hyp:FXGroup>
            <hyp:Email>?</hyp:Email>
            <hyp:MailOrSMS>?</hyp:MailOrSMS>
            <hyp:Quantity>?</hyp:Quantity>
            <hyp:AuthCalendarGroup>?</hyp:AuthCalendarGroup>
            <hyp:LoadToken>?</hyp:LoadToken>
            <hyp:RequiredBankingFeatures>
               <hyp:ExistingToken>?</hyp:ExistingToken>
               <hyp:BankingInEnabled>?</hyp:BankingInEnabled>
               <hyp:BankingOutEnabled>?</hyp:BankingOutEnabled>
               <hyp:DirectDebitInEnabled>?</hyp:DirectDebitInEnabled>
               <hyp:DirectDebitOutEnabled>?</hyp:DirectDebitOutEnabled>
               <hyp:CardEnabled>?</hyp:CardEnabled>
               <hyp:Status>?</hyp:Status>
               <hyp:CompanyName>?</hyp:CompanyName>
```

```
            <hyp:AccountName>?</hyp:AccountName>
         </hyp:RequiredBankingFeatures>
         <hyp:IsActive>?</hyp:IsActive>
         <hyp:CustomerID>?</hyp:CustomerID>
         <hyp:PaymentTokenUsageGroup>?</hyp:PaymentTokenUsageGroup>
         <hyp:IsSingleUse>false</hyp:IsSingleUse>
         <hyp:IsNonReloadable>false</hyp:IsNonReloadable>
         <hyp:Url>https://www.your-e-card.com/balance/7109680989634104</hyp:Url>
         <hyp:OOBAppURL>https://login.app.bank1.com/</hyp:OOBAppURL>
      </hyp:request>
   </hyp:Ws_CreateCard_V2>
</soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_CreateCard_V2Response xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_CreateCard_V2Result>
            <WSID>87576567675</WSID>
            <IssCode>PMT</IssCode>
            <TxnCode>10</TxnCode>
            <PublicToken>123456789</PublicToken>
            <ExternalRef/>
            <LocDate></LocDate>
            <LocTime></LocTime>
            <ItemID></ItemID>
            <ClientCode></ClientCode>
            <SysDate></SysDate>
            <ActionCode></ActionCode>
            <LoadValue></LoadValue>
            <IsLive></IsLive>
            <SortCode></SortCode>
            <AccountNumber></AccountNumber>
            <AccountName></AccountName>
            <ErrorText></ErrorText>
         </Ws_CreateCard_V2Result>
      </Ws_CreateCard_V2Response>
   </soap:Body>
</soap:Envelope>
```

Register a Customer for Banking Actions

API: Ws_Banking_RegisterNotification

For Modulr banking integrations, once you have called Ws_CreateCard_V2 to create the bank card, you need to make additional calls to enable payment notifications for payments processed on and off the card. There are a number of options, but as a minimum, you should enable both *PAYIN* and *PAYOUT* notifications (using two separate calls).

Note: ALL notifications work at a CUSTOMER level, so if a customer has more than one account, the notification applies to all of the customer's accounts.

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every request. For details, see the FAQs.	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<CardDesign>	AN	1	8	The Thredd Product ID. For details, check with your Implementation Manager.	Mandatory	Omit
<CustomerID>	AN	10	10	Unique Modulr identifier for the customer (returned when you used the Ws_Banking_CreateCustomer API to Register a Customer for Banking.	Mandatory	Omit
<channel>	Enum (see desc)			Specify how you want to receive notifications. Options are: *WEBHOOK* or *EMAIL*. Should be set in conjunction with <Type>.	Mandatory	Omit
<daysToRun>	A			Days on which to send the notification: *MONDAY*, *TUESDAY*, *WEDNESDAY*, *THURSDAY*, *FRIDAY*, *SATURDAY* or *SUNDAY*. You can specify multiple days.	Optional	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				Note: applies only to the *EMAIL* notifications channel of type *BALANCE*.		
<threshold>	N			Amount threshold which triggers the notification. This attribute only applies to *EMAIL* notifications channel, of type *PAYIN* or *PAYOUT*. Thredd recommends you leave bank.	Optional	Omit
<timesToRun>	A			Times of the day when to trigger the notification. Takes values *AM* and *PM*. This attribute applies only to the *EMAIL* notifications channel, of type *BALANCE*.	Optional	Omit
<destinations>	AN			A list of email addresses where notifications are sent. This is not required for the *WEBHOOK* channel.	Optional	Omit
<type>	Enum (see desc)			Takes values: ACCOUNT_ STATEMENT, DDMANDATE, DD_INCOMING_ DEBIT, BALANCE, BALANCE_HIGH, BALANCE_LOW, PAYOUT and PAYIN. For PAYOUT and PAYIN types, <Channel> should be set to *WEBHOOK*. For all others types, set the channel to *EMAIL* and enter the required email in <Destinations>.	Mandatory	Omit
<status>	Enum (see desc)			Notification is set to ACTIVE by default.	Mandatory	Omit

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				Options are: ACTIVE = set notification status to active INACTIVE = set notification status to inactive		
<ActionCode>	N	3	3	The action code for the response. See Action Codes.	Omit	Mandatory
<Messages>	A list of BankingError			If the action code is 576, displays details of the error message. See BankingError.	Omit	Optional

Request

```
<soap:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:soap="h-
ttp://schemas.xmlsoap.org/soap/envelope/">
  <soap:Header>
    <AuthSoapHeader xmlns="http://www.globalprocessing.ae/HyperionWeb">
      <strUserName>******</strUserName>
      <strPassword>******</strPassword>
    </AuthSoapHeader>
  </soap:Header>
  <soap:Body>
    <Ws_Banking_RegisterNotification xmlns="http://www.globalprocessing.ae/HyperionWeb">
      <request>
        <WSID>2021123456789</WSID>
        <IssCode>PMT</IssCode>
        <CardDesign>int</CardDesign>
        <CustomerID>string</CustomerID>
        <channel>WEBHOOK or EMAIL</channel>
          <daysToRun>
            <string>MONDAY</string>
            <string>WEDNESDAY</string>
          </daysToRun>
          <threshold>double</threshold>
          <timesToRun>
            <string>AM</string>
            <string>PM</string>
          </timesToRun>
        <destinations>
          <string>string</string>
          <string>string</string>
        </destinations>
        <type>ACCOUNT_STATEMENT or DDMANDATE or DD_INCOMING_DEBIT or BALANCE or BALANCE_HIGH or BALANCE_LOW or PAYOUT or
PAYIN</type>
        <status>CREATE or INACTIVE or ACTIVE</status>
      </request>
    </Ws_Banking_RegisterNotification>
  </soap:Body>
</soap:Envelope>
```

Response

```
<soap:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:soap="h-
ttp://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <Ws_Banking_RegisterNotificationResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
```

```
      <Ws_Banking_RegisterNotificationResult>
        <WSID>2021123456789</WSID>
        <IssCode>PMT</IssCode>
        <ActionCode>string</ActionCode>
        <Messages>
            <BankingError>
            <field>string</field>
            <code>string</code>
            <message>string</message>
            <error>string</error>
          </BankingError>
        </Messages>
      </Ws_Banking_RegisterNotificationResult>
    </Ws_Banking_RegisterNotificationResponse>
  </soap:Body>
</soap:Envelope>
```

Make External Payment

API: Ws_Banking_TransferFunds

This web service makes an external payment via the faster payment banking system where a card has an associated UK Bank Account (provided through programmes using Agency Banking). Note that the money is queued and has not necessarily entered the banking world.

Note:

- The account is first checked to ensure that banking out is enabled.
- The account is then checked against an issuer defined Deny list. This makes two checks: the source account is not Deny-listed; the destination account is not Deny-listed.
- The final checks are the standard velocity/balance checks.

Record Request Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every request. For details, see the FAQs.	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd. Mandatory in the request. If only <IssCode> is present in the request then this method returns the pending fee details of all cards that belong to the given program manager.	Mandatory	Mandatory
<PublicToken>	N	9	9	The 9 digit public token associated with the account.	Mandatory	Mandatory
<Beneficiary>	Beneficiary			Details of the account where the money is going to. See Beneficiary.	Mandatory	Mandatory
<SEPABeneficiaryAddress>	SEPABeneficiaryAddress			Details of the address of the beneficiary. See SEPABeneficiaryAddress.	Optional	Optional
<Reference>	AN			A reference for the payment. Cannot contain the following characters: (;),(->), (CR- Carriage Return), (LF - Line Feed).	Optional	Optional
<AmountOfPayment>	N			The amount of the payment.	Mandatory	Mandatory
<AuthorisedBy>	N			Who initiated the payment (used for	Optional	Optional

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				display in Smart Client).		
<Currency>	N	3	3	The 3 digit ISO currency code. Currently defaults to GBP.	Optional	Optional
<PaymentMethod>	ENUM_ PaymentMethod			How the payment is being made. Set this to *FasterPaymentOut* or *PeerToPeerOut*. See ENUM_ PaymentMethod.	Mandatory	Mandatory
<Direction>	ENUM_ PaymentDirection			The direction of the payment. This must be set to *Outbound*.	Mandatory	Mandatory
<UseAsDirectDebit>	AN			When set to *true*, the transfer will be processed as a direct debit. If not provided, the default value is *false*. Boolean values of either 1, 0 or *true*, *false* are accepted. (1 = true, 0 = false).	Optional	Omit

Response

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every request. For details, see the FAQs.	Mandatory	Mandatory
<Response>	ENUM_ TransferFundsResult			The response from the call. See ENUM_ TransferFundsResult.	Mandatory	
<TransactionID>	N			The unique transaction ID for the transaction, generated by Thredd.		Optional
<ErrorText>	AN			Human readable text of the error that occurred. Should be read in conjunction with the <ActionCode>.		Optional

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<ActionCode>	N	3	3	The action code for the response. See Action Codes.		Mandatory
<RecipientActionCode>	N	3	3	The action code of attempting to apply the transfer to the Beneficiary account (See Beneficiary). If the action code is 552 a manual balance adjustment may be required. Contact your Account Manager for details.		
<RecipientTransactionID>	N			The unique Thredd transaction ID from applying the transaction to the recipient account.		
<BankTransactionId>	N			The bank transaction ID from applying the transaction to the bank transaction table. (For Thredd internal use only)		

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
          <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_Banking_TransferFunds>
         <hyp:request>
            <hyp:WSID>76565675</hyp:WSID>
            <hyp:IssCode>PMT</hyp:IssCode>
            <hyp:PublicToken>123456789</hyp:PublicToken>
            <hyp:Beneficiary>
               <hyp:AccountNumber>98765432</hyp:AccountNumber>
               <hyp:SortCode>333333</hyp:SortCode>
               <hyp:AccountName>S Wilson</hyp:AccountName>
            </hyp:Beneficiary>
           <SEPABeneficiaryAddress>          ;
                <AddressLine1>string</AddressLine1>
                <AddressLine2>string</AddressLine2>
                <PostTown>string</PostTown>
                <PostCode>string</PostCode>
                <Country>string</Country>
           </SEPABeneficiaryAddress>
            <hyp:Reference>test load</hyp:Reference>
            <hyp:AmountOfPayment>7.00</hyp:AmountOfPayment>
```

```
            <hyp:AuthorisedBy>S Wilson</hyp:AuthorisedBy>
<hyp:Currency>?</hyp:Currency>
            <hyp:PaymentMethod>?</hyp:PaymentMethod>
            <hyp:Direction>?</hyp:Direction>
            <hyp:UseAsDirectDebit>false</hyp:UseAsDirectDebit>
         </hyp:request>
      </hyp:Ws_Banking_TransferFunds>
   </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_Banking_TransferFundsResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_Banking_TransferFundsResult>
            <WSID>76565675</WSID>
            <Response>Success</Response>
            <TransactionID>60199453</TransactionID>
            <ErrorText></ErrorText>
            <ActionCode>000</ActionCode>
            <RecipientActionCode>000</ RecipientActionCode >
            <RecipientTranactionID>6446546565654</RecipientTranactionID>
            <BankTransactionID>5478934</BankTranactionID>
         </Ws_Banking_TransferFundsResult>
      </Ws_Banking_TransferFundsResponse>
   </soap:Body>
</soap:Envelope>
```

Retrieve Direct Debit Mandates

API: Ws_Banking_DD_GetMandate

This Web service retrieves all mandates for a given token.

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every request. For details, see the FAQs.	Optional	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Optional	Omit
<CardDesign>	AN	1	8	The Thredd Product ID. For details, check with your Implementation Manager.	Mandatory	Omit
<Token>	N	1	9	The 9 digit public token associated with the account.	Mandatory	Omit
<DD_Mandates>	A list of DD_ Mandates			A list of mandates. See DD_Mandates.	Omit	Mandatory
<ActionCode>	N	3	3	The action code for the response. See Action Codes. If the action code is 576, full details can be found in <Messages>.	Omit	Mandatory
<Messages>	A list of BankingError			Displays details of the error message. See BankingError.	Omit	Optional
<ErrorText>	AN			Human readable text of the error that occurred.	Omit	Optional

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <!--Optional:-->
         <hyp:strUserName>OnePayTest1</hyp:strUserName>
         <!--Optional:-->
```

```
         <hyp:strPassword>**********</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:WS_Banking_DD_GetMandates>
         <hyp:request>
            <!--Optional:-->
            <hyp:WSID>${=(long)(Math.random()*Long.MAX_VALUE)}</hyp:WSID>
            <!--Optional:-->
            <hyp:IssCode>ONE</hyp:IssCode>
            <hyp:CardDesign>2018</hyp:CardDesign>
            <hyp:Token>106239304</hyp:Token>
         </hyp:request>
      </hyp:WS_Banking_DD_GetMandates>
   </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <WS_Banking_DD_GetMandatesResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <WS_Banking_DD_GetMandatesResult>
            <WSID>3371287256120270848</WSID>
            <ActionCode>000</ActionCode>
            <DD_Mandates>
               <DD_Mandate>
                  <MandateId>M101BZWED</MandateId>
                  <MerchantName>M101BZWED</MerchantName>
                  <LastScheduledAmount>5.5550</LastScheduledAmount>
                  <MandateStatus>EXPIRE</MandateStatus>
                  <MandateCreatedDate>17/03/2022 10:11:28</MandateCreatedDate>
               </DD_Mandate>
               <DD_Mandate>
                  <MandateId>M101BZWEF</MandateId>
                  <MerchantName>M101BZWED</MerchantName>
                  <LastScheduledAmount>0.0000</LastScheduledAmount>
                  <MandateStatus>CANCEL</MandateStatus>
                  <MandateCreatedDate>17/03/2022 10:17:08</MandateCreatedDate>
               </DD_Mandate>
            </DD_Mandates>
            <Messages/>
         </WS_Banking_DD_GetMandatesResult>
      </WS_Banking_DD_GetMandatesResponse>
   </soap:Body>
</soap:Envelope>
```

Cancel Direct Bank Mandate

API: Ws_Banking_DD_CancelMandate

This Web service cancels a specific mandate for a mandateId and token.

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every request. For details, see the FAQs.	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<CardDesign>	AN	1	8	The Thredd Product ID. For details, check with your Implementation Manager.	Mandatory	Omit
<Token>	N	1	9	The 9 digit public token associated with the account.	Mandatory	Omit
<MandateId>	AN			The mandateId related to the direct debit mandate.	Mandatory	Omit
<MerchantNumber>	AN			The merchant number.	Optional	Omit
<CancellationCode>	AN	ENUM		The cancellation code for the direct debit mandate.	Mandatory	Omit
<ActionCode>	N	3	3	The action code for the response. See Action Codes.	Omit	Mandatory
<Messages>	A list of BankingError			Displays details of the error message. See BankingError.	Omit	Optional

Request

```
<soap:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:soap="h-
ttp://schemas.xmlsoap.org/soap/envelope/">
<soap:Header>
     <AuthSoapHeader xmlns="http://www.globalprocessing.ae/HyperionWeb">
          <strUserName>string</strUserName>
          <strPassword>string</strPassword>
     </AuthSoapHeader>
```

```
</soap:Header>
<soap:Body>
       <Ws_Banking_DD_CancelMandate xmlns="http://www.globalprocessing.ae/HyperionWeb">
              <request>
                     <WSID>string</WSID>
                     <IssCode>string</IssCode>
                     <CardDesign>string</CardDesign>
                     <Token>PUBTOKEN/PANPUBT</Token>
                     <MandateId>string</MandateId>
                     <MerchantNumber>string</MerchantNumber>
                     <CancellationCode>string</CancellationCode>
            </request>
         </Ws_Banking_DD_CancelMandate>
</soap:Body>
</soap:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
<soap:Body>
<Ws_Banking_DD_CancelMandateResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_Banking_DD_CancelMandateResult>
                <WSID>string</WSID>
                <ActionCode>string</ActionCode>
                <Messages>
                      <BankingError>
                            <field>string</field>
                            <code>string</code>
                            <message>string</message>
                            <error>string</error>
                       </BankingError>
                <Messages>
          </Ws_Banking_DD_CancelMandateResult>
</Ws_Banking_DD_CancelMandateResponse>
</soap:Body>
</soap:Envelope>
```

Bank Account Change

API: Ws_Banking_ChangeAccountBankingFeaturesStatus

Note: This web service is for legacy use only. For the latest Agency Banking web services via Modulr, see Banking Services Overview.

This web service changes the features of the banking enabled card and allows you to switch functionality on or off.

Request Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every request. For details, see the FAQs.	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd. Mandatory in the request. If only <IssCode> is present in the request then this method returns the pending fee details of all cards that belong to the given program manager.	Mandatory	Mandatory
<PublicToken>	N	9	9	The 9 digit public token associated with the account.	Mandatory	Mandatory
<UpdateSubAccountsToSame>	B			Setting this flag to true updates all associated accounts (sub-accounts) to the same values. If missed out, the default value is true.	Optional	Optional
<BankingFeatures>	BankingFeaturesType			See BankingFeaturesType.	Mandatory	Mandatory

Response Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every request. For details, see the FAQs.	Mandatory	Mandatory
<ActionCode>	A	3	3	The action code for the response. See Action Codes.	Mandatory	Mandatory

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<ErrorText>	AN			Human readable text of the error that occurred. Should be read in conjunction with the <ActionCode>.		Optional
<Response>	ENUM_ ChangeAccountStatus			This indicates if the call was successful or not and the reason why. See ENUM_ ChangeAccountStatus.		Mandatory
<Accounts>	ChangedBankingFeatures			A list of changed accounts, detailing their current status. See ChangedBankingFeatures.		Optional

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_Banking_ChangeAccountBankingFeaturesStatus>
         <hyp:request>
            <hyp:WSID>765776764</hyp:WSID>
            <hyp:IssCode>PMT</hyp:IssCode>
            <hyp:PublicToken>123456789</hyp:PublicToken>
            <hyp:UpdateSubAccountsToSame>false</hyp:UpdateSubAccountsToSame>
            <hyp:BankingFeatures>
               <hyp:BankingIn>DisableBankingIn</hyp:BankingIn>
               <hyp:BankingOut>DisableBankingOut</hyp:BankingOut>
               <hyp:DirectDebitIn>DisableDirectDebitIn</hyp:DirectDebitIn>
               <hyp:DirectDebitOut>DisableDirectDebitOut</hyp:DirectDebitOut>
            </hyp:BankingFeatures>
         </hyp:request>
      </hyp:Ws_Banking_ChangeAccountBankingFeaturesStatus>
   </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_Banking_ChangeAccountBankingFeaturesStatusResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_Banking_ChangeAccountBankingFeaturesStatusResult>
            <WSID>765776764</WSID>
            <ErrorText></ErrorText>
            <ActionCode>000</ActionCode>
            <Response>Success</Response>
            <Accounts>
               <ChangedBankingFeatures>
                  <PublicToken>123456789</PublicToken>
                  <BankingFeatures>
                     <BankingIn>Disabled</BankingIn>
                     <BankingOut>Disabled</BankingOut>
                     <DirectDebitIn>Disabled</DirectDebitIn>
                     <DirectDebitOut>Disabled</DirectDebitOut>
```

```
                    <CardEnabled>Enabled</CardEnabled>
                 </BankingFeatures>
                 <UpdateSuccess>DirectDebitNotAllowed</UpdateSuccess>
              </ChangedBankingFeatures>
           </Accounts>
        </Ws_Banking_ChangeAccountBankingFeaturesStatusResult>
     </Ws_Banking_ChangeAccountBankingFeaturesStatusResponse>
  </soap:Body>
</soap:Envelope>
```

Bank Account Check Number

API: Ws_Banking_AccountModulusCheck

Note: This web service is for legacy use only. For the latest Agency Banking web services via Modulr, see Banking Services Overview.

This web service validates that a sort code and account number (UK Bank Accounts provided through programmes using Thredd Bottomline Agency Banking) are valid.

Note: This uses a modulus check to confirm that the account number *could* be a valid account number.

To use this web service call, there needs to be a financial agreement in place with Bottomline. For more informatiom, check with your Account Manager.

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every request. For details, see the FAQs.	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd. Mandatory in the request. If only <IssCode> is present in the request then this method returns the pending fee details of all cards that belong to the given program manager.	Mandatory	Mandatory
<SortCode>	N	6	6	The sort code of the account that needs checking. **Note**: for accurate results, the sort code should have been registered with the Vocalink Account Modulus, otherwise all values return true.	Mandatory	Mandatory
<AccountNumber>	N	8	8	The account number.	Mandatory	Mandatory

Reponse Description

There is no description for the response. This is a pass through from another service. You should check the <ActionCode> tag in the response to ensure the request was a successful and the <Valid> flag to determine the action.

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
```

```
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_Banking_AccountModulusCheck>
         <hyp:request>
            <hyp:WSID>8976875765765</hyp:WSID>
            <hyp:IssCode>PMT</hyp:IssCode>
            <hyp:SortCode>123456</hyp:SortCode>
            <hyp:AccountNumber>98765432</hyp:AccountNumber>
         </hyp:request>
      </hyp:Ws_Banking_AccountModulusCheck>
   </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_Banking_AccountModulusCheckResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_Banking_AccountModulusCheckResult>
            <WSID>8976875765765</WSID>
            <ActionCode>000</ActionCode>
            <VSeriesResponse>
               <AccountDetailsInput>
                  <SortCode></SortCode>
                  <AccountNumber></AccountNumber>
                  <BuildingSocietyRollNumber/>
               </AccountDetailsInput>
               <AccountDetailsOutput>
                  <SortCode></SortCode>
                  <AccountNumber></AccountNumber>
                  <BuildingSocietyRollNumber/>
               </AccountDetailsOutput>
               <AccountIBAN></AccountIBAN>
               <AccountTranscribed></AccountTranscribed>
               <UkBankBranch>
                  <TransactionInfo>
                     <BacsCredits></BacsCredits>
                     <BacsDebits></BacsDebits>
                     <FasterPaymentsService></FasterPaymentsService>
                     <ChapsSterling></ChapsSterling>
                     <DirectDebitInstructions></DirectDebitInstructions>
                     <UnpaidChequeClaims></UnpaidChequeClaims>
                     <DividendInterest></DividendInterest>
                     <BuildingSocietyInterest></BuildingSocietyInterest>
                  </TransactionInfo>
               </UkBankBranch>
               <RequiresBuildingSocietyRollNumber></RequiresBuildingSocietyRollNumber>
               <BuildingSocietyRollNumberTranscribed></BuildingSocietyRollNumberTranscribed>
               <PublicInvalidIssue>0</PublicInvalidIssue>
               <Valid></Valid>
               <InvalidReason/>
               <InvalidParameter/>
            </VSeriesResponse>
         </Ws_Banking_AccountModulusCheckResult>
      </Ws_Banking_AccountModulusCheckResponse>
   </soap:Body>
</soap:Envelope>
```

Return Sort Code and Account

API: Ws_Banking_ReturnBankDetailsFromToken

Note: This web service is for legacy use only. For the latest Agency Banking web services via Modulr, see Banking Services Overview.

This web service returns the sort code and account number (for UK bank accounts provided through programmes using Agency Banking) from a token.

Record Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every request. For details, see the FAQs.	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd. Mandatory in the request. If only <IssCode> is present in the request, then this method returns the pending fee details of all cards that belong to the given program manager.	Mandatory	Mandatory
<PublicToken>	N	9	9	The 9 digit public token associated with the account.	Mandatory	Mandatory
<SortCode>	N	6	6	The sort code associated with the token.	Omit	Mandatory
<AccountNumber>	N	8	8	The account number associated with the token.	Omit	Mandatory
<ActionCode>	N	3	3	The action code for the response. See Action Codes.	Omit	Mandatory
<ErrorText>	AN			Human readable text of the error that occurred. Should be read in conjunction with the <ActionCode>.	Omit	Optional

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
```

```
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_Banking_ReturnBankDetailsFromToken>
         <hyp:request>
            <hyp:WSID>20160415093831</hyp:WSID>
            <hyp:IssCode>PMT</hyp:IssCode>
            <hyp:PublicToken>123456789</hyp:PublicToken>
         </hyp:request>
      </hyp:Ws_Banking_ReturnBankDetailsFromToken>
   </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_Banking_ReturnBankDetailsFromTokenResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_Banking_ReturnBankDetailsFromTokenResult>
            <WSID>20160415093831</WSID>
            <PublicToken>891614123</PublicToken>
            <SortCode>666666</SortCode>
            <AccountNumber>00000186</AccountNumber>
             <ErrorText></ErrorText>
            <ActionCode>000</ActionCode>
         </Ws_Banking_ReturnBankDetailsFromTokenResult>
      </Ws_Banking_ReturnBankDetailsFromTokenResponse>
   </soap:Body>
</soap:Envelope>
```

Get Direct Debits

API: Ws_Banking_GetDirectDebitInstructionsBankingEnabledCard

Note: This web service is for legacy use only. For the latest Agency Banking web services via Modulr, see Banking Services Overview.

This web service returns a list of all direct debits for a given token (with or without sub-accounts).

Record Request Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every request. For details, see the FAQs.	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Conditional	Mandatory
<CardDesign>	AN	1	8	The identifier of the card product, or Product ID, within Thredd, for which you want to retrieve a list of direct debits.	Conditional	Omit
<PublicToken>	N	9	9	The 9 digit public token associated with the account from which to retrieve a list of direct debits.	Mandatory	Mandatory
<IncludeSubAccounts>	N	1	1	Whether all sub-accounts are included. 0 = No; 1 = Yes. Default is 1.	Optional	Optional
<CreatedFrom>	DateTime			The date from which the direct debits are included. In *YYYY-MM-DD* format.	Optional	Optional
DirectDebitStatus	ENUM_ DirectDebitStatus			The status of the direct debits to be included. See ENUM_ DirectDebitStatus.	Optional	Optional
<ActionCode>	N	3	3	The action code for the response. See Action Codes.	Omit	Mandatory
<ErrorText>	AN			Human readable text of the error that occurred.	Omit	Optional

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				Should be read in conjunction with the <ActionCode>.		
<DirectDebit>	List (BLDirectDebit)			A list of direct debits. See BLDirectDebit.	Omit	Mandatory

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_Banking_GetDirectDebitInstructionsBankingEnabledCard>
         <hyp:request>
            <hyp:WSID>2021123456789</hyp:WSID>
            <hyp:IssCode>PMT</hyp:IssCode>
            <hyp:CardDesign>?</hyp:CardDesign>
            <hyp:PublicToken>123456789</hyp:PublicToken>
            <hyp:IncludeSubAccounts>?</hyp:IncludeSubAccounts>
            <hyp:CreatedFrom>?</hyp:CreatedFrom>
            <hyp:DirectDebitStatus>?</hyp:DirectDebitStatus>
         </hyp:request>
      </hyp:Ws_Banking_GetDirectDebitInstructionsBankingEnabledCard>
   </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_Banking_GetDirectDebitInstructionsBankingEnabledCardResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_Banking_GetDirectDebitInstructionsBankingEnabledCardResult>
            <WSID>2021123456789</WSID>
            <ActionCode></ActionCode>
            <DirectDebits>
               <BLDirectDebit>
                  <Created></Created>
                  <CreationMethod></CreationMethod>
                  <CreditorAccountName></CreditorAccountName>
                  <CreditorBIC/>
                  <CreditorIBAN/>
                  <CreditorReference/>
                  <DebtorAccountID></DebtorAccountID>
                  <DerivedReference></DerivedReference>
                  <IBAN></IBAN>
                  <ID></ID>
                  <IgnoreTransactionCode></IgnoreTransactionCode>
                  <IsInstructionHeldAtBank></IsInstructionHeldAtBank>
                  <IsPaperless></IsPaperless>
                  <IsThroughNotificationService></IsThroughNotificationService>
                  <LastChanged></LastChanged>
                  <Reference></Reference>
                  <ServiceUserNumber></ServiceUserNumber>
                  <Status></Status>
                  <SuppressFirstDirectDebit></SuppressFirstDirectDebit>
```

```
                </BLDirectDebit>
            <BLDirectDebit>
                   <Created></Created>
                   <CreationMethod></CreationMethod>
                   <CreditorAccountName></CreditorAccountName>
                   <CreditorBIC/>
                   <CreditorIBAN/>
                   <CreditorReference/>
                   <DebtorAccountID></DebtorAccountID>
                   <DerivedReference></DerivedReference>
                   <IBAN></IBAN>
                   <ID></ID>
                   <IgnoreTransactionCode></IgnoreTransactionCode>
                   <IsInstructionHeldAtBank></IsInstructionHeldAtBank>
                   <IsPaperless></IsPaperless>
                   <IsThroughNotificationService></IsThroughNotificationService>
                   <LastChanged></LastChanged>
                   <Reference></Reference>
                   <ServiceUserNumber></ServiceUserNumber>
                   <Status></Status>
                   <SuppressFirstDirectDebit></SuppressFirstDirectDebit>
               </BLDirectDebit>
            </DirectDebits>
         </Ws_Banking_GetDirectDebitInstructionsBankingEnabledCardResult>
      </Ws_Banking_GetDirectDebitInstructionsBankingEnabledCardResponse>
   </soap:Body>
</soap:Envelope>
```

Get Pending Direct Debits

API: Ws_Banking_GetPendingDirectDebits

Note: This web service is for legacy use only. For the latest Agency Banking web services via Modulr, see Banking Services Overview.

This web service returns a list of all direct debits that are due for payment today for a given token (with or without sub- accounts). You can also specify whether to return a list of pending direct debits that will not be paid (idue to insufficient funds in the account). The response is indicative only and is based on the situation at 3 am processing time, and does not guarantee which Direct Debits will not be paid.

Note: The data in this call is only valid between the first processing call (approximately 3am UK time) and the final call (approximately 3pm UK time). After this time, the Direct Debit will be processed.

Record Request Description

Tag	Type	Minimum Lengthgth	Maximum Lengthgth	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every request. For details, see the FAQs.	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.	Mandatory	Mandatory
<CardDesign>	N	1	8	The identifier of the card product, or Product ID, within Thredd, for which you want to retrieve a list of direct debits.		
<PublicToken>	N	9	9	The 9 digit public token associated with the account from which to retrieve a list of direct debits.	Mandatory	Mandatory
<IncludeSubAccounts>	N			Whether all sub-accounts are included. 0 = No; 1 = Yes. Default is 1.		
<IncludeAll>	N			A flag to indicate whether all pending direct debits should be returned or just those that won't be paid. 0 = Only those not paid; 1 = All.	Optional	
<PendingDirectDebits>	List (PendingDirectDebit)			A list of direct debits. See PendingDirectDe	Omit	Optional

Tag	Type	Minimum Lengthgth	Maximum Lengthgth	Description	Request	Response
				bit.		
<TotalValueOfTransactions>	D	1	19	Total value of transactions.	Omit	Mandatory
<TotalValueOfFees>	D	1	19	Total value of fees.	Omit	Mandatory
<TotalValueOfTransactionsAndFees>	D	1	19	Total value of transactions and fees.	Omit	Mandatory
<ErrorText>	AN			Human readable text of the error that occurred. Should be read in conjunction with the <ActionCode>.	Omit	Optional
<ActionCode>	N	3	3	The action code for the response. See Action Codes.	Omit	Mandatory

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_Banking_GetPendingDirectDebits>
         <hyp:request>
            <hyp:WSID></hyp:WSID>
            <hyp:IssCode>PMT</hyp:IssCode>
            <hyp:CardDesign></hyp:CardDesign>
            <hyp:PublicToken>123456789</hyp:PublicToken>
            <hyp:IncludeSubAccounts> </hyp:IncludeSubAccounts>
            <hyp:IncludeAll> </hyp:IncludeAll>
         </hyp:request>
      </hyp:Ws_Banking_GetPendingDirectDebits>
   </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_Banking_GetPendingDirectDebitsResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_Banking_GetPendingDirectDebitsResult>
            <WSID>2021123456789</WSID>
            <PendingDirectDebits>
               <PendingDirectDebit>
                  <PublicToken>123456789</PublicToken>
                  <BLGUID> </BLGUID>
                  <IBAN> </IBAN>
                  <Amount></Amount>
```

```
                  <CreatedDate></CreatedDate>
                  <CreditorReference> </CreditorReference>
                  <Reference> </Reference>
                  <AvailableAmount></AvailableAmount>
                  <PendingSuccess> </PendingSuccess>
               </PendingDirectDebit>
            </PendingDirectDebits>
            <ActionCode></ActionCode>
         </Ws_Banking_GetPendingDirectDebitsResult>
      </Ws_Banking_GetPendingDirectDebitsResponse>
   </soap:Body>
</soap:Envelope>
```

Cancel a Direct Debit

API: Ws_Banking_CancelDirectDebitBankingEnabledCard

Note: This web service is for legacy use only. For the latest Agency Banking web services via Modulr, see Banking Services Overview.

This web service marks a direct debit as cancelled where a card has an associated UK Bank Account (provided through programmes using Agency Banking). The web service requires a GUID (Globally Unique ID) for the direct debit, which you can obtain by calling this web service and selecting the correct direct debit.

Request Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every request. For details, see the FAQs.	Mandatory	Mandatory
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd. Mandatory in the request. If only <IssCode> is present in the request then this method returns the pending fee details of all cards that belong to the given program manager.	Mandatory	Mandatory
<PublicToken>	N	9	9	The 9 digit public token associated with the account.	Mandatory	Mandatory
<DDIdentifier>	AN			The unique identifier of the direct debit.	Mandatory	
<Reason>	ENUM_ DirectDebitCancellationReason			The reason for cancelling the direct debit. See ENUM_ DirectDebitCancellationReason	Mandatory	

Response Description

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
<WSID>	N	1	19	Web service ID. Must be unique for every request. For details, see the FAQs.	Mandatory	Mandatory
<Response>	ENUM_ DirectDebitCancelStatus			The result of the request. See ENUM_ DirectDebitCancelStatus.	Omit	Mandatory
<ErrorText>	AN			Human readable text of the error that occurred. Should be read in conjunction with the	Omit	Optional

Tag	Type	Minimum Length	Maximum Length	Description	Request	Response
				<ActionCode>.		
<ActionCode>	N	3	3	The action code for the response. See Action Codes.	Omit	Mandatory

Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:hyp="http://www.globalprocessing.ae/HyperionWeb">
   <soapenv:Header>
      <hyp:AuthSoapHeader>
         <hyp:strUserName>******</hyp:strUserName>
         <hyp:strPassword>******</hyp:strPassword>
      </hyp:AuthSoapHeader>
   </soapenv:Header>
   <soapenv:Body>
      <hyp:Ws_Banking_CancelDirectDebitBankingEnabledCard>
         <hyp:request>
            <hyp:WSID>67567675</hyp:WSID>
            <hyp:IssCode>PMT</hyp:IssCode>
            <hyp:PublicToken>?</hyp:PublicToken>
            <hyp:DDIdentifier>?</hyp:DDIdentifier>
            <hyp:Reason>?</hyp:Reason>
         </hyp:request>
      </hyp:Ws_Banking_CancelDirectDebitBankingEnabledCard>
   </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
   <soap:Body>
      <Ws_Banking_CancelDirectDebitBankingEnabledCardResponse xmlns="http://www.globalprocessing.ae/HyperionWeb">
         <Ws_Banking_CancelDirectDebitBankingEnabledCardResult>
            <WSID>67567675</WSID>
            <Response>Success</Response>
            <ActionCode>000</ActionCode>
         </Ws_Banking_CancelDirectDebitBankingEnabledCardResult>
      </Ws_Banking_CancelDirectDebitBankingEnabledCardResponse>
   </soap:Body>
</soap:Envelope>
```

Appendices Overview

This section contains a list of appendices with further reference information. See the table below.

Appendix	Description
Action Codes	Action codes returned by Thredd in response to a request.
Transaction Codes	Transaction codes used in a web service response.
Activation Methods	Thredd card activation types.
Processing Code (fees)	Codes that represent the type of fee charge applied to a transaction.
SMS Configuration Options	Options for configuring the SMS messages sent to your customers.
Authentication Methods	Codes that represent the cardholder authentication method.
Status Codes	Codes that represent the status of a card.
Transaction Types	Codes that represent the transaction type.
Transaction Status	Codes that represent the transaction status.
Load Sources	Codes that represent the source of funds loaded.
Item Source	Codes that represent the item source type.
LoadFund Types	Codes that represent the type or method used to load funds.
Enums and Data Structures	Provides details of parameters with Enumerated (Enum) values and data structures. This includes: BankingFeaturesType ChangedBankingFeatures BankingEnabled Enums Enum_CardEnabled AccountStatus ENUM_AccountStatus BLAccount ENUM_CloseAccountStatus BankingFeatures Beneficiary ENUM_PaymentMethod ENUM_PaymentDirection ENUM_TransferFundsResult ENUM_DirectDebitCancellationReason ENUM_DirectDebitCancelStatus ENUM_DirectDebitStatus BLDirectDebit PendingDirectDebit ENUM_ChangeAccountStatus ENUM_CreationMethod ENUM_PendingDirectDebit 3D Secure Data Structures ENUM_DS_Details ENUM_DS_Action Ws_DS_ReIssue ItemSrc types BankingError
Payment Token Types	Payment token types.
Field Validation	Provides details of amount and phone number validation rules.
String Cleaning and Approved Characters.	Details of special characters that are removed from input fields and approved characters for use on cards.
Processing Codes (DE003)	Description of processing codes returned in the `<ProcCode>` field for a Card Statement request.
Device Types	Description of device type code used in the get payment token service.

Appendix	Description
Fraud Type Codes	List of Mastercard fraud type codes.
Wallet Tokenisation Reason Codes	List of reason codes for the Wallet_Reasons field.
Currency Codes	List of currency codes and their exponents.
Card Manufacturers	List of card manufacturers supported by Thredd.
WebServiceResult	For some web services, the response returns this parameter to a request when the request includes the same WSID as a previously submitted request.

Action Codes

The following action codes may be returned in the <ActionCode> tag of a web service response.

Code	Description	How is it used?
000	Normal, approve	Indicates success of the web service transaction.
100	Do not Honour, deny	As required by Issuer. Also used for example in Card Load when the currency in the request does not match the card currency.
101	Card expired, deny	Checks expiry status of card before allowing certain operations e.g. Load.
104	Restricted card, deny	Indicates that the card is not in the required status for that service. For example: for Card Convert, Thredd returns a 104 action code if the status is not '00' ; for Card PIN Control, Thredd returns a 104 action code if the card status is 41,43,62,83 or 14.
116	Insufficient funds, deny	Indicates lack of funds to the account, e.g., to cover the fee associated with the request.
118	No card record, deny	Indicates the PAN/Pubtoken/CustAccount/AccountID in the request has no associated card record in the database.
119	Transaction not allowed to cardholder, deny	Indicates that the cardholder is not allowed to perform that particular transaction type due to an invalid input value.
120	Action will exceed allowed system limit	Indicates that any of the card or account amount system limits are exceeded.
121	Amount limits exceeded or outside valid load range, deny	Indicates that any of the card or account amount limits are exceeded or a load amount falls outside the valid range.
122	Invalid ExternalAuth	Incorrect External Authorisation (ExternalAuth) value. Possible values are: 0 and 1. Empty value defaults to 0. See Card Create > ExternalAuth.
123	Frequency limits exceeded, deny	Indicates that any of the card or account frequency limits are exceeded.
124	Card already active, deny.	Indicates that an active card is tried to be activated again.
126	Invalid PIN, deny	Indicates that the supplied PIN does not match our records.
130	External API unreachable	Indicates when an external API is called e.g. ws_ PINControl when Func=06.
131	External API returned an error	Indicates when an external API is called e.g. ws_ PINControl when Func=06, and an error is returned. For the actual error, contact Thredd or the external API provider.

Code	Description	How is it used?
140	Invalid Currency. Currency doesn't match with product configuration.	Indicates when there is a product and currency mismatch for a SEPA payment (when using the Modulr Agency Banking service).
141	MandateId is missing.	Modulr (Agency Banking Service)
142	Cancellation Code is missing or invalid.	Modulr (Agency Banking Service)
144	No entry in the database for the input MandateId.	Modulr (Agency Banking Service)
145	No mandate details found.	Modulr (Agency Banking Service)
184	PIN confirmation failed, deny	Indicates when the PIN confirmation does not match the new PIN when attempting to change the PIN.
200	Card closed, deny & pickup	As required by Issuer
202	Fraudulent use, deny & pickup	As required by Issuer
208	Card lost, deny & pickup	Indicates that the card is in Lost status (41).
209	Card stolen, deny & pickup	Indicates that the card is in Stolen status (43).
210	Invalid DPAN	Indicates that the supplied tokenised PAN is invalid.
211	Invalid Payment Token Id	Indicates that the supplied Payment Token id is invalid.
212	Card and Payment Token details do not match	Indicates that the supplied Card details and Payment Token do not relate.
213	FPAN status change is successful. DPANs are ignored as they are in irreversible status.	The FPAN was successfully updated, but the DPAN was not updated, as it is in an irreversible status.
214	No associated Payment Token for the card details supplied	There is no associated Payment Token for the card details supplied.
216	Either DPAN or PaymentTokenId must be provided	Provide a valid DPAN or PaymentTokenId
217	Invalid Func value	Provide a valid value, such as: 00 and 01.
218	Payment token has no device in the list	No associated device in the system.
219	Specified device index is not in the list	No Visa device index exists that matches the supplied value of <DeviceIndex>.
220	The device is already in unbound status	You made can attempt to unbind a device that is not bound to any DPAN,
221	DeviceIndex is mandatory when value of Func is '01'.	For Token Device Management (Ws_Token_Device_Management), when the token device function requested is to unbind the device, then the Visa device index should be provided.

Code	Description	How is it used?
250	Banking balance transfer not allowed on account status	BOTTOM LINE (AGENCY BANKING SOLUTION)
400	Addrl1 is missing, Addrl1 is mandatory if ‘Address’ fields are being specified.	Reserved for future use
401	Invalid PostCode	Postcode is not formed from alphanumerics or hyphens
402	dlvaddr1 is missing, dlvaddr1 is mandatory if ‘Delivery Address’ fields are being specified.	Reserved for future use
403	Invalid dlvpostcode	Postcode is not formed from alphanumerics or hyphens.
404	Workaddr1 is missing, Workaddr1 is mandatory if ‘Work Address’ fields are being specified.	Reserved for future use
405	Invalid Workpostcode	Postcode is not formed from alphanumerics or hyphens.
406	Invalid IssCode	IssCode does not match the credentials supplied.
409	Invalid PAN, PAN must be composed of digits	Indicates that the PAN is not a valid number composed of digits.
410	Invalid PublicToken, PublicToken must be composed of digits	Indicates that the PublicToken is not a valid number composed of digits.
411	Invalid NewPAN, NewPAN must be composed of digits	Indicates that the PAN is not a valid number composed of digits.
412	Invalid NewToken, NewToken must be composed of digits	Indicates that the NewToken is not a valid number composed of digits.
413	Invalid PrimaryToken, PrimaryToken must be composed of digits	Indicates that the PrimaryToken is not a valid number composed of digits.
414	Invalid MVCToken, MVCToken must be composed of digits	Indicates that the MVCToken is not a valid number composed of digits.
415	Invalid CardDesign, CardDesign must be composed of digits	Indicates that the CardDesign is not a valid number composed of digits.
416	Could not complete request, partial results returned	Indicates that not all requests within a bulk operation could be completed.
418	Both allow list and deny list are present in the request. Customer can only assign either allow list or deny list to a card	Indicates when both request parameters are supplied, only one is allowed.
419	Invalid RenewOptions	Indicates an invalid RenewOption was supplied.
420	NewProductID not present in the request	Indicates the request parameter was missing.
421	Invalid ExpiryDate format, it should be YYYY-MM-DD	Indicates the request parameter was in an invalid format.
422	Card request has been taken into account by the system. The production files are not yet generated.	Indicates a card renewal is already in progress.

Code	Description	How is it used?
423	This card request has been already processed and the production files are successfully generated.	Indicates a card renewal is already in progress.
424	This card has an expiry less than one month, which is less than minimum validity. Please select a RenewOptions other than 0,2 and 4.	Indicates an attempt to renew card thar is about to expire, without supplying a new expiry date.
425	Invalid AccumulatorType	Indicates the supplied parameter was an invalid value.
426	New available to spend balance on card is greater than new current balance on the card. The new available to spend balance should be less than new current balance.	Indicates the supplied parameter was an invalid value.
427	Balance stand-in not enabled in External Host Settings	Indicates the card is not valid for the operation.
431	Invalid PaymentTokenUsageGroup has been supplied, should be numeric.	Indicates the supplied parameter was an invalid value.
432	Incorrect PaymentTokenUsageGroup. (Returns when the group code is not present in Thredd database)	Indicates the supplied parameter was an invalid value
433	Invalid Delivery Method has been supplied, should be numeric.	Indicates the supplied parameter was an invalid value
434	Credential Value is missing, should be supplied when Action is add or update.	Returned in a 3D Secure request to add a credential to a card. See 3D Secure RDX Credentials (Cardinal).
435	Incorrect Virtual Card Image.	Returned when the Virtual Card Image ID is not present in Thredd database.
436	Incorrect Image Size.	Returned when the Size is not present in Thredd database.
437	No credentials found for the token.	Returned in response to a GET request for the 3D Secure credentials linked to a card if no credentials are found. See 3D Secure RDX Credentials (Cardinal).
438	Credential type already exists for this token.	Returned in response to an Add request if the credential type already exists for this card.
439	Value supplied is not valid	Returned in response to requests where an invalid value is provided.
440	Archived card, deny	If the request relates to an archived card record, the request is denied. (Applies to the following web services: Create_Card, Create_Wallet, Regenerate, Regenerate_Wallet and ws_Renew.)
441	Value not supplied for mandatory field	Returned in response to a service request where a mandatory field is empty.
444	Conversion to a physical card failed	Indicates that the create card request was successful, but the conversion to a physical card failed. The created card will be a virtual card.
447	Cannot change status to expired. Expiry should be a system driven	The card expiry status is driven by the expiry date

Code	Description	How is it used?
	change.	set in the system and cannot be manually applied to the card using the status code of 54. See Status Codes.
450	Token limit exceeded	Request is over the maximum number of card records (currently 1000 records) that can be cleared of cardholder data in a single web service call when using the Remove Cardholder Data (*Ws_Remove_CardHolder_Data*) web service.
500	Function not allowed by Institution	BOTTOM LINE (AGENCY BANKING SOLUTION)
501	Invalid Status Code	BOTTOM LINE (AGENCY BANKING SOLUTION)
502	Token Not Found	BOTTOM LINE (AGENCY BANKING SOLUTION)
503	Account Closed	BOTTOM LINE (AGENCY BANKING SOLUTION)
504	Account status was not updated successfully	BOTTOM LINE (AGENCY BANKING SOLUTION)
505	Apply to Account was not updated successfully	BOTTOM LINE (AGENCY BANKING SOLUTION)
506	Bank Transaction does not exists.	BOTTOM LINE (AGENCY BANKING SOLUTION)
507	Payment failed sanctions check.	BOTTOM LINE (AGENCY BANKING SOLUTION)
508	Payment to an Institution defined as a deny-listed account.	BOTTOM LINE (AGENCY BANKING SOLUTION)
509	BankingIn not allowed at Institution level	BOTTOM LINE (AGENCY BANKING SOLUTION)
510	BankingOut not allowed at Institution level	BOTTOM LINE (AGENCY BANKING SOLUTION)
511	DirectDebitIn not allowed at Institution level	BOTTOM LINE (AGENCY BANKING SOLUTION)
512	DirectDebitOut not allowed at Institution level	BOTTOM LINE (AGENCY BANKING SOLUTION)
513	BankingIn not switched on.	BOTTOM LINE (AGENCY BANKING SOLUTION)
514	Account in “not open” status but account status is a priority. BankingIn switched off.	BOTTOM LINE (AGENCY BANKING SOLUTION)
515	BankingOut not switched on.	BOTTOM LINE (AGENCY BANKING SOLUTION)
516	Account in “not open” status but account status is a priority. BankingOut switched off.	BOTTOM LINE (AGENCY BANKING SOLUTION)
517	DirectDebitIn not switched on.	BOTTOM LINE (AGENCY BANKING SOLUTION)
518	Account in “not open” status but account status is a priority. DirectDebitIn switched off.	BOTTOM LINE (AGENCY BANKING SOLUTION)
519	DirectDebitOut not switched on.	BOTTOM LINE (AGENCY BANKING SOLUTION)
520	Account in “not open” status but account status is a priority. DirectDebitOut switched off.	BOTTOM LINE (AGENCY BANKING SOLUTION)
521	Attempt to change account to disallowed status	BOTTOM LINE (AGENCY BANKING SOLUTION)

Code	Description	How is it used?
522	Amount to transfer must be a positive amount	BOTTOM LINE (AGENCY BANKING SOLUTION)
523	Sortcode cannot be empty	BOTTOM LINE (AGENCY BANKING SOLUTION)
524	Account number cannot be empty	BOTTOM LINE (AGENCY BANKING SOLUTION)
525	No available bank account numbers. Contact Thredd	BOTTOM LINE (AGENCY BANKING SOLUTION)
526	Error creating bank account with required features	BOTTOM LINE (AGENCY BANKING SOLUTION)
527	Banking not allowed for this product	BOTTOM LINE (AGENCY BANKING SOLUTION)
528	No account associated with this token	BOTTOM LINE (AGENCY BANKING SOLUTION)
529	Payment from an Institution defined deny-listed account.	BOTTOM LINE (AGENCY BANKING SOLUTION)
530	Inbound processing payment code not allowed by Institution	BOTTOM LINE (AGENCY BANKING SOLUTION)
531	Inbound payment has error code. Processing not allowed by Institution	BOTTOM LINE (AGENCY BANKING SOLUTION)
532	Reversal not present	BOTTOM LINE (AGENCY BANKING SOLUTION)
533	Generic DDA Agency error	BOTTOM LINE (AGENCY BANKING SOLUTION)
534	Unknown DDA account number	BOTTOM LINE (AGENCY BANKING SOLUTION)
535	Direct debit was not cancelled	BOTTOM LINE (AGENCY BANKING SOLUTION)
536	BankingIn not allowed at Issuer level	BOTTOM LINE (AGENCY BANKING SOLUTION)
537	BankingOut not allowed at Issuer level	BOTTOM LINE (AGENCY BANKING SOLUTION)
538	DirectDebitIn not allowed at Issuer level	BOTTOM LINE (AGENCY BANKING SOLUTION)
539	DirectDebitOut not allowed at Issuer level	BOTTOM LINE (AGENCY BANKING SOLUTION)
540	Bottomline C series API not configured	BOTTOM LINE (AGENCY BANKING SOLUTION)
541	Combination of banking features not allowed	BOTTOM LINE (AGENCY BANKING SOLUTION)
542	DDA vales not configured	BOTTOM LINE (AGENCY BANKING SOLUTION)
543	Balance Sequence External Host is missing	Indicates the supplied parameter was an invalid value.
544	Invalid EHI Mode	Indicates the EHI mode of the Product is not valid for the operation.
545	Balance Sequence number is higner that the one inputted	Indicates the supplied parameter was an invalid value.
546	No direct debit found	BOTTOM LINE (AGENCY BANKING SOLUTION)
547	Issue connecting to Bottomline V Series	BOTTOM LINE (AGENCY BANKING SOLUTION)

Code	Description	How is it used?
548	Cannot close account with balance	BOTTOM LINE (AGENCY BANKING SOLUTION)
549	BACS payment cancelled by User	BOTTOM LINE (AGENCY BANKING SOLUTION)
550	BACS Error Code Q in file	BOTTOM LINE (AGENCY BANKING SOLUTION)
551	Peer to Peer transfer failed	BOTTOM LINE (AGENCY BANKING SOLUTION)
552	Peer to Peer reversal failed	BOTTOM LINE (AGENCY BANKING SOLUTION)
553	Peer to Peer not allowed between different PM	BOTTOM LINE (AGENCY BANKING SOLUTION)
554	Invalid character in reference field	BOTTOM LINE (AGENCY BANKING SOLUTION)
555	‘Banking transaction already processed	BOTTOM LINE (AGENCY BANKING SOLUTION)
556	Expected spend cannot be 0	Modulr (Agency Banking Service)
557	Must have at least 1 associate for the account	Modulr (Agency Banking Service)
558	Document must include a filename	Modulr (Agency Banking Service)
559	Document must have a filepath	Modulr (Agency Banking Service)
560	Document must have an uploaded date	Modulr (Agency Banking Service)
561	Associate must have an email	Modulr (Agency Banking Service)
562	Associate must have a first name	Modulr (Agency Banking Service)
563	Associate must have a last name	Modulr (Agency Banking Service)
564	Associate must have a phone number	Modulr (Agency Banking Service)
565	Associate phone number is not a recognised number	Modulr (Agency Banking Service)
566	Address line 1 is empty	Modulr (Agency Banking Service)
567	Address town is empty	Modulr (Agency Banking Service)
568	Address postcode is empty	Modulr (Agency Banking Service)
569	Address has invalid country code	Modulr (Agency Banking Service)
570	Product is not a Modulr product. Cannot create a customer	Modulr (Agency Banking Service)
571	Customer ID is not associated with this product	Modulr (Agency Banking Service)
572	Failed to save Modulr bank details	Modulr (Agency Banking Service)
573	Destination information provided with WEBHOOK call. Not needed	Modulr (Agency Banking Service)
574	No emails supplied when specifying EMAIL	Modulr (Agency Banking Service)
575	Customer ID is empty	Modulr (Agency Banking Service)

Code	Description	How is it used?
576	Passback Modurl Error	Modulr (Agency Banking Service)
577	Notfication already exists	Modulr (Agency Banking Service)
581	Modulr Payment unsuccessful	Modulr (Agency Banking Service)
583	IBAN is not valid	When the beneficiary IBAN is not provided in the request for a SEPA outbound payment (Modulr Agency Banking Service).
584	SEPAOut not allowed at Issuer level	When SEPAOut settings are not enabled at Issuer level (Modulr Agency Banking Service).
585	SEPAOut not allowed at Institution level	When SEPAOut settings not enabled at Institution level (Modulr Agency Banking Service).
588	Currency not supported	When any currency other than EUR is used for making SEPA Outbound payment. Only EUR currency is supported in SEPA (Modulr Agency Banking Service).
589	SEPAIn not allowed at Issuer level	When SEPAIn settings are not enabled at Issuer level (Modulr Agency Banking Service).
590	SEPAIn not allowed at Institution level	When SEPAIn settings are not enabled at Institution level (Modulr Agency Banking Service).
591	ComplianceData is not properly handled	The ComplianceData field is expected when Type is *PREQUALIFIED*(Modulr Agency Banking Service). See Register a Customer for Banking.
593	Modulr not enabled for this product. Please contact Thredd support	When making a SEPA Outbound payment using a product which is not enabled for the Modulr Agency Banking Service).
594	KBA answer not provided	The 3D Secure *Add* or *Update* failed because the Type chosen is *KBA*, but KBA_Answer is not provided.
595	KBA question ID does not exist	The 3D Secure *Add* or *Update* failed because the Type chosen is *KBA*, but the KBA Valueprovided (question ID) does not exist.
596	Some conditions have not been met to remove cardholder data	The following conditions must be met before cardholder data can be deleted: • The number of years since the card was created must be greater than 6 years. • The actual or blocked amount on the card must be zero. • The card must be in the status of *Destroyed* or *Expired* card and the card must not be linked to an eWallet account.
598	Token does not have 3D Secure entries	Request to delete a 3D Secure credential for a card that does not have any credential entries in the 3D Secure tables.
599	Credential and token do not match	The 3D Secure Add/Update/Delete failed because

Code	Description	How is it used?
		the provided credentials do not belong to the provided public token. For an Update request for a KBA credential, this error is returned if the <KBA_AnswerOldValue> provided does not match the existing KBA credential value.
600	Invalid AuthCalendarGroup	Indicates the supplied value could not be found.
603	Quantity exceed the max limit	Quantity exceed the max limit.
604	Invalid Event ID	Indicates supplied event ID is invalid.
605	MVC token is missing or invalid	Indicates MVC token is missing or invalid.
606	Product of MVC token and destination token are not from same	Indicates MVC token and destination token do not belong to same product.
607	Source token is not MVC	Indicates source token is not MVC.
609	Invalid FeeWaiver	Indicates FeeWaiver is invalid.
610	Partial fee is taken, remaining amount is stored for later	Partial fee is taken, remaining amount is stored for later.
611	No fee is taken, whole amount is stored for later	No fee is taken, whole amount is stored for later.
613	Invalid WSID specified in the request	Indicates supplied WSID is invalid.
614	Invalid Deny List	Indicates the supplied value could not be found.
615	Invalid Allow List	Indicates the supplied parameter value was not correct.
621	SFTP Is missing	SendCardFiles:SFTP Missing.
622	Invalid SMSBalance	Indicates the supplied parameter value was not correct.
623	Invalid load token, deny	Indicates the supplied parameter value was not correct.
624	Invalid Auth Type	Indicates the supplied parameter value was not correct.
625	Invalid ActMethod	Indicates the supplied parameter value was not correct.
628	Token already exist in the table	3D Secure
629	Token is not configured to use the 3D secure web service	3D Secure
630	Token details set for delete.	3D Secure
631	LastModifiedType is missing	3D Secure
633	Invalid CheckLevel	Sanction PEP

Code	Description	How is it used?
646	IssCode not configured for 3d secure	3D Secure
647	Invalid MatchItems	Sanction PEP
649	Update is Applicable only after processing of Insert (File is not yet processed)	Indicates when an attempt is made to update 3D Secure details before the initial details have been sent to the 3D Secure processing bureau.
650	Public token and new token have different billing currencies.	Primary and secondary cards should have same billing currency.
651	Invalid Sms_Required	Indicates the parameter value was invalid.
652	Invalid Sms_Content	Indicates the parameter value was invalid.
653	CSN is empty or badly formatted	Gemalto : CSN – given in custom1 field – is null, empty or badly formatted.
654	Card status cannot be changed, current status of the card is not reversible	Indicates when card is in an irreversible status: 43 or 83.
655	CSN is already associated with a card request in progress (i.e. a card request that has not yet reached a definitive status)	Gemalto : CSN – given in custom1 field – is already associated with a card request in progress (i.e. a card request that has not yet reached a definitive status)
656	Invalid DataSrc	Invalid data source
657	Authentication code is null, empty or badly formatted	Gemalto : Authentication code – given in custom2 field – is null, empty or badly formatted.
658	ExtAPICardID is missed in the request	Indicates the parameter value was missing.
659	Invalid load source is used in the request.	Please use load source Primary card (68) to transfer fund from primary to secondary and vice versa.
660	Invalid passcode (AccCode), it should be 6 digit number.	Leading zero is acceptable.
662	LockMode is invalid or missing	Indicates the parameter value was missing or an invalid value.
663	Invalid DOB	Indicates the parameter value was missing or an invalid value.
664	Invalid Fee, it should be decimal/integer	Indicates the parameter value was an invalid value.
665	Invalid ProductID	Indicates the parameter value was missing or an invalid value.
666	ProductID not belongs to the client	Indicates the parameter value was an invalid value for the PAN/Token supplied.
667	Forbidden load source(LoadSrc), this program manager has no right to use the selected load source.	Indicates the parameter value was an invalid value.
668	RSA – Invalid NamePrefix	Up to 120 characters allowed

Code	Description	How is it used?
669	RSA - Invalid NameSuffix	Up to 120 characters allowed
670	RSA - Invalid MothersMaidenName	Up to 120 characters allowed
671	RSA - Invalid CustomerID	Up to 120 characters allowed
672	RSA - Invalid AddressLine1	Up to 120 characters allowed
673	RSA - Invalid AddressLine2	Up to 120 characters allowed
674	RSA - Invalid City	Up to 120 characters allowed
675	RSA - Invalid StateCode	Two digits
676	RSA - Invalid CountryCode	Two characters according to ISO 3166-1 alpha-2 standards.
677	RSA - Invalid CompanyName	Up to 120 characters allowed
678	RSA - Invalid Misc1	Up to 120 characters allowed
679	RSA - Invalid Misc2	Up to 120 characters allowed
680	RSA - Invalid Misc3	Up to 120 characters allowed
681	RSA - Invalid Misc4	Up to 120 characters allowed
682	RSA - Invalid Misc5	Up to 120 characters allowed
683	RSA - Invalid Misc6	Up to 120 characters allowed
684	RSA - Invalid Misc7	Up to 120 characters allowed
685	RSA - Invalid Misc8	Up to 120 characters allowed
686	RSA - Invalid Last4SSN	Four digit integer
687	RSA - Invalid PANExp	Four digit integer
688	RSA - Invalid FullSSN	Nine digits
689	RSA - Invalid Last6SSN	Six digits
690	RSA - Invalid HomePhone	Up to 50 digit integer
691	RSA - Invalid BusinessPhone	Up to 50 digit integer
692	RSA - Invalid AltPhone1	Up to 50 digit integer. Also known as Mobile phone number.
693	RSA - Invalid AltPhone2	Up to 50 digit integer
694	RSA - Invalid ZipCode	Five digits
695	RSA - Invalid DayOfBirth	Two digits

Code	Description	How is it used?
697	RSA - Invalid MonthOfBirth	Two digits
698	RSA - Invalid YearOfBirth	Two digits
699	RSA - Invalid CreditLimit	Nine digits
700	Invalid ISO language code	Indicates the parameter value was missing or an invalid value.
701	Invalid CreateType	Indicates the parameter value was missing or an invalid value.
702	Invalid Currency Buy Rate.	Must be non-negative
703	Invalid Currency Sell Rate.	Must be non-negative
704	Invalid Currency Mid Rate.	Must be non-negative
705	Invalid source currency code	Indicates the parameter value was missing or an invalid value.
706	Invalid destination currency code	Indicates the parameter value was missing or an invalid value.
707	Invalid FX Group ID	Indicates the parameter value was missing or an invalid value.
708	Invalid Card Design, its a MutliFX product	Indicates the parameter value was missing or an invalid value.
710	This Card Design does not support MultiFX	Indicates the parameter value was an invalid value.
711	This Card Design does not support External Authorisation	Indicates the parameter value was an invalid value for the operation.
712	Invalid Filter	Indicates the parameter value was missing or an invalid value.
713	Invalid Group Type	Indicates the parameter value was an invalid value.
714	Invalid load source	Indicates the parameter value was an invalid value.
715	invalid load fund type	Indicates the parameter value was an invalid value.
716	Invalid Linkage Group	Indicates the parameter value was an invalid value.
717	The specified PrimaryToken is not a primary card.	Secondary cards cannot be chosen as the Primary Card of another card.
718	Invalid PIN	PIN should be numeric and contain 4-12 digits.
719	Duplicate ExternalRef	Gemalto : requestUID value already exists for a card that is currently in production, or already produced.
720	Invalid TerminalID	Gemalto : satelliteUID value doesn't exists in Dexxis I2 (Central Base can't retrieve any Satellite with this ID).

Code	Description	How is it used?
721	Invalid ProductRef	Gemalto : cardTypeUID value doesn't exists in Dexxis I2 (Central Base can't retrieve any card type with this ID).
722	ExternalRef is empty	Gemalto : Null or empty string, or default value for parameter requestUID.
723	TerminalID is empty	Gemalto : Null or empty string for parameter satelliteUID.
724	ProductRef is empty	Gemalto : Null or empty string for parameter cardTypeUID.
725	CardName is empty	Gemalto : Null or empty string for parameter cardHolderName.
726	Some graphical data are empty	Gemalto : Null or empty array, or wrong size for parameter cardGraphicalData.
727	Some magnetic data are empty	Gemalto : Null or empty array, or wrong size for parameter cardMagneticalData.
728	Some carrier data are empty	Gemalto : Null or empty array or wrong size for parameter cardCarrierData.
729	Electric data is empty	Gemalto : Null or empty string for parameter cardElectricalData.
730	Illegal character in ExternalRef	Gemalto : requestUID contains characters that are not compatible with allowed charset/requestUID contains characters that are not alphanumerical.
731	Illegal character in TerminalID	Gemalto : satelliteUID contains characters that are not compatible with allowed charset/satelliteUID contains characters that are not alphanumerical.
732	Illegal character in ProductRef	Gemalto : cardTypeUID contains characters that are not compatible with allowed charset/cardTypeUID contains characters that are not alphanumerical.
733	Illegal character in graphical data	Gemalto : cardGraphicalData contains characters that are not compatible with allowed charset.
734	Illegal character in magnetic data	Gemalto : cardMagneticalData contains characters that are not compatible with allowed charset.
735	Illegal character in carrier data	Gemalto : cardCarrierData contains characters that are not compatible with allowed charset.
736	Grapical data type is empty or size is incorrect	Gemalto : Null or empty array, or wrong size for parameter cardGraphicalDataType.
737	Unknown graphical data type	Gemalto : cardGraphicalDataType contains at least one unknown graphical data type.
738	Size of graphical data and graphical data type aren't identical	Gemalto : cardGraphicalDataType doesn't contain the same number of values than cardGraphicalData.

Code	Description	How is it used?
739	Graphical data type doesn't specified	Gemalto : At least one cardGraphicalData doesn't have a cardGraphicalDataType specified.
740	Illegal character in electric data	Gemalto : cardElectricalData contains characters that are not compatible with allowed charset.
741	Custom data 1 is empty	Gemalto : Null or empty string, or default value for parameter cardRequestCustomData1.
742	Illegal character in custom data 1	Gemalto : cardRequestCustomData1 contains characters that are not compatible with allowed charset.
743	Custom data 2 is empty	Gemalto : Null or empty string, or default value for parameter cardRequestCustomData1.
744	Illegal character in custom data 2	Gemalto : cardRequestCustomData1 contains characters that are not compatible with allowed charset.
745	Custom data 3 is empty	Gemalto : Null or empty string, or default value for parameter cardRequestCustomData1.
746	Illegal character in custom data 3	Gemalto : cardRequestCustomData1 contains characters that are not compatible with allowed charset.
747	Custom data 4 is empty	Gemalto : Null or empty string, or default value for parameter cardRequestCustomData1.
748	Illegal character in custom data 4	Gemalto : cardRequestCustomData1 contains characters that are not compatible with allowed charset.
749	Custom data 5 is empty	Gemalto : Null or empty string, or default value for parameter cardRequestCustomData1.
750	Illegal character in custom data 5	Gemalto : cardRequestCustomData1 contains characters that are not compatible with allowed charset.
751	Illegal character in custom map file	Gemalto : cardRequestCustomMapFile contains characters that are not compatible with allowed encoding.
752	Incorrect custom map file XML format	Gemalto : XML file(s) contained into cardRequestCustomMapFile archive doesn't have the required XML format.
753	Empty custom map file MD5 hash	Gemalto : Null or empty string for parameter cardProductionCustomMapFileMd5Hash.
754	Illegal character in custom map file MD5 hash	Gemalto : cardRequestCustomMapFileMd5Hash contains characters that are not compatible with allowed encoding. Hash result must be base64 encoded.
755	Comparison failed	Gemalto : cardRequestCustomMapFile archive transmission failure: MD5 hash comparison failed.

Code	Description	How is it used?
756	Unpack failed	Gemalto : cardRequestCustomMapFile archive can’t be unpacked or files can’t be retrieved from it. Probably an archive format error.
757	Map file data is not compactable with encoding	Gemalto : XML file(s) contained into cardRequestCustomMapFile archive contains at least one value that is not compatible with allowed encoding.
758	Invalid PIN Block	Gemalto : cipheredPin must contain 16 characters/cipheredPin parameter contains characters that are not compatible with allowed charset/cipheredPin parameter contains characters that are not allowed. cipheredPin must only be composed of digits or letters from A to F.
759	Invalid PIN Block format	Gemalto : cipheredPinFormat parameter is null or default values whereas it is mandatory since cipheredPin is set/cipheredPinFormat has not an attempted value (only ‘ISO0’ and ‘ISO2’ values are correct).
760	PIN block doesnot match PIN Block format	Gemalto : cipheredPin does not match given cipheredPinFormat.
761	PAN is empty	Gemalto : pan parameter is null or empty or default values whereas it is mandatory (given Ciphered PIN format is ISO0).
762	Invalid character in PAN	Gemalto : pan parameter contains characters that are not compatible with allowed charset/pan parameter contains characters that are not allowed. Pan must only be composed of digits.
763	Illegal character in PIN mailer data	Gemalto : At least one pinMailerData element contains characters that are not compatible with allowed charset.
764	Card request creation is forbidden	Gemalto : Card request creation is forbidden since standard Instant Issuance mode is deactivated on Central Base.
765	PIN cannot be verified	Gemalto : cipheredPin cannot been verified since KMS server is unreachable.
766	PIN delivery mode is empty	Gemalto : Null, empty or default string for parameter PinDeliveryMode whereas Pin or pinMailerData are provided.
767	Unknown PIN delivery mode	Gemalto : Unknown value for parameter PinDeliveryMode. Only NONE, PIN_MAILER and PIN_SELECTION are allowed.
768	Illegal character in PIN delivery mode	Gemalto : PinDeliveryMode parameter contains characters that are not compatible with allowed charset.
769	PIN Block is empty, chosen PIN delivery mode required PIN Block	Gemalto : cipheredPin parameter is null, empty or default value whereas it MUST contain a value because the chosen pinDeliveryMode requires it.

Code	Description	How is it used?
770	Data preparation failed	Gemalto : Data preparation failed (synchronous DP call) or data preparation launch failed (asynchronous DP call).
771	System is busy	Gemalto : The system is busy and can't accept any new request for the moment. Either too many concurrent requests have been sent, or too many requests are currently waiting for data preparation. The system refuses new requests to remain stable and to keep acceptable performances. Please try again later and check the system health.
772	Request not found	Gemalto : Card Request not fount in Gemalto system.
774	Limit Group not assigned to the input secondary card	Indicates the parameter value is not correctly configured.
775	Load source limit setting not found in the secondary card	Indicates the parameter value is not correctly configured.
777	Invalid func	Indicates the parameter value was invalid.
778	Invalid PIN Mailer	Indicates the parameter value was invalid.
779	Deny list is empty	Indicates the parameter value was empty and is required.
780	Allow List is empty	Indicates the parameter value was empty and is required.
781	CardAcceptorId is empty	Indicates the parameter value was empty and is required.
782	Invalid Action	Indicates the parameter value was invalid.
783	CardAcceptorID not found	Indicates the parameter value was not found.
784	The requested product is virtual but the request is for physical card generation	Indicates the CreateType parameter value was invalid for the specified Product.
785	The requested product is physical but the request is for virtual card generation	Indicates the CreateType parameter value was invalid for the specified Product.
786	Invalid e-mail address	Indicates the parameter value was in an invalid format.
787	e-mail address is missing	Indicates the parameter value was empty and is required.
788	Invalid MailOrSMS	Indicates the parameter value was invalid.
789	Cannot convert card, card is already physical	Indicates the card has already been converted.
790	The card is physical, only virtual can convert	Indicates the card is already physical.
793	Wrong or insufficient credentials	The credentials were not properly supplied.

Code	Description	How is it used?
798	Quantity entered is invalid, it should be numeric and greater than one	Indicates the parameter value was invalid format.
799	This card acceptor is already added to the deny list/allow list of the given scheme	Indicates the card acceptor is already added to the deny list/allow list of the given scheme.
800	WSID is missing in the request.	Parameter was not supplied but is required.
801	IssCode is missing.	Parameter was not supplied but is required.
802	TxnCode is missing	Parameter was not supplied but is required.
803	AuthType is missing	Parameter was not supplied but is required.
804	LocDate is missing	Parameter was not supplied but is required.
805	LocTime is missing	Parameter was not supplied but is required.
806	CurCode is missing in the request.	Parameter was not supplied but is required.
807	DebOrCred is missing in the request.	Parameter was not supplied but is required.
808	Description is missing in the request.	Parameter was not supplied but is required.
810	PAN, PublicToken or CardDesign is missing in the request.	Parameter was not supplied but is required.
811	DOB is missing in the request.	Parameter was not supplied but is required.
812	CVV is missing.	Parameter was not supplied but is required.
813	AccCode is missing or invalid.	Parameter was not supplied but is required.
814	ClientCode is missing when AuthType is 5	Parameter was not supplied but is required.
815	LastName is missing when AuthType is 6	Parameter was not supplied but is required.
816	Track2 is missing when AuthType is 7	Track2 is mandatory when ActMethod is 4 or AuthMethod is 7 or when both PAN and PubToken are not provided.
819	ActMethod is missing in the request.	Parameter was not supplied but is required.
820	City or Postcode is missing in the request.	Parameter was not supplied but is required.
821	Country is missing	Parameter was not supplied but is required.
822	FirstName is missing in the request.	Parameter was not supplied but is required.
823	AccNo is missing in the request.	Parameter was not supplied but is required.
824	ExpDate is missing in the request.	Parameter was not supplied but is required.
825	StatCode or NewStatCode is missing or invalid in the request.	Parameter was not supplied but is required.
829	SvcSrc is missing in the request.	Parameter was not supplied but is required.

Code	Description	How is it used?
830	SvcTye is missing in the request.	Parameter was not supplied but is required.
831	Work city or Work Postcode is missing in the request.	Parameter was not supplied but is required.
832	Work country is missing	Parameter was not supplied but is required.
833	Dlvcity or DlvPostcode is missing in the request.	Parameter was not supplied but is required.
834	DlvCountry is missing.	Parameter was not supplied but is required.
835	DlvFirstName is missing in the request.	Parameter was not supplied but is required.
846	ItemId is missing.	Parameter was not supplied but is required
850	Func is missing.	Parameter was not supplied but is required
851	Current Pin is missing	Parameter was not supplied but is required
852	New Pin is missing	Parameter was not supplied but is required
853	Confirm Pin is missing	Parameter was not supplied but is required
854	Key ref is missing.	Parameter was not supplied but is required
857	LoadSrc is missing.	Parameter was not supplied but is required
864	Invalid Limit group code.	Parameter was supplied but is invalid
865	Invalid MCC group code.	Parameter was supplied but is invalid
866	Invalid Usage group code.	Parameter was supplied but is invalid
867	ProcCode is missing in the request or invalid.	Parameter was either supplied but is invalid, or is missing and required
868	Duplicate WSID in the request, deny.	The WSID has already been used on a previous request. WSIDs should be unique.
869	Invalid Fee Group Code	Parameter was supplied but is invalid
870	Invalid Primary Token, deny	Parameter was supplied but is invalid
871	Balance transfer from primary card to seconday or vice vers, deny	Not in use
872	Source and destination card has same PAN, deny	Attempt to balance transfer to and from same card is invalid
873	CardSelector is missing or invalid.	Parameter was not supplied but is required, or is an invalid value
874	CardSelectorValue is missing or invalid.	Parameter was not supplied but is required, or is an invalid value
875	Fee structure is not set for the given process code.	No fee structure is configured for the process code supplied during an attempt to take generic fees

Code	Description	How is it used?
876	RegenType/Replace is empty or invalid.	Parameter was not supplied but is required, or is an invalid value
877	Invalid expiry date.	An attempt was made to update the logical expiry date to either a past date, or a date that is beyond the physical expiry date
878	Invalid character in Card Name.	Non - european characters are not allowed in Card Name
879	Invalid character in First Name.	If Card Name is empty then non – european characters are not allowed in First Name.
880	Invalid character in Last Name.	If Card Name is empty then non – european characters are not allowed in Last Name.
881	Invalid recurring/scheduled fee group code.	Parameter was supplied but is invalid
882	Invalid web service fee group code.	Parameter was supplied but is invalid
883	Invalid Card Manufacturer Code	Parameter was supplied but is invalid
884	Customer mobile phone number is not set for this card.	An attempt was made to send an SMS, but no mobile number is registered for this card
893	Invalid DebOrCred,	It should be 1(Credit) or -1(Debit).
894	Invalid DOB format	Format should be YYYY-MM-DD
895	Invalid Start Date	Format should be YYYY-MM-DD
896	Invalid EndDate	Format should be YYYY-MM-DD
897	Invalid amount	Amount should be non-negative and no more decimal places than the currency will allow.
898	Invalid BIN/Manufacturer combination	The selected card manufacturer is not associated with the programme scheme
899	Invalid Country/Delv_Country, it should be ISO numeric code.	Parameter was supplied in incorrect format
900	Restricted web method, this client is not allowed to use this method	Client is not configured to call this web service
902	Invalid Transaction	The selected transaction is not valid for this operation
904	Format error, deny	Generic format error condition eg used by Account Enquiry to indicate invalid format in ‘txnfilter’ value received in request or when the security details do not match with the selected authMethod
908	Transaction destination cannot be found for routing	As required by Issuer
909	System malfunction, deny	Generic ‘catch-all’ error condition
911	Card issuer timed out	As required by Issuer
913	Duplicate transaction, deny	To indicate the received request is a duplicate of a

Code	Description	How is it used?
		previous request. In some calls the ID of the original request (that this request duplicates) may also be returned in the response.
914	Unable to trace original transaction, deny	Indicates that the item a Void transaction seeks to cancel cannot be found
915	Reconcilliation cutover or checkpoint error	As required by Issuer
920	Security error – authentication failed, deny	Failed to authenticate the cardholder
932	Recurring data error	As required by Issuer
933	3DS Update not allowed	Cardholder update completed successfully, but the 3D Secure update was not performed as the cardholder is not configured for 3D Secure.
951	Web service call successful, but failed to send Network Message due to internal error (i.e. 0302 service call did not return)	As required by Issuer
952	Web service call successful, but failed Fraud API update	As required by Issuer
953	Activation of Card successful, but updating MDES Card Mapping failed	As required by Issuer
954	RSA – Invalid BranchNumber	Ten digits
996	Retired Web Service	Retired
997	Soap username is null or empty	SOAP authentication
998	Soap password is null or empty	SOAP authentication
999	Security error – SOAP authentication failed. Deny	Indicates the SOAP authentication user name or password is incorrect.

MVC Action Codes

The following action codes are relevant to a Master Virtual Card (MVC) .

Code	Description
000	Normal, approve.
100	Do not Honour, deny.
116	Insufficient funds, deny.
118	No card record, deny.
121	Amount limits exceeded or outside valid load range, deny.
123	Frequency limits exceeded, deny.

Code	Description
605	MVC token is missing or invalid.
606	Source (MVC) and destination (new) tokens aren't belonging to same scheme.
607	Source token is not MVC.
661	MVC token and new token have different billing currencies. MVC load doesn’t support inter currency fund transfer.
801	IssCode is missing.
806	CurCode is missing in the request.
810	PublicToken is missing in the request.
897	Invalid amount, amount should be non-negative.
909	System malfunction, deny.
997	Soap username is null or empty.
998	Soap password is null or empty.
999	Security error. SOAP authentication failed. Deny.

Transaction Codes

You can use the following transaction codes in the `<TxnCode>` tag of a web service response.

Code	Description
0	Card Activation
1	Card Load
2	Status Change
3	Balance Enquiry
4	Customer Enquiry
5	Card Statement
6	Load Verification
7	Balance Transfer
8	Card Unload
9	Card Enquiry
10	Activate / Load
11	Card Unload / Status Change
12	Transaction Void
13	Cardholder Update
14	Cardholder Details Enquiry
15	Load Demand
16	Balance Adjustment
17	Extend Expiry
18	Manage PIN
19	External Approve
20	Card Reload

Activation Methods

You can use the following methods in the <ActMethod> tag to activate a card:

Method	Description
1	Card number (PAN)/public token + cardholder's date of birth
2	Card number/public token + CVC2
3	Card number/public token + access code
4	Full Track 2
5	Card number/public token + security data - DO NOT USE
6	Card number/public token

See: Card Activate, Card Activate and Load and MVC Card Activate and Load.

Processing Codes (Fees)

You can use the following fee processing codes in the `<ProcCode>` tag of the Pending Fees and Apply Fees requests.

Code	Description
001	Fees : POS Standard
002	Fees : Thredd Kiosk
003	Fees : Thredd Web Site
004	Fees : Card Processor
005	Fees : Standard Web Service
006	Fees : Agent
007	Fees : Head Office
008	Fees : Call Centre
009	Fees : Customer Web site
010	Fees : Wirecard
011	Fees : Customer kiosk
012	Fees : Customer mobile app
013	Fees : Thredd IVR
014	Fees : Unknown
017	Fees : Corporate
018	Fees : epay
019	Fees : HOCA Verifiable
020	Fees : Post Office
021	Fees : HOCA Non Verifiable
022	Fees : Paypoint
023	Fees : POS Relaod
024	Fees : TCC Web Report
025	Fees : TCC Online
026	Fees : VIRGIN POS Reload
027	Fees : TCC POS Reload
028	Fees : TCC Promotion

Code	Description
029	Fees : DXB Zero Load
030	Fees : AlFardan Reload
031	Fees : UAEx Reload
032	Fees : AlAnsari Reload
033	Fees : 14 day Cool Off
034	Fees : Unload to Repatriate
035	Fees : Loan Repayment
038	Fees : VIRGIN Zero Load
039	Fees : VIRGIN POS standard
040	Fees : JADE Web Report
041	Fees : JADE POS standard
042	Fees : JADE POS Reload
043	Fees : JADE Zero Load
044	Fees : Wirecard-Cadooz
045	Fees : Crunch POS Standard
046	Fees : CRUNCH POS Reload
047	Fees : Unload Fee Test
048	Fees : Balance Transfer Fee Test
049	Fees : Sofort Banking
050	Fees : Wirecard e-commerce
051	Fees : UAExAirport POS Standard
052	Fees : UAExAirport Reload
053	Fees : Cadooz Load
054	Fees : Cadooz Reload
055	Fees : Cadooz web unload
056	Fees : Sofort Bank Transfer Load
057	Debit Card Load fee
058	PIN Control

Code	Description
060	Fees : Post Office and Paypoint
061	Fees : Credit Limit
062	Fees : Credit Card Payment
063	Fess : Ukash Payment
064	Fees : Bank Transfer
065	Fees : Giropay
066	Fees : Sofortüberweisung
067	Fees : Debit Card
068	Fees : Primary Card
069	Monthly Service Fee
070	Balance Enquiry Fee 0 - Call Centre
071	Balance Enquiry Fee 1 - Website
072	Balance Enquiry Fee 2 - IVR
073	Balance Enquiry Fee 3 - SMS
074	Fees : Master Virtual Card
075	Fees : Micropayment
076	Fees : MVC Load
077	Fees : iMVC Load
078	Fees : P2P Transfer
079	Fees : Auto-transfer from Primary Card
080	Card Upgrade Fee
081	Card Closure/Redemption Fee
082	Card Issue Fee (Physical)
083	Administration Fee
084	Card Replacement Fee
085	Card Issue Fee (Virtual)
086	Secondary Card Issue Fee
087	Primary Card Activation Fee

Code	Description
088	Secondary Card Activation Fee
089	Lost & Stolen Card Fee
090	Monthly Service Fee Virtual
091	Fees : Incoming SEPA Transfers
092	Fees : Incoming Direct Debit
093	Fees : Outgoing Sepa Transfers
094	Fees : Outgoing Direct Debit
095	Fees : Voucher
096	Fees : Cash Incentive Rewards
097	Fees : Entercash
098	Fees : Payvision
100	Fees : La banque Postale
101	Fees : La Banque Postale
102	Fees : Loyalty Programme
103	Fees : KYC Upgrade_Grp Chng
106	Fees : First Load from MVC
107	Fees : Cash Deposit
108	Fees : International Bank Transfer
109	Fees : Balance Transfer - Mtel
110	Fees : Balance Transfer - Phyre
111	Fees : Balance Transfer - CashTerminal
112	Fees : Balance Transfer - Payoo
599	Blocked Amount Posting
999	Recurring Fee

SMS Configuration Options

Below are options for configuring the SMS messages sent to your customers. Contact your Implementation Manager to ask for these SMS options to be configured.

Description	Examples
Web Services that allow configurable SMS text to be sent	PIN Control, Load, Unload, Balance Enquiry, Status Change, Activation, Card Create, Regenerate, Card Create (Replacement option), Balance Adjustment, Updated Cardholder.
Example variables that are allowed in configurable messages	Cardholder Title Cardholder First Name Cardholder Surname Card Currency (.e.g GBP) Amount (Load/Adjustment/Unload etc..) Current Available Balance CVV Masked PAN Masked replacement PAN PIN Sender (scheme sender)
Languages allowed	Language is determined by checking the current value of the cardholder *Lang* setting. For details, see Create Card.

Authentication Methods

See the table below for a list of cardholder authentication methods, which are used within the <AuthType> tag. In most cases an Authorisation type of 1 is sufficient, since there is separate SOAP header authentication to validate the user of the web service.

Auth Type	Description
1	Card number (PAN) or public token
2	Card number/public token & cardholder's date of birth
3	Card number/public token & CVC2
4	Card number/public token & access code
5	Login ID - DO NOT USE
6	Card number and cardholder's date of birth and cardholder's last name
7	Full Track2
8	Card number & security data - DO NOT USE

Note: If you suspect your SOAP login details may have been compromised, contact Thredd immediately

Status Codes

Refer to the table below for status codes that you can use within the <NewStatCode> tag. The codes enable you to set the status of a card using the Card Change Status (Ws_Status_Change) web service, and the Card Unload and Change Status (Ws_UnLoad_StatusChange). These statuses are set as **Can be changed** in the table below. Scheme DPAN (Digital PAN) status refers to the corresponding DPAN status in MDES/VDEP when a card is set to the matching Status Code in Thredd's systems. Other statuses can be returned in a response to a card status request.

Note: The service returns an action code of 654 if an attempt is made to change the status of a card with an irreversible status.

Note: The service returns an action code of 825 if an attempt is made to change the status of a card to a non-editable status.

Status Code	Description	Scheme DPAN Status	Can be changed
00	All Good. Indicates that the card is good for use, but does not indicate whether it is active. **Tip**: A card must have its <IsLive> flag changed to 1 to be considered active. You cannot activate a card by changing its status to 00. To activate a card, use Ws_Activated.	Activated / Re-activated	Yes
01	Refer to card issuer. **Note:** Do not use status 01. This is for Thredd use only.	Call Issuer	No
02	Card not yet activated or card is inactive. May be used for newly issued cards before activation.	Suspended	No
03	Invalid merchant.	Suspended	No
04	Capture Card. This status is irreversible.	Deactivated / Deleted	No
05	Do not honour.	Suspended	Yes
06	Unspecified Error.	Suspended	No
08	Honour with identification.	Activated	No
10	Partial Approval.	Activated	No
12	Invalid Transaction.	Suspended	No
13	Invalid Amount.	Suspended	No
14	Invalid card number (no such number). This status is irreversible.	Suspended	No
15	No such issuer.	Suspended	No
17	Customer cancellation.	Suspended	No
1A	Strong Cardholder Authentication (SCA) required.	Suspended	No
30	Format error.	Suspended	No
31	Issuer sign-off.	Suspended	No

Status Code	Description	Scheme DPAN Status	Can be changed
32	Completed partially.	Suspended	No
33	Expired card (Capture). Made non-editable for removing the status from Smart Client. This status is irreversible.	Deactivated / Delete	No
36	Restricted card (Capture). Made non-editable for removing the status from Smart Client. This status is irreversible.	Deactivated / Delete	No
37	Card acceptor call acquirer security (Capture). Made non-editable for removing the status from Smart Client. This status is irreversible.	Deactivated / Delete	No
38	Allowable PIN tries exceeded (Capture). This status is irreversible.	Deactivated	No
41	Lost card . This status is irreversible. Do not use if temporarily blocking a card or a tokenised digital PAN (DPAN). We recommend you use status code G1 instead.	Suspended	No
43	Stolen card. This status is irreversible.	Deactivated / Delete	No
46	Closed Account. This status is irreversible.	Deactivated / Delete	No
51	Insufficient funds.	Suspended	No
54	Expired card. Do not use status 54.	Suspended	No
55	Incorrect PIN.	Suspended	No
58	Transaction not permitted to terminal.	Suspended	No
59	Suspected Fraud.	Suspended	Yes
61	Exceeds withdrawal amount limit.	Suspended	No
62	Restricted card.	Suspended	Yes
63	Security violation.	Suspended	Yes
64	Original amount incorrect.	Suspended	No

Status Code	Description	Scheme DPAN Status	Can be changed
65	Exceeds withdrawal frequency limit.	Suspended	No
66	Card acceptor call acquirer's security department.	Suspended	No
67	Card to be picked up at ATM. This status is irreversible.	Deactivated / Delete	No
68	Response received too late.	Suspended	No
69	Invalid or missing data to verify card, cardholder or other.	Suspended	No
70	Cardholder to contact issuer.	Suspended	Yes
71	PIN not changed.	Suspended	No
75	Allowable number of PIN tries exceeded.	Suspended	Yes
76	Invalid <To> Account in Field 3.	Suspended	No
77	Invalid <From> Account in Field 3.	Suspended	No
78	Card not activated yet.	Suspended	No
79	Unacceptable PIN – Transaction declined Retry.	Suspended	No
80	Network error.	Suspended	No
81	Foreign network failure.	Suspended	No
82	Timeout at IEM.	Suspended	No
83	Card destroyed This status is irreversible.	Deactivated / Delete	No
85	Approved (special).	Activated	No
86	PIN validation not possible.	Suspended	No
87	Purchase Amount Only, No Cash Back Allowed.	Suspended	No
88	Cryptographic failure.	Suspended	No
89	Unacceptable PIN.	Suspended	No
90	Invalid ARQC/CVV1/CVV2/CVV3/iCVV.	Suspended	No
91	Issuer or switch is inoperative.	Suspended	No

Status Code	Description	Scheme DPAN Status	Can be changed
92	Unable to route.	Suspended	No
93	Violation of Law.	Suspended	No
94	Duplicate transmission.	Suspended	No
95	Reconcile error.	Suspended	No
96	System malfunction.	Suspended	No
98	Refund given to customer. This status is irreversible.	Suspended	No
99	Card voided. This status is irreversible.	Deactivated / Delete	No
C0	Requires SCA, Card.	Suspended	No
C1	Requires SCA, non-card.	Suspended	No
G1	A short-term block which temporarily blocks card usage for all card transactions (excluding Credits and Refunds) for a short period.	Suspended	Yes
G2	Short-term full block (all transactions are blocked).	Suspended	Yes
G3	Long-term block (excluding Credits and Refunds).	Suspended	Yes
G4	Long-term full block (all transactions are blocked).	Suspended	Yes
G5	Thredd Protect Short-term Debit Block.	Suspended	Yes
G6	Thredd Protect Short-term Full Block.	Suspended	Yes
G7	Thredd Protect Long-term Debit Block.	Suspended	Yes
G8	Thredd Protect Long-term Full Block.	Suspended	Yes
G9	IVR Lost/Stolen Block (like 41 Lost). This status is irreversible.	Deactivated / Delete	No
N0	Force STIP.	Suspended	No
N7	Decline for CVV2 failure.	Suspended	No
P5	PIN Change/Unblock request declined.	Suspended	No
P6	Unsafe PIN.	Suspended	No
5C	Transaction not supported/blocked by issuer.	Live - status can be changed.	Yes

Status Code	Description	Scheme DPAN Status	Can be changed
9G	Blocked by cardholder/contact cardholder.	Live - status can be changed.	Yes

Notes

- Status codes 04, 14, 33, 36, 37, 38, 41, 43, 46, 67, 83, 98, 99, and G9 are irreversible. You should only use these statuses if you intend to set a permanent block on the card. All other status codes are reversible.
  For more information on how to manage cards reported as lost, stolen or destroyed (irreversible status's), see Use Case Scenarios: Updating a Card Status to Lost, Stolen or Destroyed.
- Do not use status 01 (refer to Card Issuer or 54 (expired card) as these are for Thredd use only.
- Changing the status to 99 (card voided) or 98 (refund to customer) automatically generates a card balance adjustment down to 0.00.
- You should use the following status codes for blocks:
  - Temporary Block: G1 or G2.

    Use when you want merchants to try again. Visa guidelines instruct merchants to attempt up to 15 retries over 30 days. A card block takes place for all non-credit, Balance enquiry and tokenisation (digital wallet) transactions. Refunds and Credits are permitted.
  - Permanent Block: G3 or G4. Use when you don’t want merchants to try again. Visa expect that the card should not return to the '00 Approve' state at all, or at least not within 30 days.

Transaction Types

Refer to the table below for a list of transaction types, which can be used in the <TransactionType> tag.

Type	Description
A	Authorisation
B	Balance Adjustment
C	Chargeback
D	Auth Reversal
E	Financial Reversal
F	Fee
G	Payment
H	Chargeback - Non Credit
J	Authorisation Advice
L	Load
N	Second Presentment
P	Presentment
R	Retrieval Request
S	Status Change
U	Unload
W	Repeat Reversal NOT USED
Y	Expiry

Transaction Status

Refer to the table below for a list of transaction status values for the <StatusCode> field.

Type	Description
A	Accepted
C	Cleared
I	Declined
R	Removed
S	Settled
V	Reversed

See usage in: Card Statement, Card Statement (V2)

Load Sources

Refer to the table below for a list of load sources available for the <LoadSrc> field.

Source	Description
1	POS standard
2	Thredd Kiosk
3	Thredd Web Site
4	Card Processor
5	Standard Web Service
6	Agent
7	Head Office
8	Call Centre
9	Customer Web site
10	Wirecard NO LONGER USED
11	Customer kiosk
12	Customer mobile app
13	Thredd IVR
14	Unknown
16	Load From Card Request File
17	Corporate
18	epay
19	HOCA Verifiable
20	Post Office
21	HOCA Non Verifiable
22	Paypoint
23	DXB POS Reload
24	TCC Web Report
25	TCC Online
26	VIRGIN POS Reload
27	TCC POS Reload

Source	Description
28	TCC Promotion
29	DXB Zero Load
30	AlFardan Reload
31	UAEx Reload
32	AlAnsari Reload
33	14 day Cool Off
34	Unload to Repatriate
35	Loan Repayment
36	DXB Online
37	Payzone
38	VIRGIN Zero Load
39	VIRGIN POS standard
40	JADE Web Report
41	JADE POS standard
42	JADE POS Reload
43	JADE Zero Load
44	Wirecard-Cadooz
45	Crunch POS Standard
46	CRUNCH POS Reload
47	Unload Fee Test
48	Balance Transfer Fee Test
49	Sofort Banking
50	Wirecard e-commerce
51	UAExAirport POS Standard
52	UAExAirport Reload
53	Cadooz Load
54	Cadooz Reload
55	Cadooz web unload

Source	Description
56	Sofort Bank Transfer Load
57	Billpay Payment
60	Post Office and Paypoint
61	Credit Limit
62	Credit Card Payment
63	Ukash Payment
64	Bank Transfer
65	Giropay
66	Sofortüberweisung
67	Debit Card
68	Primary Card
74	Master Virtual Card
75	Micropayment
76	MVC Load
77	iMVC Load
78	P2P Transfer
79	Auto-transfer from Primary Card
91	Incoming SEPA Transfers
92	Incoming Direct Debit
93	Outgoing Sepa Transfers
94	Outgoing Direct Debit
95	Voucher
96	Cash Incentive Rewards
97	Entercash
98	Payvision
101	La Banque Postale
102	Loyalty Programme
103	KYC Upgrade_Grp Chng

Source	Description
106	First Load from MVC
107	Cash Deposit
108	International Bank Transfer
109	Balance Transfer - Mtel
110	Balance Transfer - Phyre
111	Balance Transfer - CashTerminal
112	Balance Transfer - Payoo

Item Source Types

Refer to the table below for a list of item source types.

Type	Description
0	Undefined
1	Call Centre
2	Website
3	Interactive Voice Response (IVR) system.
4	SMS
5	mbanking

Load Fund Types

Refer to the table below for a list of load fund types, which you can use within the <loadfundtype> tag.

Type	Description
0	Unknown
1	Cash
2	Debit card
3	Credit card
4	e-Wallet
5	Bank account
6	Import
7	Savings Stamps
8	Cheque
9	Export
10	Transfer
11	From/To Offline Balance

Enums and Data Structures

This section provides details of parameters with Enumerated (Enum) values and data structures.

BankingFeaturesType

Property	Type	Value	Description
BankingIn	Enum	ENUM_BankingIn	See ENUM_BankingInEnabled
BankingOut	Enum	ENUM_BankingOut	See ENUM_BankingOutEnabled
DirectDebitIn	Enum	DirectDebitIn	See ENUM_DirectDebitInEnabled
DirectDebitOut	Enum	DirectDebitOut	See ENUM_DirectDebitOutEnabled
SEPAIn	Boolean	SEPAInEnabled	Allow payments in. Set to *TRUE* or *FALSE*.
SEPAOut	Boolean	SEPAOutEnabled	Allow payments out. Set to *TRUE* or *FALSE*.
AccountName	String	AccountName	Account name.

Changed Banking Features

Property	Type	Value	Description
PublicToken	Integer	PublicToken	Public token
BankingFeatures	Data structure	BankingFeaturesReturnType	See BankingFeaturesReturnType
	Enum	UpdateSuccess	See ENUM_ ChangedBankingFeaturesUpdate
BankingFeaturesReturnType	Enum	BankingIn	See ENUM_BankingInEnabled
	Enum	BankingOut	See ENUM_BankingOutEnabled
	Enum	DirectDebitIn	See ENUM_DirectDebitInEnabled
	Enum	DirectDebitOut	See ENUM_DirectDebitOutEnabled
	Enum	CardEnabled	See ENUM_CardEnabled.

BankingEnabled Enums

Property	Type	Value	Description
ENUM_BankingInEnabled	Enum	Enabled Disabled	Enabled Disabled
ENUM_BankingOutEnabled	Enum	Enabled	Enabled

Property	Type	Value	Description
		Disabled	Disabled
ENUM_DirectDebitInEnabled	Enum	Enabled Disabled	Enabled Disabled
ENUM_DirectDebitOutEnabled	Enum	Enabled Disabled	Enabled Disabled
ENUM_ ChangedBankingFeaturesUpdate	Enum	Success Fail DirectDebitNotAllowed	Successful Failed Direct Debit not allowed

Enum_CardEnabled

Property	Type	Value	Description
ENUM_ CardEnabled	Enum	Enabled Disabled	Enabled Disabled

AccountStatus

Property	Type	Value	Description
AccountStatus	Enum	AccountStatus	See ENUM_AccountStatus.
	Enum	BankingInEnabled	See ENUM_BankingInEnabled.
	Enum	BankingOutEnabled	See ENUM_BankingOutEnabled.
	Enum	DirectDebitInEnabled	See ENUM_DirectDebitInEnabled.
	Enum	DirectDebitOutEnabled	See ENUM_DirectDebitOutEnabled
	Enum	CardEnabled	See ENUM_CardEnabled.

ENUM_AccountStatus

Property	Type	Value	Description
ENUM_ AccountStatus	Enum	Open Closed SuspendedPaymentsInAllowed FullySuspended Deceased Probate	The account is open. The account is closed. The account is suspended, but payments in are allowed. The account is fully suspended. The account holder is deceased The account is in probate (for a deceased account holder)

BLAccount

Property	Type	Value	Description
BLAccount	Integer (long)	PublicToken	Encrypted public token
	String	SortCode	String of the 6-digit sort code
	String	AccountNumber	String of account number
	Enum	Status	Account status. See ENUM_AccountStatus.
	Number	Balance	Account balance (decimal)
	String	UpdateStatusResult	String of status result

BankingFeatures

Property	Type	Value	Description
ExistingToken	String	ExistingToken	Public token.
BankingIn	Boolean	BankingInEnabled	Allow payments in. Set to "TRUE" or "FALSE".
BankingOut	Boolean	BankingOutEnabled	Allow payments out. Set to "TRUE" or "FALSE".
DirectDebitIn	Boolean	DirectDebitInEnabled	Allow direct debit payments in. Set to "TRUE" or "FALSE".
DirectDebitOut	Boolean	DirectDebitOutEnabled	Allow direct debit payments out. Set to "TRUE" or "FALSE".
CardEnabled	Boolean	CardEnabled	Indicates whether the card is enabled. Set to "TRUE" or "FALSE".
Status	String	Status	Account status code.
CompanyName	String	CompanyName	Company name.
AccountName	String	AccountName	Account name.

Notes

- Populating the ExistingToken field will add banking features onto an existing card.
- Boolean options, if not populated, will default to true.
- The status codes and their associated options are shown below (0 = false, 1 = true).

Status Code	Description	AllowPaymentsIn	AllowPay-mentsOut	AllowDir-ectDebitIn	AllowDir-ectDebitOut	Priority	BlockCard	CardStatus
C	Closed	0	0	0	0	1	1	5
D	Customer deceased	1	0	0	0	1	1	5

F	Full sus-pended	0	0	0	0	1	1	5
O	Open	1	1	1	1	0	1	0
P	Probate	1	1	0	0	1	1	5
S	Suspended payments in allowed	1	0	0	0	1	1	5

* Priority - takes precedent over any other account settings.
** When creating a card, the status is automatically set to status "O" (open).
*** For CardStatus, see Card Status.

BankingError

Property	Type	Value	Description
BankingError	String	field	Error message field.
	String	code	Error message code.
	String	message	Error message.
	String	error	Error.

Beneficiary

Property	Type	Value	Description
Beneficiary	String	AccountNumber	Account number
	String	SortCode	Sort code
	String	AccountName	Account name
	String	IBAN	IBAN

SEPABeneficiaryAddress

Property	Type	Value	Description
SEPABeneficiaryAddress	String	AddressLine1	First line of the address
	String	AddressLine2	Second line of the address
	String	PostTown	Address town or city
	String	PostCode	Address postcode
	String	Country	Address country

ENUM_PaymentMethod

Property	Type	Value	Description
ENUM_ PaymentMethod	Enum	FasterPaymentIn FasterPaymentOut BACSIn BACSOut DirectDebitIn FasterPaymentReturn PeerToPeerIn PeerToPeerOut SEPAOut	Faster Payment into the account Faster Payment out of the account BACS payment into the account BACS payment out of the account Direct Debit payment into the account Faster Payment returned Peer-To-Peer payment into the account Peer-To- Peer payment out of the account SEPA payment out of the account

ENUM_PaymentDirection

Property	Type	Value	Description
ENUM_ PaymentDirection	Enum	Outbound Inbound	Payment out of the account. Payment into the account.

ENUM_TransferFundsResult

Property	Type	Value	Description
ENUM_ TransferFundsResult	Enum	Success Failure	Transfer of funds was successful. Transfer of funds failed.

ENUM_DirectDebitCancellationReason

Property	Type	Value	Description
ENUM_ DirectDebitCancellationReason	Enum	AccountClosed CancelledByDebtor DebtorDeceased ReferToDebtor	Account closed. Cancelled by debtor. The debtor is deceased.

ENUM_DirectDebitCancelStatus

Property	Type	Value	Description
ENUM_ DirectDebitCancelStatus	Enum	Success Failure	Cancel of direct debit was successful. Cancel of direct debit failed.

ENUM_DirectDebitStatus

Property	Type	Value	Description
ENUM_ DirectDebitStatus	Enum	0 1 2 3 4 5	Active Suspended Cancelled Pending Dormant Expired

BLDirectDebit

Type	Value	Description
DateTime	Created	Date and time created
Enum	CreationMethod	Creation method. See Enum_CreationMethod
String	CreditorAccountName	Creditor account name
String	CreditorBIC	Creditor BIC
String	CreditorIBAN	Creditor IBAN
String	CreditorReference	Creditor reference
String	DebtorAccountID	Debtor account ID
String	DerivedReference	Derived reference
String	IBAN	IBAN
Guid	ID	ID
Boolean	IgnoreTransactionCode	Whether to ignore the transaction code
Boolean	IsInstructionHeldAtBank	Whether the instruction is held at a bank
Boolean	IsPaperless	Whether the instruction is paperless
Boolean	IsThroughNotificationService	Whether the instruction is through a notification service
DateTime	LatChanged	Date last changed
String	Reference	Reference
String	ServiceUserNumber	ServiceUserNumber
Enum	Status	Direct debit status. See ENUM_DirectDebitStatus
Boolean	SuppressFirstDirectDebit	Whether to suppress the first direct debit

ENUM_ChangeAccountStatus

Property	Type	Value	Description
ENUM_ ChangeAccountStatus	Enum	Success Failure AccountDoesNotExist AccountInvalidStatus	Account status change successful Account status change failed Account does not exist Invalid account status

ENUM_CreationMethod

Property	Type	Value	Description
ENUM_ CreationMethod	Enum	Unknown Manual Imported	Unknown creation method Manually entered into system Imported into system

ENUM_PendingDirectDebit

Property	Type	Value	Description
ENUM_ PendingDirectDebit	Enum	LikelySuccess LikelyFailure	Pending Direct Debit likely to succeed. Pending Direct Debit likely to fail.

3D Secure Data Structures

Detail

Property	Type	Value	Description
Detail	String	ENUM_3DS_Details	See ENUM_3DS_Details.

ENUM_3DS_Details

Value	Description
EmbossedName	Up to 120 characters allowed
Last4SSN	Four digit integer.
DateOfBirth	Must be in the format YYYYMMDD.
PANExp	Four digit integer.
FirstName	Up to 120 characters allowed.

Value	Description
MiddleName	Up to 120 characters allowed.
LastName	Up to 120 characters allowed.
NamePrefix	Up to 120 characters allowed.
NameSuffix	Up to 120 characters allowed.
FullSSN	Nine digit integer.
Last6SSN	Six digit integer.
MothersMaidenName	Up to 120 characters allowed.
HomePhone	Up to 50 digit integer.
BusinessPhone	Up to 50 digit integer.
AltPhone1	Up to 50 digit integer.
AltPhone2	Up to 50 digit integer.
RelationshipType	Must be one of the following primary, co-applicant, authorized)
CustomerID	Up to 120 characters allowed.
AddressLine1	Up to 120 characters allowed.
AddressLine2	Up to 120 characters allowed.
City	Up to 120 characters allowed.
StateCode	Two digits
ZipCode	Five digits
CountryCode	Two characters according to ISO 3166-1 alpha-2 standards.
DayOfBirth	Two digits
MonthOfBirth	Two digits
YearOfBirth	Two digits
CreditLimit	Nine digits
LastStatementDate	Must be format YYYYMMDD.
CompanyName	Up to 120 characters allowed
CompanyTel	Up to 50 digit integer
BranchNumber	Ten digits
AccountNumber	Ten digits

Value	Description
Misc1	Up to 120 characters allowed.
Misc2	Up to 120 characters allowed.
Misc3	Up to 120 characters allowed.
Misc4	Up to 120 characters allowed.
Misc5	Up to 120 characters allowed.
Misc6	Up to 120 characters allowed.
Misc7	Up to 120 characters allowed.
Misc8	Up to 120 characters allowed.

ENUM_3DS_Action

Property	Type	Value	Description
ENUM_3DS_Action	String	Add Update Delete	Add 3DS record. Update 3DS record. Delete 3DS record.

Ws_3DS_ReIssue

Property	Type	Value	Description
Ws_3DS_ReIssue	Boolean	ReIssue	Re-issue 3DS token.
	Integer	NewToken	New token value.

Agency Banking Data Structures

Associate

Property	Type	Description
applicant	Boolean	Whether the associate is an applicant.
dateOfBirth	DateTime	Date of birth.
documentInfo	String	Document information
firstName	String	First name
lastName	String	Last name

Property	Type	Description
middleName	String	Middle name
ownership	Int	Ownership
phone	String	Phone
homeAddress	Object	See homeAddress

DocumentInfo

Property	Type	Description
filename	String	Filename of the file sent to the SFTP server.
filepath	String	Filepath to where the file is stored on the SFTP server.
uploadDate	DateTime	Date uploaded to the SFTP server.

homeAddress

Property	Type	Description
addressLine1	String	Address line 1
addressLine2	String	Address line 2
posttown	String	Town
postCode	String	Postcode
country	String	Country

RegisteredAddress

Property	Type	Description
addressLine1	String	Address line 1
addressLine2	String	Address line 2
posttown	String	Town
postCode	String	Postcode
country	String	Country

TradingAddress

Property	Type	Description
addressLine1	String	Address line 1
addressLine2	String	Address line 2
posttown	String	Town
postCode	String	Postcode
country	String	Country

BankingFeaturesReturnType

Property	Type	Description
BankingIn	Enum	See ENUM_BankingInEnabled
BankingOut	Enum	See ENUM_BankingOutEnabled
DirectDebitIn	Enum	See ENUM_DirectDebitInEnabled
DirectDebitOut	Enum	See ENUM_DirectDebitOutEnabled
CardEnabled	Enum	See ENUM_CardEnabled
AccountName	String	The account name.

DD_MANDATES

Type	Value	Description
MandateId	AN	The mandateId related to the direct debit mandate.
MerchantName	AN	MerchantName from the latest DD_INCOMING_DEBIT with the same MandateID.
LastScheduledAmount	N	Amount of last PAYOUT with same Mandate ID.
MandateStatus	AN	The NewStatus of the mandate.
MandateCreatedDate	Date	Date that the mandate ID was originally added to the database.

Payment Token Types

Refer to the table below for a list of transaction types.

Type	Description
C	Contactless Device PAN
CF	Card on File PAN
CL	Cloud-base payments PAN
P	Real PAN (i.e. a normal ISO form factor card)
SE	Secure Element PAN
U	Unknown
V	Virtual PAN (i.e. virtual card)
BW	Browser-accessible wallet

Field Validation

This section provides additional information on Thredd's field validation checks, which are run on numerical data fields containing amounts and phone numbers.

Note: For information on additional field validation and string cleaning reformatting on other types of fields containing alphabetical data, see String Cleaning and Approved Characters.

Amount Validation

Amount value validation is run on any field that contains an amount value. For example: LoadValue, LoadFee, AmtUnLoad, AmtTxn, Fee and AmtAdjustment.

Validation Rules

- Amounts can be up to a maximum value of 15 digit numbers + 4 decimal places. For example: *123456789012345.1234*
- Amounts must contain proper amount values only.
  - Negative values are not permitted. For example, the following will be rejected: -123.22
  - Values starting with a '+' sign are not permitted. For example, the following will be rejected: +123.22
- Amounts must not contain any commas, letters, spaces, special characters or more than one decimal indicator. For example, the following will be rejected:

Invalid Amount	Reason for rejection
124.99$	No special characters allowed.
123456 GBP	No letters allowed.
123,45	No commas allowed.
91 987	No spaces allowed.
12.34.5	Only one decimal indicator is allowed.

Note: In regions where commas are used to indicate decimal places, these should be converted to decimal points. Your systems should remove any currency signs, spaces, currency letters or direction indicators (+ or - signs) before submitted a web service to Thredd.

Action Codes

For invalid amount values, our systems respond with action code: 439. See Action Codes.

Phone Number Validation

Phone number value validation is run on the following fields that contain a phone number: Mobile, Tel, Mobtel and Worktel.

Validation Rules

- Phone numbers can be up to a maximum value of 15 digit numbers. For example: 123456789012345

Note: A standard phone number cannot contain more than 15 digits according to the international E.164 numbering plan, which sets the maximum at 15 digits including the country code.

- A Phone number must be properly formatted.
    - Starting a number with an optional single '+' sign is allowed. But double plus (++) is not allowed. For example: +442037409682 is allowed.
      ++442037409682 is not allowed.
    - Negative values (starting with minus '-' symbol) are allowed, though the minus symbol is cleaned by the system. For example: -442037409682 would be cleaned to be 442037409682.
    - Numbers which include spaces are allowed, though the spaces are cleaned. For example: 44203 7409 682 would be cleaned to be 442037409682.
- Only numbers from 0 to 9 are allowed. If phone numbers contain any commas, special characters or decimal indicators then they will be cleaned so only the numbers remain. If the phone number has any letters then the number is rejected. See the following examples of what is and isn't accepted:

Phone Number	Result
UK 2037409682	Rejected. No letters allowed.
203,740,9682	Accepted and cleaned to read 2037409682.
203.740.9682	Accepted and cleaned to read 2037409682.
-2037409682	Accepted and cleaned to read 2037409682.
203 7409 682	Accepted and cleaned to read 2037409682.

Note: For information on string cleaning on phone numbers, see String Cleaning and Approved Characters.

Action Codes

For invalid phone number values, our systems respond with action code: 439. See Action Codes.

String Cleaning and Approved Characters

Thredd cleans any strings before adding to the database, limiting characters to the ASCII range of 33 to 122. This is aimed at stopping any unexpected characters in the core data for Authorisation, Presentments and Transactions, and to ensure data can be reliably used by EHI, Reporting, Smart Client, Thredd Portal and other systems.

Note: These lists are subject to change over time as printing capabilities and customer requirements change. For details, check with your Implementation Manager.

Characters Removed from Input Fields

The following special characters are removed from input fields:

Field	Special Characters that will be removed
CardName	;:!?\<>~#%@{}|[]”
FirstName	;:!?\<>~#%@{}|[]”
LastName	;:!?\<>~#%@{}|[]”
EmbossLine4	;,\:!?<>~`#%^@(){}|’[]”
Addrl1	;:!?\<>~`#%^@{}|[]”
Addrl2	;:!?\<>~`#%^@{}|[]”
Addrl3	;:!?\<>~`#%^@{}|[]”
City	;:!?\<>~`#%^@(){}|&[]”
PostCode	;:!?\<>~`#%^@(){}|&[]”
Country	;:!?\<>~`#%^@(){}|&[]”
Delv_AddrL1	;:!?\<>~`#%^@{}|[]”
Delv_AddrL2	;:!?\<>~`#%^@{}|[]”
Delv_AddrL3	;:!?\<>~`#%^@{}|[]”
Delv_City	;:!?\<>~`#%^@(){}|&[]”
Delv_County	;:!?\<>~`#%^@(){}|&[]”
Delv_PostCode	;:!?\<>~`#%^@(){}|&[]”
Delv_Country	;:!?\<>~`#%^@(){}|&[]”
Delv_Code	;:!?\<>~`#%^@(){}|&[]”
Fulfil1	;,/:!?\<>~`#%^(){}|&’[]”
Fulfil2	;,/:!?\<>~`#%^(){}|&’[]”
ThermalLine1	;:!?\<>~`#%^@(){}|&[]”

Field	Special Characters that will be removed
ThermalLine2	;:!?\<>~`#%^@{}|&[]”
Title	;:!?\<>~`#%^@(){}|&[]”
ImageId	;:!?\<>~`#%^@(){}|&[]”
LogoFrontId	;:!?\<>~`#%^@(){}|&[]”
LogoBackId	;:!?\<>~`#%^@(){}|&[]”
Mobile	;,:!?\<>~`#%^@-=*_$??(){}|&’[]”
ExternalRef	;,.\/:!?<>~`#%^@(){}&’[]”
CustAccount	;,.\/:!?<>~`#%^@(){}&’[]”
Email	;,/:!?\<>~`#%^(){}|&'[]"
Url	<>&'"
Reason	;,.\/!?<>~`#%^@(){}|&’[]”
Date fields (e.g. DOB, LocDate)	;,\/:!?<>~`#%^@+*_$(){}|&'[]"
Other string fields	;:!?\<>~`#%^@(){}|&[]”

Card Manufacturer Approved Characters

When submitting the *CardName* and *EmbossName* parameters (or *FirstName* and *LastName* if *CardName* is empty), note that the card manufacturer only accepts the following approved characters:

Manufacturer	Allowed Characters
ABNote Australasia	abcdefghijklmnopqrstuvwxyzABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789Ã¤Ã¶Ã¼Ã„Ã-Ãœ.-^()+
AB Corp	abcdefghijklmnopqrstuvwxyzABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789Ã¤Ã¶Ã¼Ã„Ã-Ãœ.-^'"&\/?"
AB Corp AU	abcdefghijklmnopqrstuvwxyzABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789Ã¤Ã¶Ã¼Ã„Ã-Ãœ.-^'"&\/?"
AB CORP NZ	abcdefghijklmnopqrstuvwxyzABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789Ã¤Ã¶Ã¼Ã„Ã-Ãœ.-^'"&\/?"
AllPay (ZEBIT)	abcdefghijklmnopqrstuvwxyzABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789Ã¤Ã¶Ã¼Ã„Ã-Ãœ.-^/`'()+
ArrowEye	abcdefghijklmnopqrstuvwxyzABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789Ã¤Ã¶Ã¼Ã„Ã-Ãœ.-^/&`'()+
Austria Card	abcdefghijklmnopqrstuvwxyzABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789Ã¤Ã¶Ã¼Ã„Ã-Ãœ.-^'
Borica	abcdefghijklmnopqrstuvwxyzABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789Ã¤Ã¶Ã¼Ã„Ã-Ãœ.-^'
Catalyst	abcdefghijklmnopqrstuvwxyzABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789Ã¤Ã¶Ã¼Ã„Ã-Ãœ.-^'&\/?'

Manufacturer	Allowed Characters
CPI	abcdefghijklmnopqrstuvwxyzABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789Ã¤Ã¶Ã¼Ã„Ã-Ãœ.-^`'
CPI Card Group Canada	ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz1234567890Ã„Ã…Ã†Ã‡Ã‰Ã‘Ã-ÃœÃ Ã¡Ã¢Ã¤Ã¥Ã¦Ã§Ã¨Ã©ÃªÃ«Ã¬ÃÃ®Ã¯Ã±Ã²Ã³Ã´Ã¶Ã¹Ãº Ã»Ã¼Ã¿Ã¼Ã¶

Manufacturer	Allowed Characters
Intaremit	abcdefghijklmnopqrstuvwxyzABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789Ã¤Ã¶Ã¼Ã„Ã-Ãœ.-^
MTL	abcdefghijklmnopqrstuvwxyzABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789Ã¤Ã¶Ã¼Ã„Ã-Ãœ.-^
Morpho Cards	abcdefghijklmnopqrstuvwxyzABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789Ã¤Ã¶Ã¼Ã„Ã-Ãœ.-^'
Nagra ID	abcdefghijklmnopqrstuvwxyzABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789Ã¤Ã¶Ã¼Ã„Ã-Ãœ.-^/&`'()+
Nitecrest	abcdefghijklmnopqrstuvwxyzABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789.-^""'ÃŸÃ€Ã Ã‚Ã„ƒÃ …Ã†Ã‡Ãˆ‰ÃŠÃ‹ÃŒÃŽÃ Ã‘Ã’Ã“Ã”Ã•Ã–Ã˜Ã™Ã›Ã™Ã›Ã™Ã™Ã–Ã˜Ã™Ã›Ã™Ã™Ã–Ã˜Ã™Ã›Ã™Ã™Ã–Ã˜

Character	Unicode value	Character	Unicode value
#	U+0023	Ú	U+00DA
$	U+0024	Û	U+00DB
%	U+0025	Ü	U+00DC
&	U+0026	Ü	U+00DC
'	U+0027	ß	U+00DF
(	U+0028	à	U+00E0
)	U+0029	á	U+00E1
*	U+002A	â	U+00E2
+	U+002B	ã	U+00E3
,	U+002C	ä	U+00E4
-	U+002D	å	U+00E5
.	U+002E	æ	U+00E6
/	U+002F	ç	U+00E7
/	U+002F	è	U+00E8
:	U+003A	é	U+00E9
;	U+003B	ê	U+00EA
<	U+003C	ë	U+00EB
=	U+003D	ì	U+00EC
>	U+003E	í	U+00ED
?	U+003F	î	U+00EE
?	U+003F	ñ	U+00F1
@	U+0040	ò	U+00F2
[	U+005B	ó	U+00F3
\	U+005C	ô	U+00F4
]	U+005D	õ	U+00F5

Character	Unicode value	Character	Unicode value
^	U+005E	ö	U+00F6
_	U+005F	ù	U+00F9
c	U+0063	ú	U+00FA
d	U+0064	û	U+00FB
e	U+0065	ü	U+00FC
l	U+006C	ý	U+00FD
n	U+006E	ÿ	U+00FF
r	U+0072	ă	U+0103
t	U+0074	Ć	U+0106
u	U+0075	Č	U+010C
|	U+007C	Ď	U+010E
£	U+00A3	Ę	U+0118
¤	U+00A4	Ĺ	U+0139
°	U+00B0	Ľ	U+013D
À	U+00C0	Ł	U+0141
Á	U+00C1	Ń	U+0143
Â	U+00C2	Ň	U+0147
Ã	U+00C3	Ő	U+0150
Ä	U+00C4	Ŕ	U+0154
Å	U+00C5	Ś	U+015A
Å	U+00C5	Š	U+0160
Æ	U+00C6	š	U+0161
Ç	U+00C7	Ť	U+0164
È	U+00C8	Ű	U+0170
É	U+00C9	Ź	U+0179

Character	Unicode value	Character	Unicode value
Ê	U+00CA	Ż	U+017B
Ê	U+00CA	Ž	U+017D
Ë	U+00CB	ž	U+017E
Ì	U+00CC	Ș	U+0218
Í	U+00CD	Ț	U+021A
Î	U+00CE	’	U+2019
Ï	U+00CF	„	U+201E
Ñ	U+00D1	€	U+20AC
Ò	U+00D2	Ö	U+00D6
Ó	U+00D3	Ø	U+00D8
Ô	U+00D4	Ù	U+00D9
Õ	U+00D5	Ú	U+00DA
Ö	U+00D6		

Replacement of Diacritic Letters

In addition to restricting the characters allowed, Thredd also automatically replaces common diacritic letters with Latin alphabet letters. This applies only to track data used for the manufacturer files.

Diacritic Letter	Classic Latin Alphabet Letter
Á	A
á	a
Ä	A
ä	a
À	A
à	a
Â	A
â	a
Ã	A

Diacritic Letter	Classic Latin Alphabet Letter
ã	a
Å	A
å	a
Ç	C
ç	c
É	E
é	e
È	E
è	e
Ê	E
ê	e
Ë	E
ë	e
Í	I
í	i
Î	I
î	i
Ï	I
ï	i
Ì	I
ì	i
Ñ	N
ñ	n
Ó	O
ó	o
Ô	O
ô	o
Ò	O

Diacritic Letter	Classic Latin Alphabet Letter
ò	o
Ö	O
ö	o
Õ	O
õ	o
Ú	U
ú	u
Û	U
û	u
Ü	U
ü	u
Ù	U
ù	u
Ÿ	Y
ÿ	y
Ý	Y
ý	y
ß	S
Æ	AE
æ	ae
Œ	OE
œ	oe
Č	C
č	c
Ď	D
ď	d
Ě	E
ě	e

Diacritic Letter	Classic Latin Alphabet Letter
Ĺ	L
Í	I
Ľ	L
ľ	l
Ň	N
ň	n
Ő	O
ő	o
Ř	R
ř	r
Š	S
š	s
Ť	T
ť	t
Ű	U
ű	u
Ů	U
ů	u
Ž	Z
ž	z
Ø	O
Ą	A
ą	a
Ć	C
ć	c
Ę	E
ę	e
Ł	L

Diacritic Letter	Classic Latin Alphabet Letter
ł	l
Ń	N
ń	n
Ø	O
ø	o
Ŕ	R
ŕ	r
Ś	S
ś	s
Ș	S
ș	s
Ț	T
ț	t
Ź	Z
ź	z
Ż	Z
ż	z

Character Support in Web Services Calls

Postcode Permitted Characters

You can use the following characters in the `Postcode` field:

- Arabic numerals "0" to "9"
- letters of the ISO basic Latin alphabet (A-Z, a-z)
- spaces
- hyphens(-).

Card Name Permitted Characters

You can use the following characters in the `CardName` field:

- abcdefghijklmnopqrstuvwxyz
- ABCDEFGHIJKLMNOPQRSTUVWXYZ
- 0123456789
- Some non-english characters i.e. “äöüÄÖÜ”
- “/” (forward slash)
- “-“ (hyphen)
- “^” (caret)
- “.” (full stop)
- “ “ (space character)
- “’” (apostrophe)

If you are using **Thredd** as your Card Manufacturer, for example, for Virtual cards where an external card manufacturer is not needed, the the `CardName` field permits the following additional characters in :
^'"ßÀÁÂÃÄÅÆÇÈÉÊËÌÍÎÏÑÒÓÔÕÖØŠÙÚÛÜŸÝŽĄĆČĎĘĹĽŁŃŇŐŔŚŞŢŤŰŹŻäácdæéëeíllnöoøôrštüúuuýžäöüÄÖÜ.-^’,&\/?’

Processing of Phone Numbers

Thredd processes phone numbers in web services as follows:

- Allows up to a maximum of 15 digits.
- Deletes all special characters, left and right parenthesis (i.e. brackets), spaces and hyphens “-“.
- Deletes all leading non-numeric characters except “+”. Non-leading non-numeric characters (e.g. “-“) are deleted.
- If the phone number has any letters then the number is rejected.
- Depending on the country, the national (domestic/inter-regional within a country) dialling prefix (e.g. single zero for many countries such as the UK, France, Spain, Australia) is dropped. The "+" and the IDD (International Direct Dialing) number is prefixed. For example:
  - London, UK: 020 7292 2400 is changed to `+442072922400`
  - Lyon, France: 04 72 12 34 56 78 is changed to `+3347212345678`
  - Kuala Lumpur, Malaysia: 03 2123 4567 is changed to `+60321234567`
  - Mobile number, Spain: 0612 345 678 is changed to `+34612345678`
  - Sydney, Australia: 02 7010 1111 is changed to `+61270101111`

  Note: IDD number prefixing is used across all endpoints that handle phone numbers.
- If there is a "+" prefix, Thredd checks if the digits which follow match the IDD number of the specified country. If they don't match, nothing is done. If they do match, Thredd checks if the digits which follow match the national dialling prefix (e.g. single zero for many countries such as UK, France, Spain, Australia). If they do match, the national dialling prefix is dropped. For example:

    - London, UK: +44 020 7292 2400 is changed to +442072922400
    - Lyon, France: +33 04 72 12 34 56 78 is changed to +3347212345678
    - Kuala Lumpur, Malaysia: +60 03 2123 4567 is changed to +60321234567
    - Mobile number, Spain: +34 0612 345 678 is changed to +34612345678
    - Sydney, Australia: +61 02 7010 1111 is changed to +61270101111
- If there is no leading "+" or national dialling prefix, the phone number is stored as it is.

Note: If invalid values such as alphabetic characters, alphanumeric characters or numbers exceeding 15 digits are provided, the service returns Action Code 439.

Processing Codes (DE003)

Refer to the table below for a list of processing codes returned in the <ProcCode> field for a Card Statement request. These codes use the DE003 messages for Mastercard or Visa transactions. Thredd uses this field to supply a processing code for Thredd-generated transactions; The codes are listed in the **Processing Code** screen on Smart Client. In Thredd Portal, these codes are also listed in a drop-down for filtering transactions.

Code	Description
000000	Debits (goods and services)
001000	Purchase with Savings account
001999	Fees : POS Standard
002000	Purchase with Checking account
002999	Fees : Thredd Kiosk
003000	Purchase with Credit Card account
003900	Purchase - Corporate account
003999	Fees : Thredd Web Site
004000	Purchase with Universal Account
004999	Fees : Card Processor
005999	Fees : Standard Web Service
006000	Purchase - Stored value account
006999	Fees : Agent
007999	Fees : Head Office
008999	Fees : Call Centre
009999	Fees : Customer Web site
010000	Debits (for ATM withdrawals, or for cash disbursements using Maestro cards)
010999	Fees : Wirecard
011000	Withdrawal with Savings account
011999	Fees : Customer kiosk
012000	Withdrawal with Checking account
012999	Fees : Customer mobile app
013000	Withdrawal with Credit Card account
013900	Withdrawal - Corporate account
013999	Fees : Thredd IVR

Code	Description
014000	Withdrawal with Universal Account
014999	Fees : Unknown
016000	Withdrawal - Stored value account
016999	Fees : Card Request File
017999	Fees : Corporate
018999	Fees : epay
019999	Fees : HOCA Verifiable
020000	Adjustment Credits
021000	Adjustment Credits
022999	PayPoint Load Fee
023999	Fees : POS Relaod
024999	Fees : TCC Web Report
026999	Fees : VIRGIN POS Reload
029999	Fees : DXB Zero Load
030999	Fees : AlFardan Reload
031999	Fees : UAEx Reload
032999	Fees : AlAnsari Reload
033999	Fees : 14 day Cool Off
034999	Fees : Unload to Repatriate
038999	Fees : VIRGIN Zero Load
041999	Fees : JADE POS standard
042999	Fees : JADE POS Reload
043999	Fees : JADE Zero Load
044999	Fees : Wirecard-Cadooz
045999	Fees : Crunch POS Standard
047999	Fees : Unload
048999	Fees : Balance Transfer
049999	Fees : Sofort Banking

Code	Description
050999	Fees : Wirecard e-commerce
052999	Fee: Load1

Device Types

The <Device_Type> tag uses the following device type codes when requesting a payment token.

Code	Description
A	Clothing or apparel
B	Media or Gaming device, e.g., XBox, TV, set-top box
C	Card (no further detail)
D	Domestic application, e.g., fridge, washing machine
F	Fob or key-fob
G	Mobile tag, case or sleeve
H	Fashion accessory, e.g., handbag, glasses
J	Jewellery, e.g., necklace, rings, bracelets
M	Mobile phone (no further detail)
P	Personal computer or laptop
R	Wristband (no further detail.). Possibly includes rings too.
S	Sticker
T	Tablet (no further detail)
U	Unknown
V	Vehicle
W	Watch (no further detail)
X	Mobile phone or tablet (sender unclear)

Fraud Type Codes

The details on this page are relevant to the Mastercard SAFE Reporting programme, and are for information use only. For further details of fraud type codes, refer to the *Mastercard SAFE Products User Guide*.

Note: File-based SAFE reporting via web services is currently not available. You should raise your SAFE reports using Smart Client. See PRN-39.

Fraud Type Codes

The table below contains acceptable values for reporting a fraud type.

Code	Description
00	Lost Fraud. A fraudulent transaction that occurs with the use of a lost credit or debit card.
01	Stolen Fraud. A fraudulent transaction that occurs with the use of a stolen credit or debit card.
02	Never Received Issue. The interception and use of a credit or debit card before receipt by the of the cardholder.
03	Fraudulent Application. A fraudulent transaction that occurs with the use.
04	Counterfeit Card Fraud. The use of altered or illegally reproduced credit or debit card including the replication or alteration of the magnetic stripe or embossing.
05	Account Takeover Fraud. An existing credit or debit account is used without the actual, implied, or apparent authority of the cardholder.
06	Card Not Present Fraud. A fraudulent transaction that occurs with the use of credit or debit account information in a card not present transaction.
07	Multiple Imprint Fraud. A fraudulent transaction that occurs with a credit or debit card where the merchant, having completed a legitimate face-to-face transaction, deposits one or more additional transactions without the actual, implied, or apparent authority of the cardholder.
51	Bust-out Collusive Merchant. A collusive cardholder engaging in transactions with a collusive merchant as defined in the Cardholder-Merchant Collusion Program.

Sub-fraud Type Codes

The table below contains acceptable values for reporting a sub-fraud type.

Code	Description
K	Convenience or Balance Transfer check transaction
N	PIN not used in transaction
P	PIN used in transaction
U	Unknown

Wallet Tokenisation Reason Codes

The wallet service provider tokenisation reason codes are a string of 24 ASCII characters which are '0' or '1':

- 0 = this reason is not set
- 1 = reason set

The first reason is in the last character, the second reason in the second last character, and so on. For example, if reasons 1, 5 and 16 were set, then wallet_reasons would be the string "*000000001000000000010001*".

Wallet_Reasons

Refer to the table below for a list of reason codes.

Reason	Offset in wallet_ reasons	Meaning (common for all wallets)	Apple Pay Description
1	24	Account too new since launch	Apple ID was created 40 days or less prior to launch.
2	23	Account too new	Apple ID was created 40 days or less prior to provisioning request.
3	22	Account Card too new	Apple ID / card pair is less than 20 days old.
4	21	Account Data recently changed	Changes have been made to the account settings for the Apple ID in the last 20 days.
5	20	Suspicious activity	Suspicious transactions linked to this account.
6	19	Inactive account	The account has not had activity in the last year.
7	18	Device has suspended tokens	Suspended cards in the secure element
8	17	Device recently lost	The phone was put in lost mode in the last 7 days for longer than the duration threshold (1 hour).
9	16	Too many recent attempts to digitise a payment token	The number of provisioning attempts for this card on this device in 72 hours exceeds the threshold (3 attempts).
10	15	Digitisations too frequent	There have been more than the threshold number of different cards attempted at provisioning to this phone in 24 hours (5 different cards).
11	14	Too many different cardholders	The card provisioning request contains a distinct name in excess of the permitted threshold (2 distinct names).
12	13	Low device score	Device score is less than 3.
13	12	Low account score	Account score is less than 4.
14	11	Digitisation attempted outside home territory or country	Device provisioning location outside of device region.
15	10	Recommendation system inoperative	Model rules not available at this time (in cases where back end systems time out).
16	9	High risk detected	Apple algorithm identified high fraud risk, enhanced verification recommended.

Reason	Offset in wallet_ reasons	Meaning (common for all wallets)	Apple Pay Description
17	8	?	Phone number score is less than 3.
18	7	RFU	Reserved for Future Use
19	6	RFU	Reserved for Future Use
20	5	RFU	Reserved for Future Use
21	4	RFU	Reserved for Future Use
22	3	RFU	Reserved for Future Use
23	2	RFU	Reserved for Future Use
24	1	RFU	Reserved for Future Use

Currency Codes

Currency codes are based on the ISO 4217 specification.

Thredd uses the currency exponent in all fields containing an amount. See Amounts and Currency Exponents.

Code	Number	Exponent	Currency
AED	784	2	United Arab Emirates dirham
AFN	971	2	Afghan afghani
ALL	008	2	Albanian lek
AMD	051	2	Armenian dram
AOA	973	2	Angolan kwanza
ARS	032	2	Argentine peso
AUD	036	2	Australian dollar
AWG	533	2	Aruban florin
AZN	944	2	Azerbaijani manat
BAM	977	2	Bosnia and Herzegovina convertible mark
BBD	052	2	Barbados dollar
BDT	050	2	Bangladeshi taka
BGN	975	2	Bulgarian lev
BHD	048	3	Bahraini dinar
BIF	108	0	Burundian franc
BMD	060	2	Bermudian dollar
BND	096	2	Brunei dollar
BOB	068	2	Boliviano
BOV	984	2	Bolivian Mvdol
BRL	986	2	Brazilian real
BSD	044	2	Bahamian dollar
BTN	064	2	Bhutanese ngultrum
BWP	072	2	Botswana pula
BYN	933	2	Belarusian ruble (new)
BYR	974	2	Belarusian Ruble (old)

Code	Number	Exponent	Currency
BZD	084	2	Belize dollar
CAD	124	2	Canadian dollar
CDF	976	2	Congolese franc
CHE	947	2	Swiss WIR Euro
CHF	756	2	Swiss franc
CHW	948	2	Swiss WIR Franc
CLF	990	4	Chile Unidad de Fomento
CLP	152	0	Chilean peso
CNH	157	2	Chinese Offshore Renminbi/Yuan
CNY	156	2	Chinese Renminbi/Yuan
COP	170	2	Colombian peso
COU	970	2	Unidad de Valor Real (UVR)
CRC	188	2	Costa Rican colon
CUC	931	2	Cuban convertible peso
CUP	192	2	Cuban peso
CVE	132	0	Cape Verde escudo
CZK	203	2	Czech koruna
DJF	262	0	Djiboutian franc
DKK	208	2	Danish krone
DOP	214	2	Dominican peso
DZD	012	2	Algerian dinar
EGP	818	2	Egyptian pound
ERN	232	2	Eritrean nakfa
ETB	230	2	Ethiopian birr
EUR	978	2	Euro
FJD	242	2	Fiji dollar
FKP	238	2	Falkland Islands pound
GBP	826	2	Great Britain (UK) Pound Sterling

Code	Number	Exponent	Currency
GEL	981	2	Georgian lari
GHS	936	2	Ghanaian cedi
GIP	292	2	Gibraltar pound
GMD	270	2	Gambian dalasi
GNF	324	0	Guinean franc
GTQ	320	2	Guatemalan quetzal
GYD	328	2	Guyanese dollar
HKD	344	2	Hong Kong dollar
HNL	340	2	Honduran lempira
HRK	191	2	Croatian kuna
HTG	332	2	Haitian gourde
HUF	348	2	Hungarian forint
IDR	360	2	Indonesian rupiah
ILS	376	2	Israeli new shekel
INR	356	2	Indian rupee
IQD	368	3	Iraqi dinar
IRR	364	2	Iranian rial
ISK	352	0	Icelandic króna
JMD	388	2	Jamaican dollar
JOD	400	3	Jordanian dinar
JPY	392	0	Japanese yen
KES	404	2	Kenyan shilling
KGS	417	2	Kyrgyzstani som
KHR	116	2	Cambodian riel
KMF	174	0	Comoro franc
KPW	408	2	North Korean won
KRW	410	0	South Korean won
KWD	414	3	Kuwaiti dinar

Code	Number	Exponent	Currency
KYD	136	2	Cayman Islands dollar
KZT	398	2	Kazakhstani tenge
LAK	418	2	Lao kip
LBP	422	2	Lebanese pound
LKR	144	2	Sri Lankan rupee
LRD	430	2	Liberian dollar
LSL	426	2	Lesotho loti
LYD	434	3	Libyan dinar
MAD	504	2	Moroccan dirham
MDL	498	2	Moldovan leu
MGA	969	2	Malagasy ariary
MKD	807	2	Macedonian denar
MMK	104	2	Myanmar kyat
MNT	496	2	Mongolian tögrög
MOP	446	2	Macanese pataca
MRO	478	2	Mauritanian ouguiya (old)
MRU	929	2	Mauritanian ouguiya (new)
MUR	480	2	Mauritian rupee
MVR	462	2	Maldivian rufiyaa
MWK	454	2	Malawian kwacha
MXN	484	2	Mexican peso
MXV	979	2	Mexican Unidad de Inversion (UDI)
MYR	458	2	Malaysian ringgit
MZN	943	2	Mozambican metical
NAD	516	2	Namibian dollar
NGN	566	2	Nigerian naira
NIO	558	2	Nicaraguan córdoba
NOK	578	2	Norwegian krone

Code	Number	Exponent	Currency
NPR	524	2	Nepalese rupee
NZD	554	2	New Zealand dollar
OMR	512	3	Omani rial
PAB	590	2	Panamanian balboa
PEN	604	2	Peruvian sol
PGK	598	2	Papua New Guinean kina
PHP	608	2	Philippine peso
PKR	586	2	Pakistani rupee
PLN	985	2	Polish zloty (new)
PYG	600	0	Paraguayan guaraní
QAR	634	2	Qatari riyal
RON	946	2	Romanian leu
RSD	941	2	Serbian dinar
RUB	643	2	Russian ruble (old)
RUR	810	2	Russian ruble
RWF	646	0	Rwandan franc
SAR	682	2	Saudi riyal
SBD	090	2	Solomon Islands dollar
SCR	690	2	Seychelles rupee
SDG	938	2	Sudanese pound
SEK	752	2	Swedish krona/kronor
SGD	702	2	Singapore dollar
SHP	654	2	Saint Helena pound
SLE	925	2	Sierra Leonean leone (new)
SLL	694	2	Sierra Leonean leone (old)
SOS	706	2	Somali shilling
SRD	968	2	Surinamese dollar
SSP	728	2	South Sudanese pound

Code	Number	Exponent	Currency
STD	678	2	São Tomé and Príncipe dobra (old)
STN	930	2	São Tomé and Príncipe dobra (new)
SVC	222	2	Salvadoran colón
SYP	760	2	Syrian pound
SZL	748	2	Swazi lilangeni
THB	764	2	Thai baht
TJS	972	2	Tajikistani somoni
TMM	795	0	Turkmenistan manat (old)
TMT	934	2	Turkmenistan manat (new)
TND	788	3	Tunisian dinar
TOP	776	2	Tongan pa-anga
TRL	792	2	Turkish lira
TRY	949	2	Turkish lira
TTD	780	2	Trinidad and Tobago dollar
TWD	901	2	New Taiwan dollar
TZS	834	2	Tanzanian shilling
UAH	980	2	Ukrainian hryvnia
UGX	800	0	Ugandan shilling
USD	840	2	United States dollar
USN	997	2	US Dollar (next day)
USS	998	2	US Dollar (same day)
UYI	940	0	Uruguay Peso en Unidades Indexadas
UYU	858	2	Uruguayan peso
UYW	927	4	Unidad previsional
UZS	860	2	Uzbekistan som
VEF	937	2	Venezuelan Bolivar Fuerte (old)
VES	928	2	Venezuelan bolívar soberano (new)
VND	704	0	Vietnamese dong

Code	Number	Exponent	Currency
VUV	548	0	Vanuatu vatu
WST	882	2	Samoan tala
XAF	950	0	CFA franc BEAC
XAG	961	2	Silver (one troy ounce)
XAU	959	2	Gold (one troy ounce)
XBA	955	2	European Composite Unit (EURCO) (bond market unit)
XBB	956	2	European Monetary Unit (E.M.U.-6) (bond market unit)
XBC	957	2	European Unit of Account 9 (E.U.A.-9) (bond market unit)
XBD	958	2	European Unit of Account 17 (E.U.A.-17) (bond market unit)
XCD	951	2	East Caribbean dollar
XSG	532	2	Caribbean Guilder
XDR	960	2	Special drawing rights
XOF	952	0	CFA franc BCEAO
XPD	964	2	Palladium (one troy ounce)
XPF	953	0	CFP franc (franc Pacifique)
XPT	962	2	Platinum (one troy ounce)
XSU	994	2	SUCRE
XTS	963	2	Code reserved for testing purposes
XUA	965	2	ADB Unit of Account
XXX	999	2	No currency
YER	886	2	Yemeni rial
ZAR	710	2	South African rand
ZMK	894	2	Zambian kwacha (old)
ZMW	967	2	Zambian kwacha (new)
ZWD	716	2	Zimbabwean dollar
ZWL	932	2	Zimbabwean dollar A/10

Amounts and Currency Exponents

Web service fields containing an amount can include up to four decimal places, depending on the currency exponent (e.g., 10.99 for EUR which has a currency exponent of 2). Below are examples of fields containing amounts:

```
AmtTxn, AvlBal, BlkAmt, AmtUnLoad, StartBal, EndBal, AmtBill, AmtTxn, FixedFee, RateFee, FxPdg, MCCPdg,
Dom_Fee_Fixed, Dom_Fee_Rate, Non_Dom_Fee_Fixed, Non_Dom_Fee_Rate, Fx_Fee_Fixed, Fx_Fee_Rate, Other_Fee_Desc,
Other_Fee_Amt, FxPdg, MCCPdg, AvlBalance_GPS_STIP, CurBalance_GPS_STIP, FINAMT, BLKAMT, AMTAVL, Fee, WaivedoffAmount,
TotalAmount, WaivedoffAmount
LimitInfo fields (V1):
MaxAllowableBalance, DailyLoadLimit, AmountLoaded, AmountLeftToLoad, DailyPosLimit, POSUsage, ValueOfPOSLeft,
DailyCashLimit, CashWithdrawal, ValueOfCashLeft, DailyUnLoadLimit, AmountUnLoaded, AmountLeftToUnLoad
LimitInfo fields (V2):
MaxPerTransaction, MinPerTransaction, Limit, Usage
```

Card Manufacturers

Thredd provides an XML file-based interface which allows card manufacturers to accept card generation files from Thredd. For details, see the Thredd Card generation Interface Specification.

Before submitting a generate card request to Thredd using the Card Create web services API, make sure you have discussed your card requirements with your selected card manufacturer. You should understand what manufacturer information you need to include in your request.

Supported Card Manufacturers

Below are examples of some of our supported card manufacturers.

Note: This list is provided for guidance only. As the list of supported manufacturers is constantly being updated, please check with your Implementation Manager to confirm support for a specific manufacturer.

Manufacturer	Region	Functionality	Further information
AB Corp	Australasia	Cards	http://www.abcorp.com
AB Corp NZ	New Zealand	Cards	http://www.abcorp.com
AB Corp USA	US	Cards	http://www.abcorp.com
AB Corp	Australia	Cards	http://www.abcorp.com
AllPay	UK	Cards	http://www.allpay.net
ArrowEye	US	Cards	http://www.arroweye.com
Austria Card	Austria	Cards	https://www.austriacard.com/
CPI Card Group	Canada	Cards	http://www.cpicardgroup.com
DigiSEq	UK	Cards and wearables	http://www.digiseq.co.uk
EVRY	Latvia/ Baltics	Cards	https://www.tietoevry.com/
Exceet	Germany	Cards and Maestro	http://www.exceet-card-group.com/en/.
FutureCard (Now known as Toppangravity)	Middle East, North Africa, APAC	Cards	http://www.toppangravity.com
Gemalto (Now known as Thales)	Europe	Card and chip	https://www.thalesgroup.com/en
GNC/TCS	Germany	Cards	https://www.gnc-cardservices.de/
G+D	Germany & UK	Cards	http://www.gi-de.com
Idemia	Czech Republic	Cards	https://www.idemia.com/
MTL Card Products	US/Canada	Cards	http://www.mtlcard.com
NiD (Previously Nagra ID)	Switzerland	Cards	http://www.nagraid.com
Placard	Australia	Cards	https://placard.com.au/

Manufacturer	Region	Functionality	Further information
Plastic Card Enterprise	Latvia, UK and EEA	Cards	https://www.plasticcard.ua/en/
Tagnitecrest (Tag Systems)	UK, Spain, Norway, Poland, US	Cards	https://www.tagsystems.net/
Thames Group (TCT)	UK	Cards	http://www.thamescardtechnology.com

WebServiceResult

In many web services, the response returns this parameter to a request when the request includes the same WSID as a previously submitted request. It can be used to check if the previous request was successful.

Tag	Type	Minimum Length	Maximum Length	Description
<WSID>	N	1	19	Web service ID from the original request.
<IssCode>	AN	1	4	Thredd Issuer (Program Manager) Code. Assigned by Thredd.
<PublicToken>	AN	1	9	The public token of the card from the original request.
<WebServiceName>	AN	1	50	The name of the web service for the request.
<Description>	AN	1	50	Description of the status of the original request. If successful, returns: *Normal, approve*.
<ActionCode>	AN	3	3	The action code for the response. See Action Codes.

Response Example

The response returns action code 000 for the first request of `Ws_CreateCard`.

```
<WebServiceResult>
      <WSID>2021123114561789</WSID>
      <IssCode/>
      <PublicToken>118423597</PublicToken>
      <WebServiceName>Ws_CreateCard</WebServiceName>
      <Description>Normal, approve</Description>
      <ActionCode>000</ActionCode>
</WebServiceResult>
```

Response - Duplicate Request Example

The response returns action code 868 for a duplicate request (where the same WSID is used).

```
<WebServiceResult>
   <WSID>2021123114561789</WSID>
   <IssCode/>
   <PublicToken>118423597</PublicToken>
   <WebServiceName>Ws_CreateCard</WebServiceName>
   <Description>Duplicate WSID in the request, deny.</Description>
   <ActionCode>868</ActionCode>
</WebServiceResult>
```

General FAQs

This section provides answers to frequently asked questions.

Web Services

What is a WSID and why must it be unique?

Each web service request must include a unique (WSID) or Web service ID. This enables Thredd systems to ensure that all requests are unique and to prevent duplication, for example, if the same request is sent twice or more).

Your systems should always generate a unique WSID. For example, this could be a number based on the current system date and time, as long as it is unique (e.g., in the format YYYYMMDDSS).

What happens if the WSID is not unique?

If you try to reuse a previous WSID, this normally results in Thredd returning the following error code: *868 – Duplicate WSID in the request, deny*.

Note: Web service transactions are archived on the Thredd systems after three days. The verification that the WID is unique therefore only extends to web service transactions made during the past three days. This is why it is important to ensure your WSID is always unique.

Card Manufacturers

Which card manufacturers does Thredd support?

For a list of supported manufacturers, see Card Manufacturers.

Transactions

What is the primary key or identifier for a transaction?

ItemId is the primary key or identifier for a transaction.

Virtual and Physical Cards

What is the difference between a virtual and physical card?

You can use virtual cards for online transactions only. Conversely, you can use physical cards at Point of Sales terminals and ATMs. The virtual card is available for immediate use in digital format, while the physical card must be printed by a card manufacturer and sent to the cardholder.

How does converting a virtual card to a physical card work?

The new physical card is issued with the same card number (PAN) as the virtual card and shares the same card status.

- You can convert to a physical card with the same expiry date as the virtual card. In this case, the CVV is also be the same as the virtual card. There is no difference between the virtual and physical card apart from the virtual-physical difference. If the virtual card is active, the physical card status is also active.
- If the physical card is issued with a new expiry date, then the cardholder is not able to use their new physical card until you use the Activate Card (Ws_Activate) web service to update the expiry date and CVV. In this case, the cardholder is able to continue to use their virtual card while waiting for printing, shipping, and delivery of the printed card. Once delivered, you can update the card record's expiry date and CVV, enabling you to use the card.

Tokenisation Services

Where can I find out more about the Thredd Tokenisation (Digital Wallet) service?

For detailed information on setting up and integrating the Thredd Tokenisation (Digital Wallet) service, see the Tokenisation Service Guide.

How can I send an activation code to the cardholder's phone number?

If you want to use the SMS activation code service to send an Activation Code Notification (ACN) to the cardholder, you must include the mobile phone number of the cardholder when creating the card: first use the Card Create web service to create the card and then use the Card Activate web service to activate the card via SMS.

How do I send a confirmation SMS to the cardholder upon successful token activation in Apple Pay?

Thredd can configure your product so that your end customers receive an SMS notification after successfully activating their Apple Pay token. You must ensure that you provide the cardholder's mobile number when creating the card.

Note: Thredd receives a Tokenization Complete Notification (TCN) from Apple Pay if the activation is successful. Thredd does not receive notifications for unsuccessful activations.

How can I retrieve the DPAN?

You can use the ws_Payment_Token_Get web service to get the DPAN for a card. See Payment Token Get.

The DPAN is returned in the <Payment_Token > field as a masked value.

Do I need to be PCI compliant to support MDES/VDEP?

Both Apple and Google mandate Push Provisioning, which requires handling the full PAN. To support MDES/VDEP integration on Android Pay or Apple Pay, you must either be PCI DSS Compliant or be using Thredd's In-App push provisioning service. For more information, see the Cards API Website: Introduction to In-App Provisioning.

3D Secure

Where can I find out more about the Thredd 3D Secure service?

For detailed information on setting up and integrating the Thredd 3D Secure service, see the 3D Secure Guide (Apata) or 3D Secure Guide (Cardinal).

How do we enrol cardholders in 3DS?

You can use Ws_AddUpDelCredentials to enrol cardholders. See 3D Secure Credentials.

The same web service is used to add, update and delete credentials for SMS One Time Password (OTP) and Biometric authentication methods.

Note: The mobile number must be correct (in the format +44 7566789123) to allow the One Time Password to be sent to your cardholder.

Which service do you use to provide 3D Secure?

Depending on the region in which you operate, Thredd offers a choice of 3D secure providers. Cardinal Commerce manages 3D secure enrolment and authentication. Cardinal provider includes two types of interfaces:

- Real-time Data Exchange (RDX): enables updates in real-time. Thredd use this interface.
- Batch file interface: legacy interface which is updated hourly (at 20 minutes past the hour). Available as a legacy service only.

What type of credentials are used to authenticate a 3D Secure transaction?

Thredd's 3D Secure service providers offer the following methods of cardholder authentication:

Thredd Option	Name	Description
1	RBA	Risk Based Authentication. Cardinal applies a risk score to determine whether to automatically accept or reject the transaction. You can configure the risk scores elements for your programme using Cardinal's Risk Portal (Check with your Account Manager for details of how to access this portal).
2	OTPSMS	One-time password via SMS. Thredd sends the OTP request to the cardholder's registered phone number when a message from Cardinal is received. The cardholder then enters the OTP to authenticate on the merchant's website.

Thredd Option	Name	Description
3	OTPEMAIL	One-time password via email. **Note**: OTPEMAIL is only available for 3DS Apata. For more information, see the 3D Secure Guide (Apata).
4	BIOMETRIC	Uses some for of user biometric to authenticate, such as a fingerprint or facial recognition on the device. Thredd sends the authentication request to your systems, using the endpoint set up for your Programme. Your systems must handle the authentication.
5	OUTOFBAND	Managed outside of the Thredd authentication flow, where the cardholder has to authenticate via a key FOB or other token device. **Note**: OUTOFBAND is currently not available.
6	CHOICE	This option allows the cardholder to choose their preferred authentication method. Note that this option must be set up in the Thredd system instead of via web services.
7	KBA	Knowledge-based Authentication. Authentication is based on something only the cardholder knows, for example, the answer to the question '*What was your first pet's name?*')

For details,refer to the 3D Secure Guide (Apata) or 3D Secure Guide (Cardinal).

How are 3D Secure transactions authenticated?

When a cardholder uses their card at the website of a merchant who is enrolled on the 3D Secure scheme, the merchant initiates a 3D authentication call. Thredd's 3D Secure provider (Apata or Cardinal) receives the request. Authentication is handled based on the authentication credential type set up for the card:

- **RBA** – Thredd's 3D Secure provider authorise or decline the transaction based on the risk score settings configured in their portal. The cardholder does not need to enter credentials to authenticate.
- **OTPSMS** – Thredd sends a One-Time Password (OTP) request to the cardholder's registered phone number when we receive a message from Thredd's 3D Secure provider . The cardholder then enters the OTP to authenticate on the merchant's website.
- **BIOMETRIC** – Thredd sends the authentication request to your systems, using the endpoint set up for your Programme. Your systems must handle the authentication.
- **OUTOFBAND** – Thredd sends the authentication request to your systems, using the endpoint set up for your Programme. Your systems must handle the authentication.

Note: OUTOFBAND is currently not available.

- **KBA** – Thredd sends the authentication request to your systems, using the endpoint set up for your Programme. Your systems must handle the authentication.

For details,refer to the 3D Secure Guide (Apata) or 3D Secure Guide (Cardinal).

You can use Ws_AddUpDelCredentials to configure the cardholder's authentication credential type. See 3D Secure Credentials.

We have tried an e-commerce transaction and it was approved without using 3DS, why?

Not all merchants are set up to use 3DS and not all merchants choose to use it for every e-commerce transaction.

What happens when a user enters an incorrect OTP? Do they get a set number of retries?

The user is allowed three attempts to enter an OTP, after which the card will be blocked for any online transaction through a merchant enrolled in 3DS.

Do OTPs have an expiry time after they are generated? If so, how long are they valid for?

Yes, they are valid until the merchant's site times out for the purchase.

Can users request a new OTP to be sent? If so, are there limits, or can we apply limits, per transaction?

Yes, there is an ability to request a new OTP during the online transaction.

Troubleshooting FAQs

This section provides answers to common integration issues.

Connection Issues

Why am I unable to connect to Thredd?

To confirm if you can connect to Thredd, you should use a web service such as Check Service Availability: Ws_Check. This should return a response with an Action Code of 000.

If you still cannot connect, check to confirm the following:

- You are using the correct API endpoint and environment (test or production)
- The credentials (username and password) you are using are correct for the environment
- Thredd has enabled your IP address to use this service
- You will need a secure connection to Thredd.
- The ports on your firewall have been configured to allow traffic from Thredd
- You have enabled the Thredd IP address to use this service in the test environment

For further details, contact your Implementation Manager.

Web Service Issues

Why has my web service request failed?

When submitting a web service request to an API endpoint, Thredd responds with an Action Code to indicate the status of the request.

Below are common reasons for API request failures:

- Incorrect username and password (Action Code 999) or issuer code (Action Code 801).
- The value provided in the <WSID> tag is not unique. A unique <WSID> must be provided for most web services.
- Mandatory fields required in the request have not been supplied. Check the relevant web service description in this guide for details of mandatory fields.
- The requested object you want to query or update, for example, existing card, does not exist. Make sure you have provided the correct reference to the object you want to update.
- The format or type of value provided in an XML tag is incorrect. Check the relevant web service description in this guide for details of the allowed formats and expected values.
- If you change the default xmlns attributes (XML namespaces) in the SOAP request, this causes an error.
- Check that there are no spaces in xml tags, as this causes an error.
- XML tag spelling or case is incorrect. Each web service implements its own naming convention standard and tag names, so these cannot be copied across different web services. If in doubt, always check the WSDL for the correct XML tag name. See Using the API.

3D Secure Issues

Why am I unable to enrol or edit a cardholder in 3D Secure?

If you are using the Cardinal Batch Interface (legacy service), your changes may take up to two hours to implement, since Thredd send updates in an hourly batch file at 20 past the hour. You should wait two hours between batch file web services to ensure they are all processed by both Thredd and Cardinal, before sending any follow-up requests.

For an improved service, we recommend you upgrade to using the real-time data exchange 3D Secure Interface. See 3D Secure Credentials (Cardinal and Apata): Ws_AddUpDelCredentials

For further details of Thredd support for 3D Secure, see our 3D Secure FAQs.

Known Issues

For a list of known issues, contact your Implementation Manager.

Glossary

This page provides a list of glossary terms used in this guide.

#

3D Secure

> 3D Secure (3-domain structure), also known as a payer authentication, is a security protocol that helps to prevent fraud in online credit and debit card transactions. This security feature is supported by Visa and Mastercard and is branded as ‘Verified by Visa’ and ‘Master-card SecureCode’ respectively.

A

Access Code

> Pass code or activation code which you supply to Thredd. You can use the access code to authenticate user access to card services or to request a user to activate the card by entering their access code.

Address Verification Service (AVS)

> An AVS check compares the billing address used in the transaction with the issuing bank’s address information on file for that card-holder. Depending on whether they match fully, partially, or not at all, the merchant can use that information in their decision on whether or not to accept or cancel the order. AVS is one of the most widely used fraud prevention tools in card-not-present trans-actions.

Apata

> Apata provide an Access Control Server (ACS) that enables support for the 3D Secure cardholder authentication scheme. See: https://apata.com/

Auth Calendar Group

> Controls the dates and times when authorisations on a card are allowed. You can use this option to control when the card can be used, for example, prevent usage on weekends or out of hours.

B

BIN

> A Bank Identification Number, or BIN, refers to the initial sequence of 4 to 6 numbers on a credit card and used to identify the card’s issuing bank or other financial institution. The BIN is the lynch pin that ties an issuer to its cards and transactions.

C

Card Linkage Group

> The Linkage Group set up in Smart Client controls various parameters related to linked cards; for details, check with your Imple-mentation Manager.

Card Manufacturer

> Thredd instructs existing card manufacturers (that it has relationships with) to print cards. Thredd uses Secure FTP (sFTP) to send the card manufacturer a generated bulk XML file containing card details. This is sent on a daily basis, or at a frequency that can be cus-tomised for your service. The card manufacturer prints the cards and sends to the cardholder. Any white label test cards are typically sent to Thredd, the Program Manager and the Card Schemes (payment networks).

Card Service Code

> 3 digit code on the magnetic strip of a card which indicates where it is valid for use.

Card Verification Value

> The Card Verification Value (CVV) on a credit card or debit card is a 3 digit number on VISA, MasterCard and Discover branded credit and debit cards. Cardholder's are typically required to enter the CVV during any online or cardholder not present transactions. CVV numbers are also known as CSC numbers (Card Security Code), as well 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.

Cardinal 3D Secure

> Cardinal Commerce provide an Access Control Server (ACS) that enables support for the 3D Secure cardholder authentication scheme. See: https://www.cardinalcommerce.com

Chargeback

Where a cardholder disputes a transaction on their account and is unable to resolve directly with the merchant, they can raise a chargeback with their card issuer. The chargeback must be for a legitimate reason, such as goods and services not received, faulty goods, or a fraudulent transaction.

Concurrent session

The number of sessions (concurrent requests) that can be processed by the Thredd server at the same time. This figure may vary, depending on server load and performance, which affects the response time. For example, an average server response time of 0.05ms.

CVC2

The Card Verification Value (CVV) on a credit card or debit card is a 3 digit number on VISA, MasterCard and Discover branded credit and debit cards. Cardholder's are typically required to enter the CVV during any online or cardholder not present transactions. CVV numbers are also known as CSC numbers (Card Security Code), as well 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.

D

DPAN

Device PAN. The PAN value set up on the cardholder’s device. This is not visible to the cardholder, but is the PAN used for the transactions as far as the merchant is concerned.

E

EEA

European Economic Area

EHI

External Host Interface (EHI) is a Thredd facility that enables exchange of data between the Thredd processing centre and external systems using online web services. All transaction data processed by Thredd is transferred to the External Host side via EHI in real time. For certain types of transactions such as Authorisations, the External Host can participate in payment transaction authorisation.

EHI Operation Mode

For authorisation type of transactions, the External Host Interface (EHI) can operate in one of five modes: Gateway Processing (mode 1) the External Host maintains card balances and participates in transaction authorisation by approving or declining the transaction. Cooperative Processing (mode 2) - Thredd maintains balances and performs all types of the authorization, but the External Host can overrule in some circumstances. Full Service Processing (mode 3) - read-only data feed from the Thredd system to the Client's system. Gateway Processing with STIP (mode 4) - External Host maintains Balance (with Thredd stand-in).

Expiry breakages

When a card with a fixed validity period, such as a gift card, expires, the available funds on the card are charged as an expiry breakage fee. The actual money is shared between Thredd and the Program Manager.

External Host Interface (EHI)

The External Host Interface provides a facility to enable exchange of data between Thredd and external systems via our web services. All transaction data processed by Thredd is transferred to the External Host side via EHI in real time. For certain types of transactions, such as Authorisations, the External Host can participate in payment transaction authorisation.

F

Fee Group

Group which controls the card transaction authorisation fees.

FPAN

Funding PAN. The true 16-digit PAN of the card, which Mastercard/Visa converts when authorisations come through to them from Acquirers on the DPAN.

FX Fee Group

Controls the rates for FX currency conversions if the purchase currency is different from the card's currency.

I

Issuer Code

Thredd Issuer (Program Manager) code, assigned by Thredd. Each Program Manager is assigned their own unique issuer code on the system.

IVR system

Interactive Voice Response System Typically a telephony-based system, where the user calls in and selects options via an automated voice prompt.

L

Limit Group

Velocity limit group which restricts the frequency and/or amount at which the card can be loaded or unloaded. You can view your current Limit Groups in Smart Client.

M

Master Virtual Cards (MVC)

A Thredd virtual card that is restricted to loading and unloading to a physical card and cannot be used for e-commerce or in-store transactions. An MVC is used to reflect the value of the ‘actual’ money in the Issuer's bank account. An MVC guarantees that the load is limited to the amount prefunded (i.e. loaded onto MVC) and gives the Programme Manager the ability to distribute funds immediately rather than having to wait for notification of each individual load into the Issuer Bank account.

Mastercard Digital Enablement Service

The MasterCard Digital Enablement Service (MDES) is a data interchange platform for generating and managing secure digital payment tokens.

MCC Group

Merchant Category Code (MCC) Group. The MCC is a four-digit number used by the Card Schemes (payment networks) to define the trading category of the merchant.

MDES

The MasterCard Digital Enablement Service (MDES) helps transform any connected device into a commerce device to make and receive payments. The MDES platform is used in iPhone 6, iPhone 6 Plus and Apple Watch to enable secure payments to take place for contactless and in-app payments.

Merchant Category Codes (MCCs)

Merchant category codes (MCCs) are four-digit numbers that describe a merchant's primary business activities. MCCs are used by credit card issuers to identify the type of business in which a merchant is engaged.

MFX Card

Payment card which supports payment and settlement transactions in multiple currencies. The MFX card typically has a single PAN with multiple currency wallets linked.

N

Non-reloadable card

Card which is loaded with funds at the time of card creation, but cannot be reloaded after this.

O

Out of Band (OOB) Authentication

OOB authentication is a type of two-factor authentication that requires a secondary verification method through a separate communication channel along with the typical ID and password. For example, the user may be asked to respond to an automatically-generated phone call, enter a code sent to their smartphone or provide biometric verification via voice or fingerprint.

P

Padding amount

An additional amount or fee charged on a transaction, typically used to hedge against FX currency fluctuations or mitigate risks of higher declines or chargebacks for certain merchant categories.

PAN

A payment card number (PAN), primary account number, or simply a card number, is the card identifier found on payment cards, such as credit cards and debit cards, as well as stored-value cards, gift cards and other similar cards.

PCI DSS Compliant

The Payment Card Industry Data Security Standard (PCI DSS) is an information security standard for organisations that handle credit cards from the major Card Schemes (payment networks). All Program Managers who handle customer card data must be compliant with this standard. See: https://www.pcisecuritystandards.org/pci_security/

PGP

Pretty Good Privacy (PGP) is an encryption program that provides cryptographic privacy and authentication for data communication. uses PGP for signing, encrypting, and decrypting texts, e-mails, files, directories, and whole disk partitions and to increase the security of e-mail communications.

Product Setup Form

The Product Setup Form is a spreadsheet that provides details of your Thredd account setup. The details are used to configure your Thredd account.

PRODUCT_REF

The predefined reference code associated with the card, which is included in the XML file sent to the card manufacturer. This field is called the <ProductRef> on ws_create_card and the <DesignRef> on ws_customer_enquiry and ws_customer_enquiry_v2

ProductMaster

Card product-level master record

Program

Logical grouping of your products set up in Smart Client. This is setup with whatever the customer (issuer or program manager) wants. Can be viewed in reports or via the web services API and may also be sent to the card manufacturer.

Program Manager

A Program Manager is a Thredd client who manages their own card service program.

Project Initiation Document (PID)

The Project Initiation Document (PID) is put together at a start of a project. This document outlines the initial project requirements and parties involved.

Project Requirements Document (PRD)

The Project Requirements Document (PRD) provides full details of the requirements of your project. Project schedules and implementation are based on the details provided in this document.

Project Scoping Document (PSD)

The Project Scoping Document (PSD) defines the scope of the project, and is typically produced before the start of the project.

PSD2

PSD2 is an EU Directive which sets requirements for firms that provide payment services. It introduces a number of requirements around how firms treat their customers and handle their complaints, and the data they must report to the FCA.

R

Race condition

When two separate processes are reading and updating a value at the same time, then the latest process can overwrite the previous saved result.

RSA

Provider of identity and access management solutions. See: https://www.rsa.com/

S

SAFE

SAFE (System to Avoid Fraud Effectively) is a Mastercard initiative requiring card issuers to report all cardholder fraud claims. The data sent to Mastarcard helpS identify and track fraudulent activity. See: https://globalrisk.mastercard.com/online_resource/system-to-avoid-fraud-effectively-safe-compliance-program/

Scheduled Fee Group

Controls whether a card is charged a recurring fee, such as a monthly platform fee.

SchemeMaster

Card scheme-level master record

Secure Connectivity Framework

Thredd's Trust Framework is the combination of several components which enable secure access to Thredd's resources, using a common identity store.

SFTP

Secure File Transfer Protocol. File Transfer Protocol FTP) is a popular unencrypted method of transferring files between two remote systems. SFTP (SSH File Transfer Protocol, or Secure File Transfer Protocol) is a separate protocol packaged with SSH that works in a similar way but over a secure connection.

Single use card

Card which can only be used for a single transaction.

Smart Client

Smart Client is Thredd's user interface for managing your account on the Thredd Platform. You install Smart Client as a desktop application which requires a secure connection to Thredd systems in order to access your account.

SOAP

SOAP (Simple Object Access Protocol) is a messaging protocol for exchanging structured information in the implementation of web services. It uses Extensible Markup Language (XML) for its message format and relies on application layer protocols such as HTTP for message negotiation and transmission. SOAP allows developers to invoke processes running on disparate operating systems (such as Windows, macOS, and Linux) to authenticate, authorise, and communicate using XML.

STIP

Stand-In Processing. Where Thredd holds the card balance on behalf of a Program Manager, in some instances where the Program Manager is not available, we are able to provide an authorisation decision for a transaction on their behalf.

T

Thredd Portal

Thredd Portal is Thredd's new user interface for managing your cards and transactions on the Thredd Platform.

Thredd Scheme

The name of the high-level product type set up in Thredd, usually at a BIN level.

U

Usage Group

Group that controls where a card can be used. For example: POS or ATM.

V

VDE

Virtual Data Element, used for 3D Secure identification. Examples are memorable name, memorable place and memorable date.

W

Web Service Fee Group

Controls the fees charges for web service usage. Different web services can have different fees associated with them.

WSDL

Web Service Definition Language (WSDL) is an XML format for describing network services as a set of endpoints operating on messages containing either document-oriented or procedure-oriented information. WSDL files are central to testing SOAP-based services. SoapUI uses WSDL files to generate test requests, assertions and mock services.

Document History

Refer to the table for details of changes to this guide.

Note: Prior to version 3.0, this guide was provided only in PDF format. If you want to access historical versions of the guide, please contact your Implementation Manager.

Version	Date	Description	Revised by
3.22	31/03/20226	Updated the character length of FirstName, LastName, dlvfirstName, and dlvlastName parameters from 20 to 30 for multiple web services. See: Card Create, Bulk Card Create Card Activate, Card Activate Load, Card Activate MVC Load, Cardholder Details enquiry, Update Cardholder Details v1, Update Cardholder Details v2, Wallet Create, Bulk Wallet Create, Create Card v2 (Agency Banking).	KD
	30/03/2026	Removed obsolete action codes. See Action Codes.	SH
	13/03/2026	Added the character "*ă*" to the TAG card manufacturer's approved character list. See String Cleaning and Approved Characters.	GF
	04/03/2026	Updated the behaviour for phone number validation to clean all characters with the exception of letters. See Phone Number Validation and Processing of Phone Numbers. See PRN-262.	JB
3.21	23/01/2026	Updated the supported characters for the card manufacturer Placard VPS. See String Cleaning and Approved Characters.	JB
	05/11/2025	Added a new Action Code 598, which is returned in response to a request to delete a 3D Secure Credential, where no entry exists in the 3D Secure tables. See 3D Secure Credentials (Cardinal and Apata).	WS
	10/10/2025	Updates to the list of card manufacturers and their supported characters. See Card Manufacturer Approved Characters in String Cleaning and Approved Characters.	WS
	25/09/2025	Added a note on use of the correct unicode value for special characters supported by your card manufacturer. See Card Manufacturer Approved Characters in String Cleaning and Approved Characters.	WS
	18/09/2025	The Card Send Files (`Ws_Send_CardFiles`) web service has been deprecated. If you attempt to use this web service, you will receive a 996 action code in the response. There are no changes to the WSDL structure. See PRN-263.	WS
	16/09/2025	The maximum length of phone number fields `Mobile`, `Tel`, `Mobtel` and `Worktel` have been updated to 15 digits and new phone number validation rules have been applied. See Field Validation. See PRN-262.	WS
	16/09/2025	Added a new appendix with details of amount and phone number validation rules. See Field Validation.	WS
	04/09/2025	Added a new optional parameter `<Update3DSRecords>` to the Update Cardholder Details (V2) (`Ws_Update_Cardholder_Details_V2`) web service, which can be used to update the 3D Secure email address and mobile number linked to the card. See PRN-256.	WS
	03/09/2025	The status codes 04, 14, 33, 36, 37, 38, 46, 67, 98, 99, and G9 have been changed to irreversible, to comply with a recent Card Scheme mandate. See PRN-232.	JB

Version	Date	Description	Revised by
	15/08/2025	Added 5C and 9G status codes to Status Codes.	JB
	21/07/2025	Added a new <UseAsDirectDebit> parameter to the Make External Payment (Ws_Banking_TransferFunds) web service. See PRN-239.	WS
	21/07/2025	The status code *41 (Lost)* has been changed to irreversible, to comply with a recent Card Scheme mandate. See PRN-240.	WS
	21/07/2025	Added details to the Use Case Scenarios section on Updating a Card Status to Lost, Stolen or Destroyed.	WS
	11/07/2025	Changed the maximum length of the <Workcity> parameter to 15 characters, in the following web services: Cardholder Details Enquiry (Ws_CardHolder_Details_Enquiry and Ws_CardHolder_Details_Enquiry_V2), Update Cardholder Details V1 (Ws_Update_Cardholder_Details) and Update Cardholder Details V2 (Ws_Update_Cardholder_Details_V2).	WS
	10/07/2025	Replaced the <Response> parameter in <WebServiceResult> with the new <WebServiceName> parameter. See WebServiceResult.	KD
	27/06/2025	Removed the Payment Token Create (Ws_Payment_Token_Create) web service and all references to it from the guide, including removing action codes that were specific to the web service.	JB
	13/06/2025	Added the <MiddleName> parameter to the following web services: CreateCard (Ws_CreateCard), Create Card with Agency Banking (Ws_CreateCard_v2) Bulk Create (Ws_BulkCreation), Wallet Create (Ws_CreateWallet), Wallet Bulk Create (Ws_BulkWalletCreation, Update Cardholder (Ws_Update_Cardholder_Details_V2), Cardholder Details Enquiry (Ws_CardHolder_Details_Enquiry). Included dlvMiddleName for card deliveries in Update Cardholder and Cardholder Details Enquiry. Added these new parameters to Clearing Field Values.	KD
	29/05/2025	Web Services exclude card status change entries prior to 2022. Card status changes before this year are no longer retrievable. See descriptions of applicable endpoints: Card Statement (v2) and Card Statement (v1).	KD
	23/05/2025	Revised the description of the response parameter PaymentTokenUsageGroup as used in the following web services: Card Enquiry (Ws_Enquiry) and Customer Enquiry (Ws_Customer_Enquiry and Ws_Customer_Enquiry_V2).	WS
	07/05/2025	Removed card status code 57 from the Card Status Codes page.	WS
	09/04/2025	Added a new currency code XCG/532 for Caribbean Guilder (this replaces ANG/532 the Netherlands Antillean guilder). See Currency Codes.	WS
	27/03/2025	Added references to Secure Connectivity Framework.	KD
	20/03/2025	The maximum length of the City, Dlv_City and Delv_City parameters have been updated to 50 characters across all web services where these parameters are used.	WS
	20/03/2025	The maximum length of the response parameter PaymentTokenUsageGroup has been updated to 50 characters in the following web services: Card Enquiry (Ws_Enquiry) and Customer Enquiry (Ws_Customer_Enquiry and Ws_Customer_Enquiry_V2). Note that there are no changed to other web services that use this parameter.	WS

Version	Date	Description	Revised by
	13/03/2025	Added a new appendix, describing the WebServiceResult Field, which is returned in the response to some web services when the request includes the same WSID as a previously submitted request.	WS
	13/03/2025	Corrected tokenised_datetime, payment_token_expdate, and wallet_reasons to optional in the response of the Payment Token Get (Ws_Payment_Token_Get) web service. Added MRCHTOKEN as an example for wallet_id. Set the minimum value of wallet_reasons to 0. Corrected the name for the field gps_status.	JB
	13/02/2025	Added references to Thredd Portal, our new online portal for managing your cards and transactions.	KD
	11/02/2025	Added notes to clarify the effect of passing an empty space as a value in specific fields in the 3D Secure Configuration (Apata) (Ws_ApataCardLevelConfigurations) web service.	WS
	03/02/2025	Added a new web service, 3D Secure Get Card Level Configuration (Apata) (Ws_GetApataCardLevelConfigurations) to be used to retrieve the card level configuration for Apata. See PRN-210.	WS
3.20	10/12/2024	New <OOBAppURL> field added to the following web services: Card Create (Ws_CreateCard), Card Bulk Create (Ws_BulkCreation), Wallet Create (Ws_CreateWV2) (Ws_Update_Cardholder_Details_V2), Card Enquiry (Ws_Enquiry) .allet), Wallet Bulk Create (Ws_BulkWalletCreation), Create Card with Agency Banking (Ws_CreateCard_V2), Update Cardholder Details (This field is optional, and specifies the Out of Band URL to be used during a 3D Secure authentication session. See PRN-201.	WS
	04/12/2024	In the Update Cardholder Details (V2)(W s_Update_Cardholder_Details_V2) web service, corrected the case format of the fields to LogoFrontId and LogoBackId.	WS
	20/11/2024	Added the OptOut parameter to the Update Cardholder Details (V2) (W s_Update_Cardholder_Details_V2) and the Cardholder Details Enquiry (Ws_CardHolder_Details_Enquiry_V2) web services.	KD
	07/11/204	New FAQ added to answer common questions around Virtual to Physical Card conversion. See the FAQs.	WS
	29/10/2024	Updated Type in the 3D Secure Credentials (Cardinal and Apata) (Ws_AddUpDelCredentials) web service to clarify that OTPEMAIL is supported by Apata only.	JB
	23/10/2024	Added a new field, ComplianceData and new customer types (Type), to the Register a Customer for Banking web service. Added a new action code of 591, returned if the Type is *PREQUALIFIED* and ComplianceData is missing. See Action Codes.	WS
	24/09/2024	Removed SecID, SecVal and SecValPos parameters from web services Record Descriptions and example requests. Removed 817, 818 and 828 from the Action Codes page.	KD
	04/09/2024	Updated the list of support card manufacturers on the Card Manufacturers page.	JB
	13/08/2024	Updated the description of AccNo in the Card Enquiry (Ws_Enquiry) web service.	WS
	29/07/2024	Added some FAQs on the use of the WSID field and the importance of	WS

Version	Date	Description	Revised by
		ensuring this is always unique. See the FAQs.	
	10/07/2024	Corrected the definition for CrdProduct and ProductID for List Products (Ws_List_Products) web service.	JB
	10/07/2024	Changed the minimum value of MaskedPan and PAN to 14.	PC
	02/07/2024	Updated the company address.	PC
3.19	13/06/2024	Removed references to the *Forwarding a PIN request to an External API* option, which is no longer supported.	WS
	07/06/2024	Updated the definition for CrdProduct and ProductID for List Products (Ws_List_Products) web service.	
	17/05/2024	Added a list of available web services to the online guide table of contents. See List of Web Services API.	WS
	30/04/2024	Updates to list of Card Manufacturers.	WS
	24/04/2024	Updates to content and graphics to align with taxonomy updates on our Documentation Portal.	WS
	27/03/2024	Clarification on use of action code 104. Updates to content and graphics to align with taxonomy updates on our Documentation Portal.	WS
	07/03/2024	In the Card Renew (Ws_renewCard) web service, the fields ExpDate and NewProductID are mandatory for specific renew options. Updated the renew options listed in the description of these fields.	WS
	07/03/2024	In the Card Send Files (Ws_Send_CardFiles) web service, removed the field '*Password*' from the request and response. See PRN-174.	WS
	21/02/2024	Added a new web service, 3D Secure Configuration (Apata) (Ws_ApataCardLevelConfigurations) to be used when configuring 3D Secure credentials and challenge screen options when using Apata. See PRN-172.	WS
	14/02/2024	Removed references to the legacy web service Ws_3DS_AddUpDelDetails, which is being decommissioned. Thredd respond with action code '996' to indicate that the service is retired. See PRN-170.	WS
	12/02/2024	When creating a card, clarified that *CreateType* option 3 works the same as option 1. See Card Create (Ws_CreateCard), Card Bulk Create (Ws_BulkCreation), Wallet Create (Ws_CreateWallet) and Wallet Bulk Create (*Ws_BulkWalletCreation*).	WS
	31/01/2024	Added the *WebServiceResult* parameter to the following web services: Card Balance Transfer (Ws_BalanceTransfer) and 3D Secure Credentials (Ws_AddUpDelCredentials). See PRN-169.	WS
	30/01/2024	Added full list of statuses to Status Codes.	JB
	23/01/2024	Added action code 575. Updated the description for action code 119.	KD

Version	Date	Description	Revised by
	08/01/2024	Removed the CardDesign field from the Card Activate and Load (Ws_Activate_Load) web service. See PRN-167.	WS
	02/01/2024	Updated the description of action code 439.	WS
3.18	20/12/2023	Updated the list of card Status Codes that can be used when setting the status of a card using the Card Change Status (Ws_Status_Change) web service.	WS
	15/12/2023	Updated the description of action code 952.	WS
	15/12/2023	Added a reference to the Fees Guide, which provides further guidance on applying card fees using web services.	WS
	18/10/2023	Removed references to the following web services, which were deprecated 30/07/2021: Ws_WebServiceResult and Web_Service_Result_V2. See PRN-31.	WS
	17/10/2023	Two optional boolean fields, IsSingleUse and IsNonReloadable have been added to the following services: Card Create (Ws_CreateCard), Create Card with Agency Banking (Ws_CreateCard_V2), Card Bulk Create (Ws_BulkCreation), Wallet Create (Ws_CreateWallet) and Wallet Bulk Create (*Ws_BulkWalletCreation*). These fields enable you to specify single use and non-reloadable cards. See PRN-164.	WS
	21/09/2023	Removed the <Replacement> and <PublicToken> fields that were used to specify a replacement card when implementing the Card Create (Ws_CreateCard), Create Card with Agency Banking (Ws_CreateCard_V2) or Card Bulk Create (Ws_BulkCreation) web services. You should always use the Card Renew (Ws_Renew_Card) web service to specify a replacement card. See PRN-159.	WS
	11/09/2023	Correction: In the Card Create web service section, updated the table of fields to include the ItemID field in the response, and the example response to include the StartDate field.	WS
3.17	08/08/2023	Added a note to clarify that the Token Device Management web service (Ws_Token_Device_Management) is for use on the Visa (VDEP) service only. Correction: In the Create Payment Token (Ws_PaymentToken_Create) web service, one of the supported values that can be used in the WalletID field should be *SAMSUNG*, Using a value that is not supported will return an action code of 439.	WS
	26/07/2023	Updated the PIN field usage table defining how a card's PIN can be updated. See Card PIN Control.	WS
	10/07/2023	Maximum length of the CardManufacturer field updated to 50 characters. See Card Create.	WS
	03/07/2023	When creating a card, you can now use additional characters in the *CardName* field if the card manufacturer is Thredd (internal card manufacturer account used for non-printed cards, such as virtual cards). See Card Manufacturer Approved Characters.	WS
	26/06/2023	Added details of which card status values can be used to *Suspend*, *Delete* and *Deactivate* a payment token at the Card Scheme (payment network). See Payment Token Status Change. For bulk card create (Quantity greater than 1), we recommend that you run the token / card details enquiry one day after the bulk card creation.	WS

Version	Date	Description	Revised by
		Added a note to clarify that CreateType options 3, 4 and 5 will not work if Quantity is greater than 1. See Card Create.	
	07/06/2023	Updated Operations email address to be occ@thredd.com	MW
	23/05/2023	When using the Create Card web service (*Ws_CreateCard*), if Quantity is greater than 1, then some fields in this web service are not relevant and should be left blank or, if mandatory, set to the default value of '0'. For details, see Create Card.	WS
	09/05/2023	Duplicate Gemalto Singapore entry removed from the Card Manufacturer Approved Characters table in the String Cleaning and Approved Characters page.	JB
	27/04/2023	Guide rebrand to new company name and brand identity.	WS
3.16	11/04/2023	The ExpDate field in the Card Activate (*Ws_Activate*) and Card Activate and Load (*Ws_Activate_Load*) web services can now be used to update the internal card record expiry date, if you want to specify a shorter expiry date than the card expiry date that was set when the card was issued. This will not change the expiry date that was set when the card was issued (and as shown on the printed card or card image).	WS
	03/04/2023	Update to description of action code 816. In the Card Bulk Create web service (*Ws_BulkCreation*), the field name *ActivateNow* in the CARD element has been corrected to *ActivateOrNot*.	WS
3.15	28/02/2023 21/02/2023	Added Chinese Offshore Renminbi (currency code CNH) to the list of supported currencies. See Currency Codes. Clarification: when using the Apply FX Rate web service (*Ws_Client_FX*) to stream your own FX rates; if you are not using the optional *SellRate* and *MidRate* fields, then you should pass a value of '0' in these fields, Correction: the CurrCode value in Card Activate and Load (*Ws_Activate_Load*) is optional. If it is not provided, then card's billing currency will be used. Correction to the list of special characters supported by the Gemalto Czech Republic Card Manufacturer. See String Cleaning and Approved Characters. Clarification to description of the *Payment_Token_ID* field in Payment Token Get (*Ws_Payment_Token_Get*) web service. Applies to both Mastercard and Visa cards.	WS
		Added a note to the Card Extend Expiry Date (*Ws_ExtendExpiry*) web service to indicate that changing the expiry date will also change the card status to '*00*' (*All Good*).	
	08/02/2023	Correction to clearing field values when using the Update Cardholder Details (V1) and Update Cardholder Details (V2) web services: the newAccCode field has been removed from the list of fields that can have their values cleared by sending a <space>.	WS
	06/02/2023	Update to description of action code 213.	WS
	25/01/2023	Update to description of action code 122. Added information to clarify the use of *CreateType* = 5 when using the Card Create (*Ws_CreateCard*) web service.	WS
	13/01/2023	Added a note the Card Renew web service to indicate that when the new card is activated, Thredd will change the status of the old card to *62 restricted card*.	WS

Version	Date	Description	Revised by
	12/12/2022	Guide updated to reflect that the OUTOFBAND authentication type is now available. See 3D Secure RDX Credentials (Cardinal). **Note**: Please discuss with your Implementation Manager before implementing this method.	WS
	06/12/2022	Added the *WebServiceResult* parameter to the following web services: Card Renew (Ws_Renew_Card), Regenerate Wallet (Ws_RegenerateWallet), Clear Accumulator (Ws_ResetAccumulator), Change Card Acceptor List (Ws_Card_Change_Cardacceptor_List), Card Balance Update (Ws_BalanceUpdate) and Payment Token Status Change (Ws_Payment_Token_StatusChange), If the web service request is a duplicate of an existing request (has the same WSID) then the result will return an action code of 868, together with details of the original request, which will be displayed in the *WebServiceResult* parameter. Otherwise this new field will be blank. See PRN-135.	WS
	01/12/2022	Updated the Copyright Statement.	MW
3.14	21/11/2022	Update to description of action code 779.	WS
	07/11/2022	Correction to card name permitted characters: Only forward slash characters ("/") are allowed; any backslashes ("\") will be replaced with forward slashes.	WS
	28/10/2022	Updated the code examples in the 3D Secure RDX Credentials (*Ws_AddUpDelCredentials*) web service to show the correct format of the KBA fields.	WS
	20/10/2022	Removed the ability to change the card status to *expired* using status code 54; attempting to do so will return a new action code of 447. Card expiry status is always set by the system, based on the card's expiry date. See PRN-134.	WS
	12/10/2022	Added additional accumulator types related to Strong Customer Authentication (SCA). See the Clear Accumulator web service. Updated the list of special characters that are removed from input fields. See String Cleaning and Approved Characters. See PRN-106. Added a new *CarrierType* parameter to the Card Renew and Card Convert web services. See PRN-130. Added a note to the ProductRef field in the Update Cardholder Details (V2) web service to indicate that this field can also be used during mobile wallet tokenisation, to specify which card profile the Card Scheme (payment network) should use.	WS
3.13	16/09/2022	Added a new action code of 221, which is returned in a Token Device Management request when the Visa device index is missing from a request to unbind the device.	WS
	08/09/2022	Added a new Currency Code, SLE, for the new Sierra Leonean leone.	WS
	18/08/2022	Added a new section to Use Case Scenarios for Renewing Expiring Cards and Replacing a Lost or Stolen Card. In Card Renew (*Ws_Renew_Card*), option 16 has been removed from the list of *<RenewOptions>*.	WS
	10/08/2022	Added the *WebServiceResult* field to wsBalanceAdjustment, wsLoad, wsUnLoad, wsUnloadStatusChange, wsStatusChange and wsActivate web services.	WS

Version	Date	Description	Revised by
		Added a new action code of 445, which is returned in a Payment Token Create request when the payment token count exceeds the allowed limit. Added a new *<Url>* parameter which enables you to include URL details in the *<QRCode>* field of the card generation file sent to the card manufacturer. This affects the following web services: Card Create (*Ws_CreateCard*), Create Card with Agency Banking (*Ws_CreateCard_V2*), Card Renew (*Ws_Renew_Card*), Update Cardholders Details (*Ws_Update_Cardholder_Details* and *Ws_Update_Cardholder_Details_V2*), Card Bulk Create (*Ws_BulkCreation*), Wallet Create (Ws_CreateWallet) and Wallet Bulk Create (*Ws_BulkWalletCreation*). See PRN-123.	
	19/07/2022	Added two new web services: Ws_Banking_DD_CancelMandate and Ws_Banking_DD_GetMandate.	JB
3.12 06/06/2022 27/06/2022 14/07/2022	19/05/2022	In the Card Renew web service (*Ws_Renew_Card*) added a note to explain that the new card will be auto-enrolled with the same 3D Secure credentials as the old card. New Remove Cardholder Data (*Ws_Remove_CardHolder_Data*) web service added. This web service enables you to remove cardholder personal information from a card, such as name, address, email and phone number. See PRN-115. New *<Activate>* parameter added to the Payment Token Status Change (*Ws_Payment_Token_StatusChange*) web service, which can be used to indicate whether to activate the payment token on the MDES system (Mastercard only). See PRN-116. Updated description of action codes 118 and 441. Added log values for the Action field in the 3D Secure RDX Credentials (Cardinal) web service (Ws_AddUpDelCredentials).	WS
3.0.11 08/03/2022 15/03/2022 14/04/2022		Added a new 3D Secure credential for OUTOFBAND. See 3D Secure RDX Credentials (Cardinal). **Note**: OUTOFBAND is not yet available to use. Please check with your 3D Secure Implementation Manager for details. The Create Card web service (*Ws_CreateCard*) now includes a new tag called *Ws_WebServiceResult*, which is returned in the response; if this is a duplicate create card request then this tag is populated with data about the original Create Card request. See PRN-80. In the Register a Customer for Banking Actions web service (*Ws_Banking_RegisterNotification*), the *<type>* field now includes *DD_INCOMING_DEBIT*. Updated the description of the maximum length for *BuyRate*, *SellRate* and *MidRate* in the Apply FX Rate (*Ws_Client_FX*) web service. In the Card Acceptor Allow List (*Ws_CardAcceptorWhiteList*) and Card Acceptor Deny List (*Ws_CardAcceptorBlacklist*) web services, the field *CardAcceptor* has been corrected to *CardAcceptorModifier*. You can use the Card Change Acceptor List (*Ws_Card_Change_Cardacceptor_List*) or Card Change Acceptor List (Bulk) (*Ws_Change_Cardacceptor_List*) web services to update the Card Acceptor Allow and Deny lists. Correction: the character limit for the field *KBA_Answer* and *KBA_AnswerOldValue* should be 45 characters. See 3D Secure RDX Credentials (Cardinal). Correction: the response example in the Check Service Availability (*Ws_Check*) web service has been updated to show the correct response fields.	WS
3.10 04/01/2022 02/02/2022 14/02/2022 23/02/2022		Added a new 3D Secure credential for Knowledge Based Authentication (KBA). See 3D Secure RDX Credentials (Cardinal). See PRN-87 and PRN-88. When updating the 3D Secure credential using *Ws_AddUpDelCredential*, you can only change the credential value and not the type. See 3D Secure	WS

Version	Date	Description	Revised by
		RDX Credentials (Cardinal). Added and updated action codes 594-599 and 601-613. See Action Codes. Added a note to not use Status Code 41 if temporarily blocking a tokenised digital PAN (DPAN). Updates to the description of the Payment Token Create web service. New *Note* field added to the Card Load (*Ws_Load*), Card Unload (*Ws_Unload*) and Card Unload and Change Status (*Ws_UnLoad_StatusChange*) web services. This note will appear in the transaction's **Note** field in Smart Client. See PRN-43. Added a note to Extend Expiry Date (*Ws_ExtendExpiry*) web service to explain that you can't extend the expiry date of a card which is in an irreversible status. Clarified which Status Codes are irreversible. See PRN-96.Added new Action Code 120, which is returned when the card or account amount system limits are exceeded.	
3.09	20/10/2021 08/11/2021 18/11/2021 01/12/2021 14/12/2021 29/12/2021	The web service responses for fields containing balance amounts have been updated to return the number of decimal places based on the ISO 4217 currency exponent for the currency; see Currency Codes. (**Note**: previously two decimal places were returned). See PRN-67. Updates to table of Appendices. Updates to the WSDL URL. See Using the API. Updated wording to clarify that customers must be PCI DSS Compliant in order to return the full PAN, in web services which provide this option. In Card Convert to Physical (*Ws_Convert_Card*) the field *<ConvertDate>* in the request is optional. Update to *<DataSrc>* tag in *Ws_Card_Statement*; see Card Statement (V1). Update to note about card status codes on load in Ws_Load; see Card Load. Update to example of device latitude in *Ws_Payment_Token_Create*; see Payment Token Create.	WS AL WS
3.08	24/08/2021 06/09/2021 13/09/2021 20/09/2021 29/09/2021	Updates to support SEPA payments when creating a card with Agency Banking features and when making external payments. New web service *Ws_PaymentToken_Create* for Creating a Payment Token for use by Program Managers who have a direct connection to the Visa (VDEP) or Mastercard (MDES) tokenisation service. New field *<PBlock>* added to the Wallet Create web service (*Ws_CreateWallet*). See PRN-58. New field *<UsageGroup>* added to the Payment Token Status Change web service (*Ws_Payment_Token_StatusChange*) to enable users to change the card usage group of the card linked to a payment token. See PRN-63. New actions codes 439,441,442 and 443 added to support the *Ws_PaymentToken_Create* web service for Creating a Payment Token. General updates to web services request and response examples throughout the guide. New value of 5 added to the *<CreateType>* field in the Card Create and Card Bulk Create web services, to enable creating a virtual card and converting to a physical card at the same time. New Action Code of 444 added. See PRN-66. Updates to Card Status Codes to reflect new card block status codes. See PRN-48. New Action Codes for SEPA payments (Modulr Agency Banking Service): 140, 584, 585, 588, 589, 583, 590, 593.	WS
3.07	22/06/2021 02/07/2021 26/07/2021	Decommission of Ws_SafeReports. See PRN-39. Updates to the WS_Enquiry web service response to include the number of online PIN tries remaining and the number of CVV2 tries remaining. See PRN-38.	WS

Version	Date	Description	Revised by
		Updates to wording and examples for the *Ws_AddUpDelCredentials* web service; see 3D Secure RDX Credentials (Cardinal). Card Acceptor Allow lists and Deny lists wording updates. For a Multi-FX card, a card can be loaded in any of the card's currencies. Updates to the Ws_Renew_Card web service response to include the Expiry Date. See PRN-45. New action code *440 Archived card, deny* is returned in response to a request to update an archived card. See PRN-52.	
3.06	12/05/2021	Updates to description of Processing of Phone Numbers. Updated description for <*CreateImage*> in Card Renew. Updates to <ForcePost> field values in Card Balance Adjustment (Ws_Balance_Adjustment). <Sms_Required> field now defaults to 0. Corrections to Status Codes. Update to indicate that when creating a virtual card, if you are PCI compliant it is possible to retrieve the PAN, Expiry and CVV. See Card Create.	WS
3.05	28/04/2021	Changed <PrimaryToken> minimum length to 9 characters in Ws_CreateCard. See Card Create.	WS
3.04	22/04/2021	Updated Card Renew (Card_Renew) to reflect you can now specify renew options to immediately update the balance on the card and update any linked payment tokens at the same time. Revised Cardholder Details Enquiry (Ws_CardHolder_Details_Enquiry) to include <CrdProduct> in the response. Updated description of <LoadFee> in Create Card with Agency Banking (Ws_CreateCard_V2). Thredd now supports the use of the symbol # in address line fields: <Addrl1>, <Addrl2>, <Addrl3>, <Delv_AddrL1>, <Delv_AddrL2>, <Delv_AddrL3> Whitelist and Blacklist now referred to as Allow list and Deny list. Added GET method to the Ws_AddUpDelCredentials web service plus other updates. See 3D Secure RDX Credentials (Cardinal)	WS
3.03	16 Mar 2021	Fixes to web service examples: Ws_Load, Ws_BulkCreation,Ws_Regenerate,Ws_BulkWalletCreation,Ws_CardAcceptorWhiteList,Ws_Get_Passcode,Ws_Get_Card_ExpireSoon,Ws_List_Pending_Fees,Ws_CreateCard_V2,Ws_Banking_Card_Statement_V2,Ws_Banking_CreateCustomer and WS_Token_Device_Management. New action code 599 added.	WS
3.02	23/03/2021	Revised Ws_CardHolder_Details_Enquiry to remove <CrdProduct> from the response.	WS
3.01	17/03/2021	Revised examples in Cardholder Details Enquiry (Ws_CardHolder_Details_Enquiry).	WS
3.0	05/03/2021	Major guide revision. Complete revamp of the guide: reorganisation of the guide, major content rewrite, creation of new Getting Started topics, generation of new online help format. New appendices. Ws_UpdateLastModifiedType service added back to guide.	WS
2.09	20 Nov 2020	Update to WS_AddUpDelCredentials to support new Get method. Update to Ws_ResetAccumulator.	WS MD
2.08	30 Sept 2020	End to end review - numerous textual updates Removal of retired web services:	GH/MC

Version	Date	Description	Revised by
		Ws_AddressMatchChecking, Ws_LicenseVerification, Ws_PassportVerification Ws_List_Sanctions_PEP, Ws_List_Sanctions_PEP_Matches, Ws_Update_Sanctions_PEP_Matches Ws_UpdateLastModifiedType Removal of superfluous Section 1. Corrected description of ExpDate parameter of Ws_CreateCard Added Function 08 of Ws_PINControl Added section on Timeout settings to top of Spec. Updated documentation of the <Phone> parameter of Ws_Insert3DSecureDetails and Ws_Update3DSecureDetails services	IF
2.07	28 Jul 2020 25 Aug 2020 27 Aug 2020	Updated description of <StartDate> and <EndDate> in Ws_Card_Statement service. Updated description for Ws_Card_Change_Groups Documented web service Ws_Update_Cardholder_Details_V2 Added new request parameters VirtualCardImage and ImageSize to Ws_CreateWallet Service Added new request parameter ImageSize to Ws_RegenerateWallet Service. Corrected description of Ws_Query3DSecureDetails service. Corrected some typos in Action codes 878 - 880 Appendix A. Clarified valid date range for Ws_Card_Statement Corrected description for MemorableDate in Ws_Insert3DSecureDetails and Ws_Update3DSecureDetails	VS MJ VS IF
2.06	21 Jul 2020	Documented Action Codes 611 and 613	IF
2.05	29 Jun 2020 13 Jul 2020 16 Jul 2020	Added new request parameter DelvMethod to Ws_Renew_Card. Added request and response details for Ws_Query3DSecureDetails Added Specification for Ws_AddUpDelCredentials Changes in Ws_WebServiceResult_V2 response Action codes 600 ,614 and 615 added Added new renew options values to Ws_Renew_Card.	VS MJ VS
2.04	9 Jun 2020 22 Jun 2020	Improved description of following services: Ws_Check, Ws_Simple_Check Added new request parameters VirtualCardImage and ImageSize to following services: Ws_Createcard, Ws_Renew_Card Added new request parameter ImageId to Ws_Convert_Card Service.	IF VS
2.03	10 Mar 2020	Added new request parameter PaymentTokenUsageGroup to following services: Ws_Createcard, Ws_CreateWallet, Ws_CreateCard_V2, Ws_Change_Groups Ws_Enquiry, Ws_Card_Change_Groups, Ws_List_Group, Ws_Customer_Enquiry_V2, Ws_Regenerate, Ws_RegenerateWallet, Ws_Renew_Card, Ws_BulkCreation, Ws_BulkWalletCreation Added action codes - 431 and 432.	VS
2.02	21 Feb 2020	Ensure PDF version of the document has bookmarks, by ensuring sections and subsections in part 2 are all the correct heading style. Corrected Ws_Sanctions_PEP_Check_V2 <Status> field (section 2.43.1)	MD

Version	Date	Description	Revised by
2.01	29 Jan 2020	Updated Ws_Insert3DSecureDetails memorable name and memorable place no longer used and response Action code to 000 Updated Ws_Update3DSecureDetails memorable name and memorable place no longer used and response Action code to 000 Updated Ws_Delete3DSecureDetails response Action code to 000	IF
2.00	12 Dec 2019	Modified Maximum Length of <Fulfil1> and <Fulfil2> from 30 to 50.	VS
1.99	19 Nov 2019	Added new request Parameters DPAN, PaymentTokenID, ClearAllDPANs to Ws_ResetAccumulator call.	MJ
1.98		Added new request parameter ProductRef to Ws_Renew_Card call. Added action codes - 426 and 427.	MJ
1.97		Documented Ws_ResetAccumulator Update Ws_CreateCard_V2 documentation. Document the default behavior of SMS_Required and SMSBalance input parameters Added Action Codes 664,665,666, 667 and 425.	MJ
1.96		Updated Ws_Bulk_Creation documentation Documented card status types 02 & 75 Documented Ws_Check Remove section about linked files from Ws_CreateCard_V2 Additional parameter in Ws_CreateCard_V2 for customer ID New web service call of Ws_Banking_CreateCustomer New we service call Ws_Banking_RegisterNotification Added a new item <BankTransactionId> to Ws_Banking_TransferFunds response New action codes for Modulr	MJ
1.95		Added new request parameters BlackList and WhiteList to Create Card and Create Wallet web services. Added new response parameters BlackList and WhiteList to Enquiry web service Updated <StartDate> in Ws_Card_Statement Added action code - 418	MJ
1.94		In Ws_3DS_AddUpDelDetails marked Details as mandatory Provided example web service cal to include AltPhone1 Updated Details to show which calls were phone numbers and that country codes must be provided Example of how to use OverrideThredd field	SW
1.93	15 Jan 2019	Update Ws_Banking_TransferFunds reference field to no longer allow certain characters Additional parameters in Ws_Banking_Transfer funds to handle peer to peer transactions Additional payment types in Appendix V to handle peer to peer payment types Documented Appendix MM Documented new web service Ws_Renew_Cards Clarified <Func> 6 in PIN Control web service Updated description of Ws_Enquiry. Updated description of WS_Passport_Verification Updated Response of Ws_Bulk_Creation	MJ

Version	Date	Description	Revised by
		Upadted <TxnCode> in WS_Activate_MVCLoad Updated Response of Ws_Load Added new action codes and updated some existing ones. Added new load sources Added note to Ws_CreateCard, under <ActivateNow> parameter. Added note to Ws_Payment_Token_Get, under <Device_Type>	
1.92	9 Oct 2018	Documented web service Ws_Activate_MVCLoad Updated the max length of input parameters CurrentPIN, NewPIN and ConfirmPIN in Ws_PINControl and max length of Pblock in Ws_CreateCard Added new request parameter FeeWaiver to web services Ws_CreateCard, Ws_CreateWallet, Ws_Regenerate and Ws_RegenerateWallet. Clarified the description of the input parameter <NewStatCode> in the status change and unload & status change requests. Clarified the description of the input parameters <PostCode>, <Delv_PostCode> and <WorkPostCode> Clarified the decription of Sms_Content in Ws_Regenerate and Ws_RegenerateWallet. Documented FxGroup request parameter to ws_Card_Change_Groups and FXGroup, CurrentFXGroup request parameters to ws_change_groups. Updated description of CardDesign request parameter of ws_activate_load	MJ IF
1.91	11 Sep 2018	Updated version number Updated description of W2DetailsPassThroughDataRequest parameter of ws_VerificationRequest service.	IF
1.90	6 Sep 2018	Added note to Ws_CreateCard, under <ActivateNow> parameter. Added note to Ws_CreateCard description regarding replacement physical cards.	HC
1.9	25-04-2012	Full revise of web service.	n/a
1.89	5 Sep 2018	Mainly a review of language to simplify terms and introduce clarifications. Added note to Ws_Activate_Load for case when card is already loaded beforehand Ws_PINControl – documented the functions 05 and 06 Update Appendix C & F Clarified Renew, SvcSrc, SvcType and SvcStatus parameters of Update Cardholder Details service.	MC SB IF
1.88		Adding Appendix MM – A Note of cleaning of some strings Updating Ws_Customer_Enquiry FirstName and LastName to be 100 characters, and Name in Ws_List_Sanctions_PEP_Matches Fixing Last Name description in Ws_VerificationRequest Added new request parameter Description to MVCLoad and MVCUnload web services.	SB
1.87	30 May 2018	Small Spelling corrections Ws_BalanceUpdate enhanced to include Stand In & Available balance Update Appendix H to be up to date Adding RegenType = 2 to Ws_Regenerate and Ws_RegenerateWallet Fixing Ws_Regenerate to include PAN Added Action Codes 409-416	SB

Version	Date	Description	Revised by
1.86	18 May 2018	Updated Ws_Payment_Token_Get no longer require PAN or Pubtoken if MDES card details are provided	SB
1.85	10 Apr 2018	Updated Ws_CreateCard & Ws_CreateWallet description. Spelling correction to Ws_CardAcceptorWhiteList Fixed <Description> to be 150 Chars and <DescriptionDelimiter> to be AN in Ws_Card_Statement Clarified TransactionType and StatusCode in Ws_Card_Statement Added Action Codes 400-405	SB
1.84	27 Feb 2018	Documented web service Ws_MVCLoad Documented web service Ws_MVCUnload	MJ
1.83	15 Feb 2018	Ws_Sanctions_PEP_Check_v2: New optional parameter ProductID in request. Corrected spelling of checkLevel request parameter Ws_List_Sanctions_PEP_Matches - New optional parameter ProductID in request and response, existing MatchItems response parameter documented, response example updated. Added to descripton of Action Code 897 for decimal place errors.	IF
1.82	16 Jan 2018	Ws_PINControl - Function 7, “CVC2 Unblocking”, added. Action Codes 127, 406 added. Optional parameters WSID, IssCode added to Ws_Regenerate Decreased the amount fields precision for Ws_BalanceAdjustment	SB
1.81	27 Dec 2017	Action codes 934 - 950 updated for 3DS error handling Appendix T updated to reflect correct handling of direct debits as per Wirecard directions	SW
1.80	10 Nov 2017	Updating Ws_3DS_AddUpDelDetails so it is up to date. Adding Action Codes from Ws_3DS_AddUpDelDetails development. Added descriptions to all the Appendix HH fields Removing references to Ws_Banking_ GetDirectDebitInstructionsBankingEnabledCard as a tiered call. It is currently only functional at a Token level. (Sections 1.69 and 2.69) Removing references to Ws_Banking_GetPendingDirectDebits as a tiered call. It is currently only functional at a Token level. (Sections 1.68 and 2.68) Change to include Creator_Token_Ref in the response for WS_Payment_ Token_Get Change to WSDL examples in WS_Payment_Token_Get And Ws_Payment_Token_StatusChange to make them clearer	SB
1.8	11-04-2012	Add a new input field in the Convert Card web service to pass expiry of the card.	n/a
1.79	7 Nov 2017	Fixed CrdDesign to be 50 Chars in Ws_CardHolder_Details_Enquiry	SB
1.78	28 Sep 2017	Clarified the description of the output parameters (<TxnDate>, <PostDate>, <Locdate> and <TxnTime>) in the card statement response.	
1.77	26 Sep 2017	Added action codes 548 (Cannot close account with balance) and 953 (updating MDES Card Mapping failed) Updated IsoLang and Lang fields to include a reference to the SMS templates that can be set up Added a section about the new Fair Usage Policy for web services. Clarified the description of the four web services ws_	SB IF

Version	Date	Description	Revised by
		Insert3DsecureDetails, ws_Update3DsecureDetails, ws_ Delete3DsecureDetails and ws_Query3DsecureDetails to make it clear that they are for customers using the Cardinal interface only.	
1.76	27 Jun 2017	Updated descriptionof Passcode (Acccode) to 6 digits in many web services. Updated description of LoadSrc in Balance Transfer web service. Updated <CreatedFrom> description to add “YYYY-MM-DD Format” for Ws_Banking_GetDirectDebitInstructionsBankingEnabledCard Added action code 546 - No direct debit found from ME_ ActionCodeDetails Updated descriptions for <ExternalAuth> and <Mobile> fields in Ws_ CreateCard Added action code 547 - Issue connecting to Bottomline V Series from ME_ActionCodeDetails Added action codes 662 (LockMode invalid or missing) and 663 (Invalid DOB)	IF
1.75	23 May 2017	Documented Sms_required parameter of Status Change. Updated descriptions and Response/Request for Ws_SafeReports Updated description of AmtUnload and AmtTxn in Unload/Unload Status Change and Balance Transfer respectively. Also LoadedBy changed to Opt in Unload Status Change. Changes done to match WSDL behavior. Added new Action Code: 660	IF
1.74	21 Apr 2017	Added Ws_BalanceUpdate Added Ws_Payment_Token_Get and Ws_Payment_Token_ StatusChange Added Appendix LL Payment Token Table Added Action codes for the above calls Added Ws_Query3DsecureDetails Response and Request - Amal Added Action codes so that 901-949 can match up better with ISO 8583:2003 Removed Ws_Card_Phone_Activation as it is not in the WSDL and is a duplicate of Ws_Phone_Activation Made <memoScope>, <dvlDaysValid>, <fundCrdIssNum>, and <FundCrdCVC> mandatory in Ws_Update_Cardholder_Details Changed Ws_Card_Statement_V2 to Ws_Banking_Card_Statement_V2 to match up with the WSDL	SB
1.73	7 Feb 2017	Increased CustAccount length from 16 to 25 throughout. Clarified the use of quantity parameter of Create Card. Various minor descriptive enhancements. Claried use of ItemSrc parameter	IF
1.72	6-Dec-2016	Added in Ws_Card_Statement_V2 Added in Ws_3DS_AddUpDelDetails Added in details for ws_RegenerateWallet as provided in CS_TUXEDO-177 at request of S Kelly	SW
1.71	15-Sep-2016	Clarified crdProduct parameter of Update Cardholder Details service. Changed length of designRef parameter to 50 on Update Cardholder Details service.	
1.70	9-Sep-2016	Various minor corrections	
1.7	26-03-2012	Full revise of web service.	n/a

Version	Date	Description	Revised by
1.69	9-Aug-2016	Corrected Definition of MatchItems parameter in ws_sanctions_pep_check_V2	
1.68	11-May-2016	Added in the banking web service calls as follows Ws_Banking_AccountModulusCheck Ws_Banking_ChangeAccountBankingFeaturesStatus Ws_Banking_ReturnBankDetailsFromToken Ws_Banking_StatusQueryBankingEnabledCard Ws_Banking_TransferFunds Ws_Banking_UpdateBankingEnabledCard Ws_CreateCard_V2	SW
1.67	28-Apr-2016	Added new service ws_VerificationRequest Added new service ws_SafeReports Added new service ws_Query3DsecureDetails Added Appendix K for Load Funds Type Added new parameter MatchItems to Ws_Sanctions_PEP_check_V2 Corrected documentation for CompleteMatch response parameter of Ws_Sanctions_PEP_check_V2 Updated documentation of the CreateImage parameter of the Create Card service due to change in recommended practice. Added documentation to the description of the Link Cards service. Removed documentation for Card Transaction XML. This web service is being retired and will be removed from the API. Correct definition of PrimaryToken request parameter on Create Card web service. Corrected description of Transaction Void service Updated list of Load Sources Documented SMS_Required parameter of Load service.	
1.66	15-Dec-2015	Corrected documentation for FeeWaiver request parameter.	IF
1.65	4-Dec-2015	Retired ws_Sanctions_PEP_Check web service, replaced by ws_Sanctions_PEP_Check_V2.	IF
1.64	30-Nov-2015	Added new request parameter BrnCode to Balance Transfer web service Added new web services to support 3D Secure Added new web services to list and update PEP and Sanctions matches. Updated descriptions of existing PEP/Sanctions web services to make them easier to understand. Added new Balance Enquiry V2, same as Balance Enquiry with different LimitInfo response. Added new web service to list pending fees	IF
1.63		Added new request parameter BrnCode to Load and Activate and Load web services. Added new request parameter Quantity to the Create Card web service. Added new request parameter LoadToken to the Create Card web service. Added option 2 to SmsBalance request parameter of Activate and Activate/Load services. Added new web services: Ws_get_ExpireSoon, Ws_list_Sanctions_PEP, Ws_card_change_acceptor_list, Ws_change_CardAcceptor_List Allowed overriding of Product Default groups on Create Card web service by passing space character. Updated the list of groups in the List Groups service	IF

Version	Date	Description	Revised by
1.62	03-09-2015	Added new service: Web Service Result V2 Added new parameters to Balance Transfer: FeeWaiver Added new response parameters to Enquiry and Customer Enquiry V2 services: AuthCalendarGroup FXGroup Added seconds support to TxnTime response parameter in Card Statement Updated documentation to correct definition of request of Card Change Groups Updated documentation to correct definition of response of Card Statement Updated documentation to correct case of LocDate and LocTime in a few services.	IF
1.61	27-08-2015	Updated documentation for PIN Control Func 03	IF
1.60	20-08-2015	Added new web service: Card Acceptor Whitelist Added new web service: Send Message	IF
1.6	09-03-2012	Added new web service to retrieve CVV of an existing card.	n/a
1.59	30-07-2015	Updated documentation of Create Card SMS_Required parameter. Added new parameter to Create Card: AuthCalendarGroup Added new parameter to Card Change Groups: AuthCalendarGroup Added new web service: Card Acceptor Disallow list Added new parameter to Regenerate: MailorSMS Added new parameter to PIN Control: FeeWaiver	IF
1.58	26-06-2015	Revised action code table	IF
1.57	11-06-2015	Added new value of func to PIN control service Added new parameter Pblock to Create Card service Added new parameter PINMailer to Create Card service Added new parameter FXGroup to Create Card and Update Cardholder Details services Updated the documentation for the LoadSrc parameter Updated the documentation for the Balance Transfer web service. Added new parameters AuthType, DOB, CVV, AccCode and LastName to PIN Control service. Added new Action Codes to Appendix A Added new parameters Email and MailOrSMS to the Create Card service Added new parameters ExternalRef and TerminalId to the Regenerate service	IF
1.56	30-03-2015	Create Card and Link Card changed to prevent a secondary card being linked to anything other than a-Primary card Length of ProductRef changed to 50 throughout. Added new parameters to the Transactions list returned from Card Statement. These return more granular information about fees. Added new response parameters ProductID and ProductRef to Customer Enquiry Service Version 2 Added new value of CreateType to Create Card web service to allow creation of Master Virtual Cards Length of ProductRef increased to allow for up to 50 alpha characters	IF

Version	Date	Description	Revised by
1.55	21-01-2015	Change to Enquiry web service: Added PrimaryToken to the response Changed behavior of Customer Enquiry V2 web service:It now returns all secondary cards for the primary token or CustAccount by default Changes to Customer Enquiry V2 web service: Added all group info and IsLive response parameters Change to Create Card web service: Added VanityName as a new parameter Change to Update Cardholder Details service: Added VanityName as a new parameter Change to Cardholder Details Enquiry V2: Added VanityName as a new response parameter Change to Update Cardholder Details service: Added addr3 as a new parameter Change to Card Statement service: Added MCCDescription as a new response parameter. Added option to allow “Fin:” to be removed from the Presentment description Improved accuracy of spelling and case of some parameters Renamed 1.24 from Card Statement to Card Transaciton XML to avoid confusion with 1.7 Card Statement service	IF
1.54	15-01-2015	Change to Create Card web service: Added new request parameter: Card Linkage Group Change to Card Change Groups service: Added new request parameter: Card Linkage Group Change to Change Groups service: Added new request parameter: Card Linkage Group. Added new request and response parameter: Current Card Linkage Group Change to Enquiry service: Added Scheduled Fee Group, Web Service Fee Group and Card Linkage Group to the response.	IF
1.53	03-12-2014	Change to Statement service: Added Processing Code to the Transaction response Change to the Customer Enquiry V2 service. Added PublicToken to the CardList response	IF
1.52	27-11-2014	Changes to Balance Adjustment service: Added LoadedBy parameter Changes to Create Card service: Added new response parameter: Image. Allows card image to be returned in response as PGP-encrypted jpeg. Implemented LoadSrc and LoadFundsType validation. Implemented Limits check against LoadSrc Changes to Balance Transfer service: Added LoadedBy parameter. Added Description parameter. Implemented LoadSrc and LoadFundsType validation. Implemented Limits check against LoadSrc Changes to Activate/Load service: Added Description parameter. Implemented LoadSrc and LoadFundsType validation. Implemented Limits check against LoadSrc Changes to Load service: Implemented LoadSrc and LoadFundsType validation. Implemented Limits check against LoadSrc Change to Regenerate service (ws_regenerate): Added new response parameter: Image. Allows card image to be returned in response as PGP-encrypted jpeg. Change to Create Wallet service: Added new response parameter: Image. Allows card image to be returned in response as PGP-encrypted jpeg. Implemented LoadSrc and LoadFundsType validation. Implemented Limits check against LoadSrc Change to Status Change service: Corrected Status code validation (status 01 retired). Change to Unload Status Change service: Corrected Status code validation (status 01 retired).Added List Products service (ws_list_ products).	IF

Version	Date	Description	Revised by
1.51	27-10-2014	Change to internal logic of Balance Adjustment: It will now check card maximum balance and return an error if it will be exceeded by the current operation. This ehavior can be overridden by using the “ForcePost” parameter. Changes to Create Card service: Additional Parameter: ExternalAuth, can be configured to return full PAN for a client or product. Fixed Delivery Address Line 3 issue Changes to Balance Enquiry service: Additional request parameter: GetLimits; Additional response parameter: LimitInfo Change to Balance Transfer service to link Load and Unload transactions via LinkId Change to Void Transaction web service to link the transactions via LinkId Change to Load service so that if the card is Multi-FX then the given Load amount will load onto the account associated with the input currency Change to the Activate, Activate/Load and Phone Activation web services so that if the card is Multi-FX then the web method will activate all accounts associated with that card Added new response parameter Product to the Enquiry web service. Added new service Link Cards. Added new service List Groups.	IF
1.50	21-10-2014	Added new Load Sources 56-67 to Appendix J Various minor corrections including removal of references to SecDet request parameter.	IF
1.5	24-11-2011	Added some new process codes for taking fees.	n/a
1.49	01-09-2014	Documented Create Wallet, Bulk Creation Wallet and Wallet Balance Enquiry web services. Added “0 – Undefined” as an option for Itemsrc	IF
1.48	03-07-2014	Documented new Client FX web service	IF
1.47	06-05-2014	Corrected the definition of the PrimaryToken parameter on Create Card. Documented new Address Line 3 parameter addrL3 on Create Card web service Corrected definitions of txnFilter on Card Statement	IF
1.46	10-03-2014	Clarifications on Create Card and Regenerate parameters. Updated the Bulk Creation web service to clarify parameters and functionality. Added OrigStan as a new response parameter to Card Statement.	IF
1.45	17-02-2014	Increased max length of all Address Lines 1 and 2 to 50 chars Clarified Mobile Telephone parameter on Update Cardholder Details Added pubtoken request parameter to, and updated description of Create Card web service to cater for Replacement card requests Updated Regenerate web service description to clarify current Lost/Stolen functionality Added new action codes 700 and 701 Added new SMS_Required request parameters to Load and Status Change services. Added Appendix E to explain how SMS messages can now be configured in a flexible way and in chosen cardholder language	IF
1.44	07-01-2014	Added new Action Code 899. Added new value of filter to Card Statement (txnFilter=6)	IF
1.43	05-12-2013	Added cobrand to the Create Card web service. If supplied it will replace	IF

Version	Date	Description	Revised by
		PROGRAMID in the Balance XML. Updated definition of Transaction Filter “3” in Card Statement Removed Disputed and Rejected from Appendix I – Transaction Status as no longer used. Added new request parameter DescriptionDelimiter to Card Statement Added new response parameter MCC to Card Statement Clarified the list of allowed characters in Create Card CardName parameter. Clarified dimensions of Public Token parameter. Clarified dimensions of WSID parameter.	
1.42	21-11-2013	Added new Action Codes 893-898 inclusive	IF
1.41	28-10-2013	Minor clarifications. Documented Description parameter of ws_load and ws_unload.	IF
1.40	17-09-2013	Updated Appendix G – Status Codes Added three new web services for ID verification (UK only as of this release): Ws_AddressMatchChecking, Ws_LicenseVerification, Ws_PassportVerification	IF
1.4	17-11-2011	Added one new field (<Apply_Fee>) in the create card web service request to take the card issue fees. Modified the available balance (<avlbal>) field in the response of web services; balance enquiry, card statement, balance adjustment, balance transfer and card enquiry. Previously the available balance includes all financials but ignores outstanding authorisations and now it includes all financials and outstanding authorisations.	n/a
1.39	16-07-2013	Added new Request Parameter CardManufacturer to the ws_createcard web service. Added new Request Parameters SchedFeeGroup and WSFeeGroup to the ws_createcard web service, to allow setting of Scheduled Fee Groups and Web Service Fee Groups Updated definition of <Lang> parameter in ws_createcard web service. Further clarifications throughout.	IF
1.38	09-04-2013	Added new response parameters in the Ws_Enquiry web service: <StartDate>, <EndDate>, <LimitsGroup>, <MCCGroup>, <PERMSGroup> and <FeeGroup>. Added new input parameters to the Create Card and Bulk Card Creation web services to specify language <lang> and bulk delivery code <Delv_Code>. Added new response parameter to the Create Card and Bulk Card Creation web services: <StartDate>. Clarified format of existing parameter: <ExpDate>. Added missing SysDate documentation to Unload web service record description. Clarified the txnFilter parameter in the ws_card_statement web service. Added new parameter <sms_required> to the ws_pincontrol web service. Added new web service Simple Check	IF
1.37	04-04-2013	Added LinkId to ws_card_statement response. Added new Appendix (J) for load sources.	n/a
1.36	25-03-2013	Added new input parameters in the Create Card and Bulk Card Creation web services to handle SMS sending during virtual card creation.	n/a
1.35	20-03-2013	Added new input parameters in the Create Card and Bulk Card Creation	n/a

Version	Date	Description	Revised by
		web services to take FULFIL1 and FULFIL2	
1.34	25-02-2013	Added new input parameters in Create Card and Bulk Card Creation web services to take delivery address.	n/a
1.33	29-01-2013	Full review of web service document.	n/a
1.32	28-01-2013	Added new web service to convert cards form virtual to physical.	n/a
1.31	17-12-2012	Added new web service to change the groups of card.	n/a
1.30	16-11-2012	Corrected the Transaction Void web service documentation	n/a
1.3	13-10-2011	Modified the Switch Advanced Permission web service to take a list process code to enable fees.	n/a
1.29	15-11-2012	Added new parameter (<SmsBalance>) in the Ws_GiftCard_Activate and Ws_GiftCard_Activate_Load web services.	n/a
1.28	27-09-2012	Added new web service to apply fees and web service to check the Politicaly Exposed Person(PEP)	n/a
1.27	17-09-2012	Full revise of web service document	n/a
1.26	07-09-2012	Added new input parameter (<FeeGroup>) in the create card change group web services. Added other new iput parameter (<PrimaryToken>) in the the create card web service.	n/a
1.25	14-08-2012	Added new web service to change the groups.	n/a
1.24	13-08-2012	Full revise of web service. Added new web service to get the transaction details.	n/a
1.23	19-07-2012	Added new out parameter (<MaskedPAN>) in the Ws_CreateCard and Ws_GiftCard_Enquiry web services.	n/a
1.22	27-06-2012	Added new field (<PERMSGroup>) in the Create Card web service.	n/a
1.21	25-06-2012	Added new fileds in the Create card web service and the XML request in the bulk creation web service. Added new action code to return when tried to activate an active card.	n/a
1.20	21-06-2012	Added two new input parameters (<LimitsGroup> and <MCCGroup>) in the Create Card web service.	n/a
1.2	07-10-2011	Added one field (<Scheme>) in the response of Card Enquiry web service. Added one new field (<AuthType>) in the request of Phone Activation web service.	n/a
1.19	20-06-2012	Updation in card statement web service. Added the description of transaction type and transaction status.	n/a
1.18	15-06-2012	Added a new input field (<newToken>) in the request of Balance Transfer web service to pass the destination token.	n/a
1.17	14-06-2012	Added a new input parameter (<CardName>) in the Create Card web service to pass the card' emboss name.	n/a

Version	Date	Description	Revised by
1.16	12-06-2012	Added Fees fields (Fixed Fee, Rate Fee, FX Padding and MCC Padding) in the transaction of the card statement web service.	n/a
1.15	11-06-2012	Added the description of XML tags in the bulk virtual card creation web service.	n/a
1.14	07-06-2012	Modified the card status codes.	n/a
1.13	06-06-2012	Full revise of web service.	n/a
1.12	21-05-2012	Added a new field in the Ws_GiftCard_Activate_Load_ProductTpye_CP web service.	n/a
1.11	17-05-2012	Added a new field in the Ws_GiftCard_Activate_Load_ProductTpye_CP web service.	n/a
1.10	11-05-2012	Added new web service for instant card creation.	n/a
1.1	28-09-2011	Load source description field is added in the Create Card web service. Added load source description field in the Card Load web service. Created a new web service to change advanced permission bit of a card. Modified the <loadSrc> values.	n/a
1.0	15-09-2011	First draft.	n/a

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