

CHAPS ISO 20022 over SWIFT

Getting Started Guide

Version 1.0

This document provides CHAPS direct participants with guidance for implementing CHAPS ISO 20022 over SWIFT.

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1 Introduction

1.1 Purpose of this Document

This Getting Started Guide provides guidance for a CHAPS direct participants (DPs) to connect and exchange CHAPS ISO 20022 messages over SWIFTNet, using InterAct Store-and-Forward Y-Copy messaging. For the sake of brevity and simplicity, the term CHAPS-ISO will be used throughout this guide referencing various aspects of the SWIFT solution for CHAPS ISO 20022, i.e. business message standards, SWIFTNet services, InterAct & Y-Copy messaging, SWIFT interface connectivity and back-office integration.

It is anticipated that all of the DPs' CHAPS-ISO projects are well underway and that this guide is complimentary to any planning, design and implementation work already in progress. This guide is aimed at the DPs' business operations, business application development and SWIFT technical staff who are involved in their CHAPS-ISO project. Also, this guide can be used in conjunction with the BoE's '[CHAPS & RTGS ISO20022 migration: revised approach and final schemas](#)' (Oct 2020) and SWIFT's '[ISO Programme Customer Adoption Guide](#)' documents.

N.B. Details of the CHAPS ISO 20022 message standards, or Usage Guidelines / final schemas, are out-of-scope of this guide, but full specifications can be found on the Bank of England's (BoE) MyStandards page on swift.com - https://www2.swift.com/mystandards/#/group/Bank_of_England

Although primarily aimed at existing CHAPS DPs migrating to the Bank of England's (BoE) CHAPS-ISO SWIFTNet services, this guide is equally applicable to new CHAPS members.

Section 2 SWIFTNet Service(s) is aimed at *staff who are responsible for completing the subscription e-forms on swift.com* for the various BoE CHAPS-ISO SWIFTNet services. The BoE will have created five SWIFTNet services and a subscription e-form will need to be completed for each service. Further guidance provided in section 2.

Section 3 Connectivity is aimed at *SWIFT technical staff* who are responsible for configuring their SWIFT messaging interface to i) exchange CHAPS-ISO messages over SWIFT and ii) exchange CHAPS-ISO messages with their back-office or middleware application(s). Further guidance provided in section 3.

Section 4 Integration is aimed at *SWIFT technical staff and business application developers* responsible for configuring the connections and exchanging CHAPS-ISO messages between the back-office or middleware application(s) and the SWIFT messaging interface. **Note**, DPs will have their own specific integration requirements and solutions, which will need to be analysed by their

developers and vendors for the impact of CHAPS-ISO message flows. Further guidance provided in section 4.

1.2 Background

In general, a SWIFTNet service is a *closed user group* consisting of the *Service Administrator*, in this case the Bank of England (BoE) and *Service Participants*, in this case the Direct Participants (DPs) of the CHAPS service. The Service Administrator defines the live service, the pilot (or test) service(s) and various features for each service. A Service Participant submits a *subscription e-form* on swift.com, which must be approved by the Service Administrator, to join a SWIFTNet service.

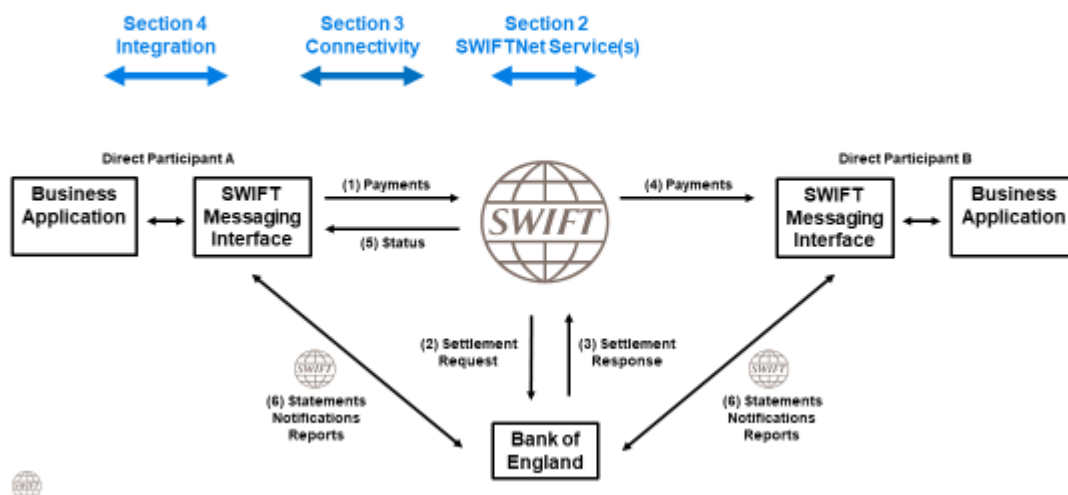
The CHAPS-ISO SWIFTNet services are an evolution of the current CHAPS-FIN services. The BoE's *RTGS Renewal Programme* consists of five SWIFTNet services, four pilot services and one production service, see table of service names below. Specific BoE CHAPS-ISO e-forms on swift.com must be submitted by the DPs to subscribe to these services. Section 2 describes in detail how to complete these e-forms.

These services include: the adoption of ISO 20022 based messages; InterAct Store-and-Forward messaging; and Y-Copy messaging for exchanging CHAPS-ISO messages over SWIFT, see diagram below.

1.3 The SWIFT Solution for CHAPS ISO 20022

The diagram below highlights the general CHAPS-ISO message flows and an overview of the SWIFT solution for a DP. It shows the three parts of the SWIFT solution, i.e. *SWIFTNet Service(s)*; *Connectivity*, and *Integration* with each area having its own section in this guide. The numbered message flows in the diagram are described in the following General Message Flows section.

CHAPS-ISO Message Flows



1.4 General Message Flows

The CHAPS-ISO SWIFTNet services are an evolution of the current CHAPS-FIN services. They use the same Y-Copy concept as shown in the above diagram, i.e.

- (1) The DP sends a CHAPS-ISO payment message to the CHAPS-ISO SWIFTNet service
- (2) Settlement Request, the payment is held in SWIFTNet and copied to the BoE for authorisation
- (3) If Settlement Response is *authorised*, then (4) the payment is delivered to the receiver and the sender is notified (5) Status authorisation, **OR**
- (3) If Settlement Response is *refused*, then the payment is not delivered to the receiver and the sender is notified (5) Status refusal.

The status or *notification* messages in (5) are represented by the pacs.002 CHAPS-ISO status messages and *not* by the standard xsys.002 and xsys.003 messages, as documented in standard SWIFTNet Y-Copy flows. Note when a negative/refusal pacs.002 is returned, an xsys.012 abort system message will also be delivered to the sender. **The mechanism for how this pacs.002 notification message is generated and other reasons for receiving the xsys.012 abort system message are described in the Integration section of this guide.** The non-payment messages (6)

are also exchanged within the CHAPS-ISO services, e.g. reporting (camt.*) and administration (admi.*) messages, but not subject to the Y-Copy process.

As well as ISO 20022 standards, InterAct Store-and-Forward and Y-Copy messaging services, the BoE have defined the following features within their CHAPS-ISO SWIFTNet services:

- **Message Validation** – the CHAPS-ISO payment messages will be validated centrally by SWIFT against the CHAPS *Usage Guidelines*. Notes for developers:
 - the usage guidelines or Usage Identifier of the ISO 20022 message is added into the Request Sub-type field of the InterAct Request Header by the SWIFT messaging interface from the metadata data provided by the business application or middleware.
 - during TS2 CHAPS will only accept Like-for-Like (L4L) format messages and during TS2.1 CHAPS will only accept Enhanced (ENH) format messages. See Integration section for more details.
- **The Sender Notification message is delivered as a pacs.002 status message, not as xsys.002 or xsys.003.** See Integration section for more details on how this pacs.002 notification message is generated.
- **Addressing** – DPs must subscribe with a wildcard Level-3 *Distinguished Name* (DN) for all the pilot services (*,o=bic8,o=swift) and subscribe with a fixed Level-3 DN for the live service (ou=xxx,o=bic8,o=swift). This is further described in section 2.
- **Requestor DN–Business Application Header (BAH) BIC consistency check** for the live service.
- **Reverse Billing** – the DPs will be invoiced by SWIFT for their Y-Copy messages, the same as in today’s CHAPS-FIN services.
- **RMA is NOT used** for the CHAPS-ISO SWIFTNet services.

1.5 SWIFTNet Service Names for CHAPS ISO 20022

The BoE will deploy the following five CHAPS-ISO SWIFTNet services:

Service Name	Purpose	Phase / Transition State (TS) <i>L4L=Like-for-Like</i> <i>ENH=Enhanced</i>	e-form Availability	Service Availability
boe.stg.iast!pu1	<i>UAT 1 pilot</i>	TS2 (L4L) TS2.1 (ENH)	available	Nov 2021
boe.stg.iast!pe1	<i>Pre-Production 1 pilot</i>	TS2 (L4L) TS2.1 (ENH)	available	Nov 2021
boe.stg.iast!pu2	<i>UAT 2 pilot</i>	TS3 (ENH)	July 2022	Nov 2022
boe.stg.iast!pe2	<i>Pre-Production 2 pilot</i>	TS3 (ENH)	July 2022	Nov 2022
boe.stg.iast	<i>Production live</i>	TS2, TS2.1 TS3	January 2022	Expected March 2022

The pilot services are described below in sub-section 1.7

1.6 Key Go-live Milestones

Date	Transition State (TS)	Description
June 2022	TS2 - L4L	Like-for-Like message standards
February 2023	TS2.1 - ENH	ENHanced message standards
September 2023	TS3	RTGS core ledger live
2024 onwards	TS4	Further changes

1.7 Key Testing Dates

The following table has been provided by the BoE. Any questions or verification on these dates must be addressed to the BoE RTGS Readiness Team - rtgs.readiness@bankofengland.co.uk

Service (*= <i>boe.stg.iast</i>)	Transition State (TS)	Phase	Date	Description
UAT1 (* <i>!pu1</i>)	TS2	TS2 Connectivity/Training	15/11/21 – 26/11/21	This will be an opportunity to test connectivity to all TS2 test environments and also offer training for the External Test Simulator (ahead of TS2 Participant Testing)
		TS2 Participant Acceptance Testing (PAT)	31/01/22 – 04/03/22	The Bank will issue a TS2 mandatory test pack for each DP to complete using the Test Simulator (or 'buddy banks' if they wish) alongside any other testing the member may want to execute.
UAT1 (* <i>!pu1</i>)	TS2.1	TS2.1 Participant Acceptance Testing (PAT)	12/09/22 – 14/10/22	The Bank will issue a TS2.1 mandatory test pack for each DP to complete using the Test Simulator (or 'buddy banks' if they wish) alongside any other testing the member may want to execute.
UAT2 (* <i>!pu2</i>)	TS3	TS3 Connectivity/Training	01/11/22 – 15/11/22	This will be an opportunity to test connectivity to all TS3 test environments (ahead of TS3 Participant Testing)
		TS3 Participant Acceptance Testing (PAT)	13/02/23 – 17/03/23	The Bank will issue a TS3 mandatory test pack for each DP to complete using the Test Simulator (or 'buddy banks' if they wish) alongside any other testing the member may want to execute.
Pre-Prod1 (* <i>pe1</i>)	TS2	TS2 Connectivity/Training	01/11/21 – 12/11/21	This will be an opportunity to test connectivity to all TS2 test environments and also offer training for the External Test Simulator (ahead of TS2 Participant Testing)
		TS2 Participant Group Testing (PGT)	28/02/22 – 06/05/22	A wider, more structured test phase where DPs test daily RTGS settlement

				processes including multi-lateral message exchange with other DPs based on a live timetable. This may also include 'scenario' testing such as volumes, fall-back, contingency.
Pre-Prod1 (*pe1)	TS2.1	TS2.1 Participant Group Testing (PGT)	10/10/22 – 16/12/22	A wider, more structured test phase where DPs test daily RTGS settlement processes including multi-lateral message exchange with other DPs based on a live timetable. This may also include 'scenario' testing such as volumes, fall-back, contingency.
Pre-Prod2 (*pe2)	TS3	TS3 Connectivity/Training	16/11/22 – 30/11/22	This will be an opportunity to test connectivity to all TS3 test environments (ahead of TS3 Participant Testing)
		TS3 Participant Group Testing (PGT)	06/03/23 – 09/06/23	A wider, more structured test phase where DPs test daily RTGS settlement processes including multi-lateral message exchange with other DPs based on a live timetable. This may also include 'scenario' testing such as volumes, fall-back, contingency.

2 SWIFTNet Service(s) for CHAPS ISO 20022

This section is aimed at *staff who are responsible for completing the CHAPS-ISO subscription e-forms on swift.com*. As previously mentioned, the BoE will deploy five SWIFTNet services for Pilot (Test) and Live operations. Each service will have its own subscription e-form. See previous table of CHAPS-ISO SWIFTNet services showing availability on the SWIFT network

Use following link to BoE's dedicated web page on swift.com to access all BoE e-forms –

<https://www.swift.com/myswift/ordering/order-products-services/bank-england>

2.1 How to access to the subscription e-forms

1. Go to BoE's dedicated web page on swift.com - <https://www.swift.com/myswift/ordering/order-products-services/bank-england>
2. Under the Bank of England section all the BoE's services will be displayed. Under sub-section "Subscribe to the CHAPS-ISO services" select the required service and click the "Subscribe" button.
3. If not already logged into swift.com, enter your account and password. If the credentials are correct, the relevant e-form (Test or Live) opens.

Ordering

Ordering

Order Products and Services

Change

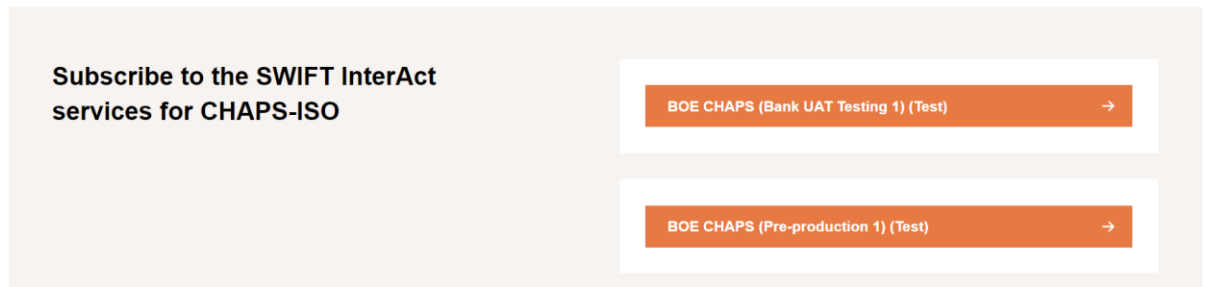
Terminate & deactivate

Bank of England

This page allows you to subscribe to SWIFT services for the Bank of England

Place orders

Place orders



Select the relevant e-form:

- “**BOE CHAPS (Bank UAT Testing 1) (Test)**” – for UAT testing in TS2 / TS2.1
- “**BOE CHAPS (Pre-production 1) (Test)**” - for external member testing in TS2 / TS2.1

The following e-forms will be available at a future date:

- “**BOE CHAPS (Pre-production 2) (Test)**” - for external member testing in TS3
- “**BOE CHAPS (UAT Testing 2) (Test)**” - for UAT testing in TS3 UAT
- “**BOE CHAPS (Live)**” - for the live service

1. Click on **Subscribe** to select the e-form. If not already logged into swift.com, enter your account and password. *N.B. Only registered swift.com users can access the order form and must have the e-ordering profile for being able to submit e-orders.*
2. If the credentials are correct, the relevant e-form (Test or Live) opens, showing the SWIFTNet service name, as in the example below.



[Print](#) | [Price list](#) | [How e-ordering works](#)

SWIFTNet Service Subscription

BANK OF ENGLAND (BKENGB2L) Market Infrastructure : BOE CHAPS(Pre-production 1) (Test)

SWIFTNet service = boe.stg.iast!pe1 / Test

Enter the requested information.

The orange arrow icon ► indicates mandatory fields

Please use this form to manage a subscription to a SWIFTNet Service under the conditions of the [SWIFTNet Service Description](#)

Registered customer information			
Full legal name	?	SOCIETY FOR WORLDWIDE INTERBANK	1.01
BIC8	?	SWHQBEBB	1.02

2.2 How to complete the subscription e-forms

See below details in completing each part of the subscription e-form, applicable for both Test and Live services.

I. Registered Customer Information

This part contains the data related to your swift.com account / BIC and is automatically pre-filled with registered information

Registered customer information			
Drafted BIC	?	SWHQBEBB	1.01
Full legal name	?	SOCIETY FOR WORLDWIDE INTERBANK	1.02
BIC8	?	SWHQBEBB	1.03
The name with which you registered yourself on swift.com.	?	Agnes Soltesz	1.04
Registered e-mail	?	Agnes.SOLTESZ@swift.com	1.05
Registered telephone	?	+31 +31 683624137	1.06
		Update user profile	1.07

II. Order Information

Order information			
Your own Purchase Order Reference	?	<input type="text"/>	3.01
Sales partner	?	<input type="text" value="S.W.I.F.T. SC"/>	3.02
SWIFT commercial quotation reference	?	<input type="text"/>	3.03
SWIFT account manager email address	?	<input type="text"/>	3.04

- 3.01: enter the reference that SWIFT has to use for communication related to this service (e.g. invoices) *Please note that there is no cost for submitting these subscription e-forms*
- 3.02: leave the default value "S.W.I.F.T SC"
- 3.03: leave the field empty
- 3.04: enter the email address of your SWIFT account manager

III. Institution that you order for

Institution that you order for			
BIC	?	<input type="text" value="SWHQBEBB"/>	4.01



- 4.01: Specify the BIC8 you use for CHAPS operations.
Either it will be the default displayed or select your CHAPS BIC8 from the drop-down list. *It will be the same BIC8 as the level-2 BIC8 of your Distinguished Name in field 6.01 of this e-form.*

IV. Preferred implementation date

Preferred implementation date

Implementations always occur during the weekly general maintenance period between Saturday 05:00 GMT and Sunday 05:00 GMT. The earliest possible implementation of an order that is validated by SWIFT as being correct and duly approved by the Service Administrator, is the second weekend following the date of submission. A later weekend can be specified.

If you are using Lite2 or Alliance Remote Gateway the implementation date will be aligned with server provisioning (for more information please contact support). In case of first subscription to a SWIFTNet service, the implementation date should concur with the [next planned BIC directory publication date](#).

Preferred implementation date   Saturday October 16 2021 

5.01

- 5.01: enter implementation date agreed with Bank of England

Notes:

- The Preferred Implementation date must be 16th October 2021 for the UAT 1 and Pre-Production 1 services. The e-forms will be available from June 2021 and will be approved by the BoE in October 2021. Due date to complete the forms is 1st October 2021.
- The Preferred Implementation date must be 15th October 2022 for the UAT 2 and Pre-Production 2 services. The e-forms will be available from July 2022 and will be approved by the BoE in October 2022. Due date to complete the forms is 30 September 2022.
- For the live service the e-form will be available from January 2022. Due date to complete the form is 18th February 2022.

V. SWIFTNet Closed User Group

SWIFTNet Closed User Group Information




Test




Use this section to specify the SWIFTNet Address or Distinguished Name (DN) that you will use to exchange messages or files with your counterparts for this SWIFTNet Service.

You must use this DN or any lower level DN as the Requestor-DN to send messages to your correspondents.

If you expect to receive messages as part of this service, this will also be the Responder-DN that your correspondents must use to send messages to you. They will find this destination in the SWIFTNet Services Directory (if supported by the service).

You can edit this field (or leave the default value) and select the appropriate CUG-category as defined by the Service Administrator.

SWIFTNet Address   *.o=swhqbebb,o=swift  6.01

CUG Category   Member  6.02

[Advanced >>](#)

Live


SWIFTNet Closed User Group Information


Use this section to specify the SWIFTNet Address or Distinguished Name (DN) that you will use to exchange messages or files with your counterparts for this SWIFTNet Service.

You must use this DN or any lower level DN as the Requestor-DN to send messages to your correspondents.

If you expect to receive messages as part of this service, this will also be the Responder-DN that your correspondents must use to send messages to you. They will find this destination in the SWIFTNet Services Directory (if supported by the service).

You can edit this field (or leave the default value) and select the appropriate CUG-category as defined by the Service Administrator.

SWIFTNet Address   ou=xxx,o=swhqbebb,o=swift  6.01

CUG Category   Member  6.02

[Advanced >>](#)

- 6.01: The SWIFTNet Address is the Distinguished Name (DN) that is used as Requestor DN to send messages. By default, your Level-2 DN will be displayed in the e-form, **but a Level-3 DN must be specified.**

To do this **please specify a Level-3 DN in field 6.01**, as defined below

For the Test services, the Level-3 DN must be specified as: ***,**o=BIC8,o=swift****

For the Live service, the Level-3 DN must be specified as: **ou=xxx,**o=BIC8,o=swift****

- 6.02: keep the default value for 'CUG Category' - "**Member**".

Additional step is required: Please click on "Advanced", update the number of entries to "1" and click on "update":

Please select the number of entries you desire (max 99)

VI. Traffic Routing for Store and Forward Service

Specify your Store and Forward queues for the **TEST** services as follows:

In this section you are able to specify the queue for your incoming InterAct Store and Forward (SnF) messages.

- 7.01: the default value of the 'Full Queue Name' will be automatically filled in the e-form. This needs to be customized as per your own preferred SnF queue name in field 7.02.01. For the customization please click on "Advanced" and specify your own preferred SnF queue name in 7.02.01.
- 7.02.01: in this section you need to specify your preferred 'Full Queue Name'. Please note that the Responder DN, i.e. your *receiving* address must be identical with the Level-3 DN indicated under 6.03.002 (*,o=**bic8,o=swift**)
- 7.03: in this section you can indicate (if required) a separate queue (other than the SnF queue specified under 7.01 and 7.02.01) for the reception of the Delivery Notification messages. If no separate queue is required for the Delivery Notification messages, this section can remain empty.

Specify your Store and Forward queues for the LIVE service as follows:

Traffic Routing for Store and Forward Service

Use this section to identify the queue name to process incoming SWIFTNet InterAct or FileAct Store and Forward traffic. Use the default value as specified below if you do not have any specific requirements.

If you expect Store and Forward traffic from this service for both InterAct and FileAct, you must use the Advanced section below to set-up separate queues and routing rules to facilitate appropriate interface processing.

Default Queue 7.01

Advanced >>

You can decide to change the queue name or use multiple queues to process different types of messages for this service. To do this, add a line for each traffic segment you want to assign to a queue. The traffic segment can be specified by using the Requestor DN, Responder DN and Request Type. The Queue Name will be created centrally if it does not yet exist.

Note : Following queue and routing rule will be created by default : Rule Order 99, Full Queue Name bic8_generic(lp), Requestor DN *, Responder DN o=bic8,o=swift and Request Type *

Rule Order	Full Queue Name	Requestor DN	Responder DN	Request Type
90	swhqbebb_file	*	ou=xxx o=swhqbet	*

Please select the number of entries you desire (max 99) 7.02.01

Delivery Notifications can be directed to any of your existing Store and Forward queues based on the configuration of your financial application. Use the following fields to request additional queue(s) if required.

Queue Name 7.03

In this section you are able to specify the queue for your incoming InterAct Store and Forward (SnF) messages

- 7.01: the default value of the 'Full queue name' will be automatically filled in the order form in 7.01. This needs to be customized as per your own preferred SnF queue name in field 7.02.01. For the customization please click on "Advanced" and specify your own preferred SnF queue name in 7.02.01.
- 7.02.01: in this section you need to specify your preferred SnF queue name(s). Please note that the Responder DN, i.e. your *receiving* address must be identical with the Level-3 DN indicated under 6.03.002 (**ou=xxx,o=bic8,o=swift**)
- Question 7.03: in this section you can indicate (if required) a separate queue (other than the SnF queue specified under 7.01 and 7.02.01) for the reception of the delivery notification messages. If no separate queue is required for the delivery notification messages, this section can remain empty.

VII. Forms Validation and Subscription

Once the e-form has been completed scroll down and click on the **"Continue"** button for initial validation of the e-form.



If valid, then confirm your subscription request and click on **"Order now"**.

Tick here to confirm your order details and to accept the terms and conditions above. Then click 'Order Now'.

[← BACK](#) [▶ Save as draft](#) [▶ Order now](#)

Your e-form will be further validated by SWIFT, before forwarding to the Bank of England for approval.

Your subscription status can be monitored using the **order tracking** tool of swift.com.

3 Connectivity

3.1 Introduction

This section is aimed at *SWIFT technical staff* who are responsible for configuring i) their SWIFT messaging interface to exchange CHAPS-ISO messages over SWIFTNet, and ii) their SWIFT messaging interface to exchange CHAPS-ISO messages exchange CHAPS-ISO messages with their back-office or middleware application(s).

Further details can be obtained from your SWIFT messaging interface provider, but as the CBPR+ ISO solution (FINplus¹) also uses InterAct Store & Forward like CHAPS-ISO, then the '[ISO Programme Customer Adoption Guide](#)' (ISO-CAG) can be used by DPs for further guidance on configuring their SWIFT messaging interfaces for CHAPS-ISO.

In FIN, Logical Terminals are used to 'connect to SWIFTNet' for sending / receiving MT messages and MT messages are received via FIN Delivery-Subsets.

In InterAct, Input Channels/Sessions are used to 'connect to SWIFT' for sending MX-ISO messages and Store and Forward Queues/Output Channels/Sessions are used for receiving MX-ISO messages. Both FIN and InterAct operate in Store-and-Forward mode. Further details on these concepts can be found in section 4.1 of the ISO-CAG document.

See below general guidance for these flows and connections, as taken from the ISO-CAG.

3.2 Configuring the Sending to SWIFTNet Flow

The below steps have been taken from the ISO-CAG document section 4.1 and where applicable CHAPS-ISO specific terms and comments have been made in ***bold italics***.

1. Complete ***CHAPS-ISO*** e-form. (***as described in section 2 of this Getting Started Guide***).
2. Choose a Delivery Notification Queue (existing or create a new one in the e-form).
3. Prepare a SWIFTNet PKI certificate to sign your ***CHAPS-ISO*** traffic. (***Authoriser DN***)
4. Configure your store & forward input channels.
5. Configure your SWIFTNet connection on your SWIFT messaging interface.
6. Determine the use of optional features, like delivery notifications and non-delivery warnings.
7. Define your ***CHAPS-ISO RMA relationships (IGNORE, CHAPS-ISO SWIFTNet services do not use RMA)***.

¹ FINplus is the centrally managed SWIFTNet service used to exchange CBPR+ ISO messages.

8. Configure your CHAPS-ISO addressing rules. (***The BoE has specified that Test DNs will be level-3 wildcard, i.e. *,ou=bic8,o=swift and the Live DN will be level-3 fixed, i.e. ou=xxx,o=bic8,o=swift***)

3.3 Sending Considerations

See the ISO-CAG section 4.3.1.* for further guidance on the following considerations -

- Send traffic on *CHAPS-ISO*
- Delivery Notification Queue
- Input Channels / Sessions
- Input Acknowledgement
- Delivery Notifications and Non-delivery Warnings

3.4 Additional Sending Considerations

- Message Validation (MVAL)
Further information on MVAL behaviour can be found in the *SWIFTNet Messaging Operations Guide*, section 5.10, dated October 2020
 - Header validation
 - Payload validation
- Ensure your SWIFT messaging interface release/version supports ISO and InterAct Store & Forward messaging
- Install *Application Service Profiles* from the Download Centre on swift.com
- Install the CHAPS-ISO format library / message standards

3.5 Configuring the Receiving from SWIFTNet Flow

The below steps have been taken from the ISO-CAG document section 4.1 and CHAPS-ISO specific terms and comments added in bold italics.

1. Create and configure your store-and-forward queues (including delivery notification queues) (***as described in section 2 of this Getting Started Guide***).
2. Define your message routing rules (e-form).
3. Configure your store-and-forward output channel.
4. Prepare the certificate to receive your CHAPS-ISO traffic.
5. Configure your SWIFTNet connection on your SWIFTNet messaging interface.

3.6 Receiving Considerations

If required, use the ISO-CAG section 4.3.2.* for further guidance on the following considerations –

- Store-and-forward Queues
- Message Routing Rules
- Output Channels and Queue Sharing
- Access Control
- Delivery Control

4 Integration

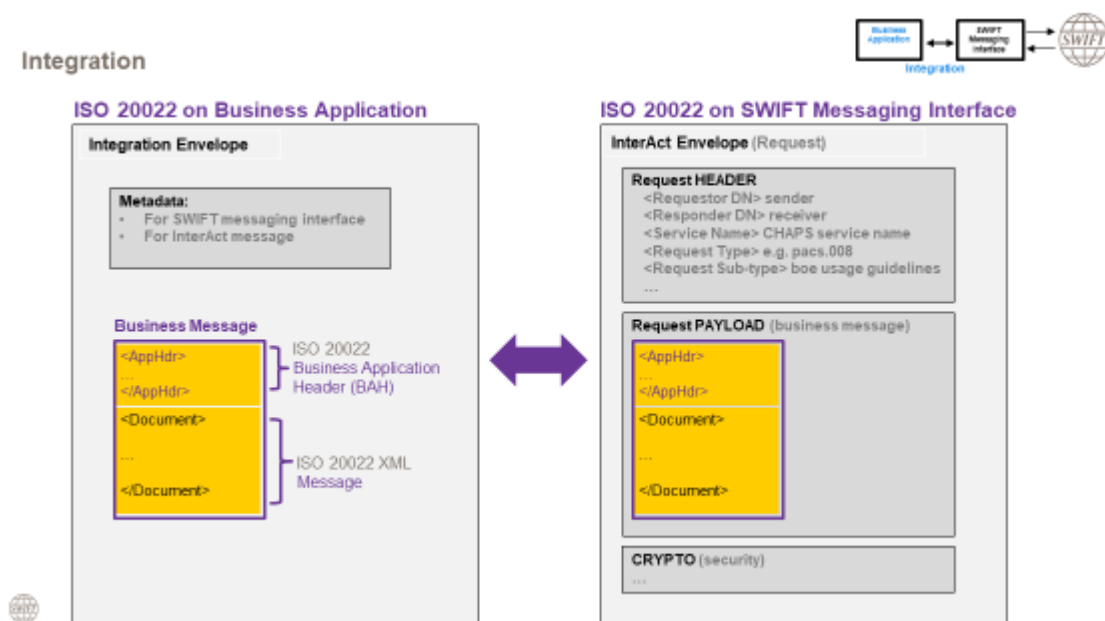
4.1 Introduction

This section is aimed at *SWIFT technical staff and business application developers* responsible for configuring the connections and exchanging CHAPS-ISO messages between the back-office or middleware application(s) and the SWIFT messaging interface.

DPs will have to *re-integrate* their business or middleware application(s) with their SWIFT messaging interface to support the CHAPS-ISO message flows. They will have to consult their internal application development team, and/or their application provider / vendor, and/or their SWIFT messaging interface provider to assess and implement their integration solution for CHAPS-ISO messages.

4.2 Integration Considerations

See below high-level diagram showing the different ‘envelopes’ (or wrappers) encapsulating the CHAPS-ISO business message on the business application and on the SWIFT messaging interface. In the ideal case for the sending flow, the business application (or middleware) generates the *business message* and *metadata* and encapsulates both within the *integration envelope*. The SWIFT messaging interface then replaces the integration envelope with the *InterAct envelope* or *InterAct Request* message, using the metadata to generate the Request Header within the InterAct message. The reverse happens for the receive flow.



For example, the integration envelope for SWIFT’s Alliance Access interface is called XMLV2 format and for Alliance Messaging Hub it is called the AMP format. For non-SWIFT interfaces, please check with your interface vendor for details of the integration envelope.

The metadata is extra information used for

- i) transmission to the SWIFT messaging interface
- ii) onward transmission to the CHAPS-ISO service over SWIFTNet.

It includes, as shown above, mandatory fields or elements used to by the SWIFT messaging interface to build the *Request Header* block of InterAct envelope, such as *Requestor DN* (sender), *Responder DN* (receiver), *Service Name*, *Request Type* and *Request Sub-Type*, for transmission to SWIFTNet.

Notes:

- The CHAPS-ISO DNs have specific formats for **Live** (ou=xxx,o=bic8,o=swift) and **Pilot** (*,o=bic8,o=swift) services.
- See sub-section 1.5 for table of the CHAPS-ISO service names.
- Keep *Sw:AuthNotifInd* field empty. Should this field be set to “TRUE”, SWIFT will nak the message.
- During TS2 CHAPS will only accept Like-for-Like (L4L) format messages and during TS2.1 CHAPS will only accept Enhanced (ENH) format messages.
- See table below for all the CHAPS-ISO Request Types and Request Sub-types
 - the ‘l4l’ and ‘enh’ Request Sub-types are for the payment messages only
 - some other Request Types have multiple Request Sub-types, i.e. camt.054 and admi.004

Request Type	Request Sub-type	TS2	TS2.1	TS3
pac.008.001.08	boe.chaps.l4l.01	Y	N	N
pac.008.001.08	boe.chaps.enh.01	N	Y	Y
pac.009.001.08	boe.chaps.l4l.01	Y	N	N
pac.009.001.08	boe.chaps.enh.01	N	Y	Y
pac.009.001.08	boe.chaps.l4l.cov.01	Y	N	N
pac.009.001.08	boe.chaps.enh.cov.01	N	Y	Y
pac.004.001.09	boe.chaps.l4l.01	Y	N	N
pac.004.001.09	boe.chaps.enh.01	N	Y	Y
camt.052.001.08	boe.chaps.01	Y	Y	Y
camt.053.001.08	boe.rtgs.01	Y	Y	Y
camt.054.001.08	boe.chaps.can.01	Y	Y	Y
camt.054.001.08	boe.chaps.dbt.01	Y	Y	Y
camt.054.001.08	boe.chaps.cdt.01	Y	Y	Y
camt.054.001.08	boe.chaps.pre.01	Y	Y	Y
camt.060.001.05	boe.rtgs.01	Y	Y	Y
admi.004.001.02	boe.chaps.qbk.01	Y	Y	Y
admi.004.001.02	boe.chaps.sts.01	Y	Y	Y
pac.002.001.10	boe.chaps.01	Y	Y	Y

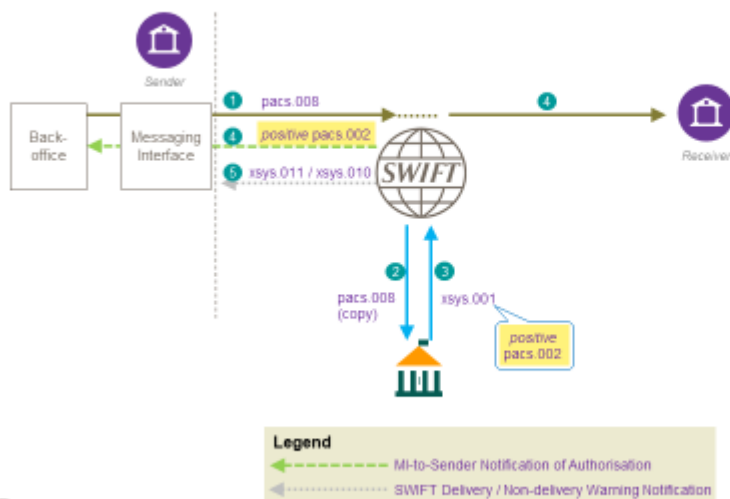
Different terminology is used to define the Request Type and Request Sub-type as shown below –

InterAct	BAH	MyStandards
Request Type	Message Definition Identifier	Message Identifier
Request Sub-type	Business Service	Usage Identifier

Mechanism for pacs.002 status message generation

As mentioned in 1.4 General Message Flows, the sender notification message takes the form of a pacs.002 message and **not** an xsys.002 or xys.003, as for standard SWIFTNet Y-Copy flows. This pacs.002 is generated by the BoE and added within the xsys.001 message as part of the Y-Copy flow. SWIFT delivers the pacs.002 from within the xsys.001 message to the sender. The pacs.002 message can either be an Authorisation notification or a Refusal notification, see below diagrams.

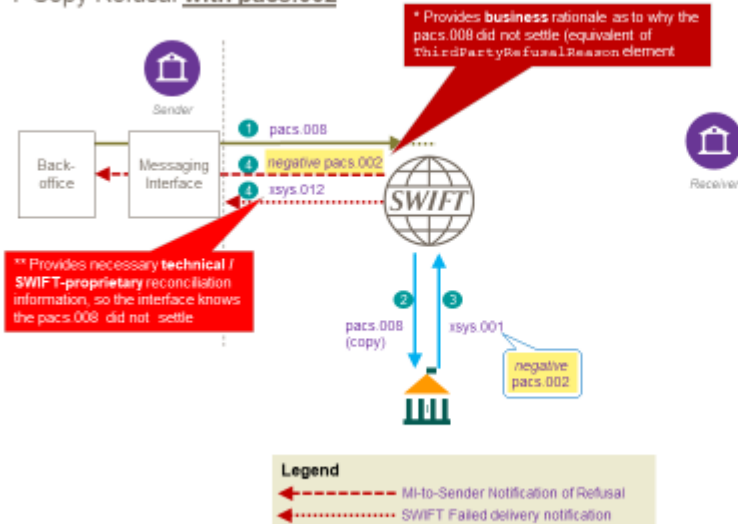
Y-Copy Authorisation with pacs.002



Comments:

- Sender receives pacs.002 **whenever present** inside the xsys.001, instead of receiving the xsys.002 or xsys.003
- Sender receives a "positive" pacs.002 (ACSC) that originates from the BoE
- Sender's back-office can correlate the pacs.002 with the pacs.008, for reconciliation purposes
- Sender can decide whether SWIFT should monitor the original message, i.e. send xsys.011 delivery confirmation and/or xsys.010 non-delivery warning, as per normal process

Y-Copy Refusal with pacs.002



Comments:

- If *negative pacs.002 (RJCT)* is **present** inside the xsys.001, sender receives *negative pacs.002 AND xsys.012 failed delivery notification*
- * Sender receives a "negative" (RJCT) pacs.002 that originates from the BoE
- * Sender's back-office can correlate the pacs.002 with the pacs.008, for reconciliation purposes
- ** Sender **ALSO** receives xsys.012 from SWIFT
- ** Sender's interface can correlate the xsys.012 with the pacs.008 at network level, without any knowledge of the business content of the pacs.008.

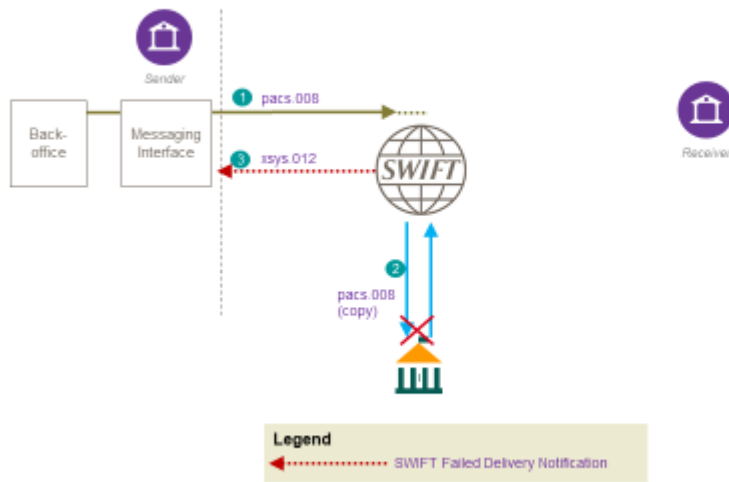
Other reasons for receiving xsys.012 failed delivery notifications are:

- Copy delivery time-out
- Delivery to receiver time-out

See below diagrams.

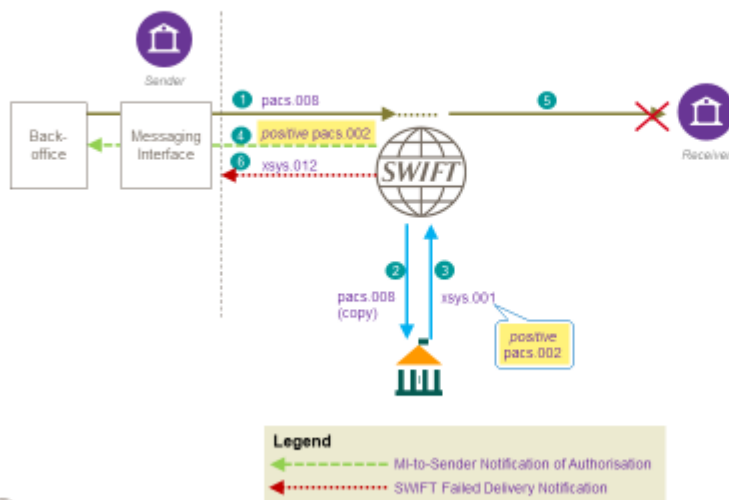
If copy destination is unable to receive the copy or send back the xsys.001, SWIFT sends an xsys.012

Other reasons for xsys.012 - Copy delivery time-out



If receiver is unable to receive the copy after 14 days in Live (or 4 days in Pilot), SWIFT aborts the transaction and sends an xsys.012 failed delivery notification to the sender.

Other reasons for xsys.012 - Delivery to receiver time-out



5 Checklist

Activity	Responsible
Section 2:	
Subscribe to BoE CHAPS-ISO SWIFTNet services (Pilot and Live)	swift.com registered user with e-order rights
Section 3:	
Configure send & receive connections between SWIFT messaging interface and SWIFT	SWIFT interface administrator (see ISO-CAG document)
Routing of CHAPS-ISO messages on SWIFT messaging interface to / from business application	SWIFT interface administrator
Section 4:	
Configure connection between SWIFT messaging interface and business application	SWIFT interface administrator Business application administrator / developer
Integration of the CHAPS-ISO message flows	Business application administrator / developer

6 Glossary

CHAPS-FIN	Existing CHAPS FIN Y-Copy service(s), identified in field 103 in block 3 of the FIN-MT message, e.g. STG
CHAPS-ISO	New BoE SWIFTNet services, identified by Service Name in Request Header block of the InterAct message, e.g. boe.stg.iast!pe1 Live and test CHAPS-ISO services have been created.
CUG	Closed User Group, same as a SWIFTNet Service
e-form	electronic form to subscribe to a SWIFTNet Service
FIN	Central SWIFT MT-based messaging service, store-and-forward based
FINplus	Central SWIFT MX/ISO-based InterAct Store-and-Forward based messaging service, e.g. for CBPR+ messages
FIN Y-Copy	Central SWIFT MT-based message copy service
InterAct Y-Copy	Central SWIFT MX-based message copy service
InterAct Store & Forward	SWIFTNet messaging protocol used for CHAPS-ISO messaging
ISO-CAG	ISO Programme Customer Adoption Guide for FINplus & CBPR+, store-and-forward based
MT	FIN message format (Message Type)
MX	InterAct XML message format XML supporting ISO 20022
MVAL	Central SWIFT message validation service
TS2	Transition State 2, BoE's Like-for-Like formats phase
TS2.1	Transition State 2.1, BoE's Enhanced formats phase
TS3	Transition State 3, BoE's RTGS core ledger go-live date
SWIFTNet Service	Same as CUG, consisting of a Service Administrator (BoE) and Service Participants (DPs)

7 Reference Documents

SWIFT Reference Documents:

ISO Programme Customer Adoption Guide

https://www2.swift.com/knowledgecentre/publications/iso_20022_prog_cust_adopt_guid/8.0

SWIFTNet Messaging Operations Guide

https://www2.swift.com/knowledgecentre/publications/sn_msg_op_guid/3.0?protected=true&reload-date=1622825559138

Bank of England Reference Documents:

CHAPS & RTGS ISO20022 migration: revised approach and final schemas (Oct 2020)

This document and other related material on the BoE's RTGS Renewal Programme page:

<https://www.bankofengland.co.uk/payment-and-settlement/rtgs-renewal-programme/consultation-on-a-new-messaging-standard-for-uk-payments-iso20022>

BoE's MyStandards page for ISO 20022 formats:

https://www2.swift.com/mystandards/#/group/Bank_of_England

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