Swift

Swift Compatible Applications

Alliance Access Integration – SOAP Host Adaptor

Technical Qualification Test 2024

This document lists the tests for application providers that integrate their back-office application or middleware with Alliance Access using SOAP Host Adaptor and that are looking at qualifying against the Swift Compatible Application.

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1 Preface

1.1 Purpose

This document describes the test scenarios that a financial application has to pass to be compliant with Alliance Access using SOAP Host Adaptor (SOAPHA).

The purpose of the SOAPHA qualification is to verify the capacity of an application to correctly integrate with SWIFTNet via Alliance Access SOAP Host Adapter.

1.2 Audience

The target audience for this document is both partners considering the compatibility of a product, and Swift users that look after an overview of the Swift Compatible Applications contents. The audience should be familiar with Swift portfolio from a technical and a business perspective.

1.3 Swift Compatible Application program

The Swift Compatible Application programme covers the entire financial application chain, from Trade, Treasury and Payment, to Corporate and Securities segments.

Each Swift Compatible Application defines a set of criteria, which are reviewed every year to ensure that the software remains aligned with the financial market evolution and with customer needs.

These criteria are designed to reflect the capability of a financial application to provide message processing automation in a Swift context, and to support straight through processing (STP) in order to increase customer value, limit customisation needs and cost, and reduce time to market.

1.4 Related Documents

The following documents can be found over swift.com:

- Alliance Access 7.7 release overview
- Alliance access - Administration guide

2 Introduction

SOAP, originally defined as Simple Object Access Protocol, is a protocol specification for exchanging structured information over HTTPS.

The SOAP connection method enables the exchange of MT and MX using XML V2 or FileAct messages between Alliance Access and back-office applications through the SOAP protocol.

Message Partner and routing rules have to be configured in alliance access for SOAPHA.

2.1 Swift Compatible Application Validation

Support of SOAPHA is one of the qualification criteria for granting the Swift Compatible Application Label to a financial application.

The Partners who deployed the Swift Alliance connectivity to Swift ITB can perform these tests independently. Test environment configurations described in **section 3**.

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3 Alliance Access configuration

This set-up is applicable for Partners who have deployed an ITB environment and connect to Alliance Access from their premises.

3.1 Alliance Access

To prepare for the tests, the Alliance Access system must be installed and configured at Partner premises. The following configuration is required for communicating through SOAPHA:

Alliance Access must be upgraded to release 7.6 or higher version. Please note that Alliance access 7.6 or higher versions can be used for MT and MX using XML V2. FileAct with SOAPHA will work with SAA 7.6 or higher versions.

- – Additional licence **14:SOAP ADAPTER** is required for SOAP
- – For exchanging XML messages **19:AI FILE XML**, license is needed

It is necessary to get acquainted with the Alliance Access - Administration Guide and Alliance 7.6 release overview to further configure the interface for test purpose. The Application Interface module of Alliance Access provides all the functions necessary to manage Message Partner profiles. Using Application Interface, the Partner needs to set up the connection profiles that are used by Alliance Access to connect with external message partners. The Application Interface allows exchanging messages with external back-office systems or "Message Partners".

3.2 Message Partner configuration

The SOAPHA communication session is set up and controlled with a dedicated Message Partner configuration in Alliance Access. Using the procedure described in the Alliance Access System Management Guide – SOAP Connection Method, create a Message Partner.

- Specify the connection method as SOAP
- Specify the direction of message transfer
- Configure other parameters

For detailed procedure for creating message partner profile for SOAPHA, please refer to the procedure described in the Alliance Access – Administration Guide – Managing Message Partner Profiles.

3.3 Exchanging messages using Message Partner

- The SOAPHA supports MT, MX and FileAct messages. It will support only the XMLv2 data format.
- The messages being sent must be the message types supported by the partner application.
- All messages entering Alliance through the Application Interface are queued at one single point of entry – _AI_from_APPLI (AI Inbound Queue), before being routed onwards.
- The successfully processed messages will be stored by Alliance Access in the _SI_to_SWIFTNetQueue.
- Swift Network returns Notification messages for technical reconciliation and response messages, since the test messages were used for "self transfers", meaning, the sender and receiver BIC are the same.
- The application must download the Network notifications and messages sent in "Output from Swift" direction.

4   SOAPHA Test preparation

SOAPHA supports the exchange of messages in the following data formats:

- **XML version 2 (MX and MT messages, and files for FileAct service)**
    - SOAPHA supports XML version 2 ONLY. The Partner must use XML version 2 and latest revisions as described is [Alliance Access System Guide](#).

For more information about these formats, see the Alliance Access System Management Guide – "Message Formats Used in AI". Sample messages for MT and MX are provided in section 6.Please refer to messages samples below exchanged with Alliance Access, in scope of the Swift solution.

4.1   Reconciliation of Delivery Notification

When the messages are sent to Alliance Access, the application can optionally request for a delivery notification. This will result in Alliance Access receiving a message about the message delivery, which can be reconciled with the original message.

The Partner must demonstrate the capability of their application to process the Delivery Notification Message and to reconcile it with the original message.

A sample Delivery Notification message is provided in [section 6.1.4.](#)

4.2   Transmission Notification

A transmission notification is a message representing the result of transmission to Swift network. Swift performs full syntax and semantic checks before it returns an acknowledgement (ACK). Other checks, such as validity of the sender and the receiver, are also performed. These checks can cause a message to be rejected and a negative acknowledgement (NAK) is returned in response.

The Partner must demonstrate their application capability to process the Transmission Notification Message and reconcile with the original message.

4.3   Message Flow

Alliance Access controls the interactive exchange of SOAP messages between the back-office Applications and Alliance Access using an additional Swift-defined protocol on top of the SOAP protocol. This protocol provides a set of primitives to manage the message exchange Sessions, to guarantee and ensure unique delivery of messages.

4.3.1   SOAP Primitives

The following SOAP primitives are used in SOAP messages:
• **Open**: open a session
• **Close**: close a session
• **Put**: send a message to Alliance Access
• **GetAck**: request Alliance Access to send a message that is waiting delivery to the back office Application, and optionally, acknowledge a message received from Alliance Access.

• **Ack**: acknowledge a message received from Alliance:

Please refer the SAA Administration guide – 7.6 for more information about SOAP messages.

5   Swift Compatible Programme SOAPHA testing

To be qualified as SOAPHA compliant, Partners need to send MT,MX or FileAct messages (depending on the label category), and act upon received MT, MX or FileAct messages including Ack/Nack and delivery notifications.

1. The Partner application vendor prepares the MT / MX/FileAct message types as required for the Swift Compatible programme. Partners having their own ITB environment must use their PIC in the sender and receiver fields of the message.

2. For individual label requirements, the vendor application must exchange application supported Swift Messages. Vendor should refer to label specific technical validation guide for the in-scope Swift MT, MX or FileAct Messages.

3. The partner application must include delivery notification instructions while generating the test messages. The partner application must receive the delivery notification information and reconcile with the original message sent to Alliance Access.

4. Alliance Access must be configured to return Alliance Access information. When receiving messages the partner application must accept this information from Alliance Access Info

5. The acknowledgement of transmission is sent through transmission notification message the partner application needs to capture the ACK and NAK received back from Swift and reconciled in the partner application. Evidences of reconciliation mechanism (screen dump, event log, dataset extract) will be handled back to Swift Qualification service provider.

5.1 Test Evidence

The Partner should extract the following evidences covering the testing period and send them via email to the Validation Service provider for Technical Validation of SOAPHA connectivity test.

Partners with own ITB connectivity

- Alliance Access Event Journal report
- Message File report
- Samples of XMLv2 files (MT, MX,FileAct)
- Screenshots /Configuration details / Log File / Dataset extract / Reports generated from the Partner application evidencing the test execution through Partner application and the reconciliation mechanism against delivery notification and transmission notification for ACK and NAK.

6 Annexure

6.1 Message Flow

The message is sent to the Alliance access from back office application in Put request and messages received from Alliance access to back office application in GetAck response. Message flow of SOAPHA is given in Connection Method of SAA System Management guide -7.6.

6.1.1 Input MT Message in XML v2 format

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:urn="urn:swift:saa:xsd:soapha">
    <soapenv:Header>
       <urn:SAAHeader Id="SAAHeader">
          <urn:SessionToken>bd96d62e-c005-4ec6-b526-645b739</urn:SessionToken>
          <urn:SequenceNumber>9</urn:SequenceNumber>
<urn:ExpiryDateTime>2024-01-02T20:33:51.373</urn:ExpiryDateTime>
       </urn:SAAHeader>
    </soapenv:Header>
    <soapenv:Body>
       <urn:Put>
        <DataPDU xmlns="urn:swift:saa:xsd:saa.2.0">
<Revision>2.0.7</Revision>
<Header>
<Message>
<SenderReference>REF10812031325</SenderReference>
<MessageIdentifier>fin.540</MessageIdentifier>
<Format>MT</Format>
<Sender>
<BIC12>SPXAINJJAXXX</BIC12>
<FullName>
<X1>SPXAINJJXXX</X1>
</FullName>
</Sender>
<Receiver>
<BIC12>SPXAINJJXXXX</BIC12>
<FullName>
<X1>SPXAINJJXXX</X1>
</FullName>
</Receiver>
<InterfaceInfo>
<UserReference>REF10812031396</UserReference>
</InterfaceInfo>
<NetworkInfo>
<IsNotificationRequested>true</IsNotificationRequested>
</NetworkInfo>
<SecurityInfo>
<FINSecurityInfo/>
</SecurityInfo>
</Message></Header>
<Body>DQo6MTZSOkdFTkwNCjoyMEM6OlNFTUUvLzExLTU0MC1TUi0yMDEwDQo6MjNHOk5FV00NCjoxNlI6T
ElOSw0KOjIwQzo6UE9PTC8vUkVGRVJFTkNFDQo6MzZCOjpUVVJOLy9GQU1ULzEwMDAwMDAsDQo6MTZTOkxJ
TksNCjoxNlM6R0VOTA0KOjE2UjpUUkFFREVUUDQo6OThBOjpTRVRULy8yMDEwMTEyMA0KOjM1QjpJU0lOIFV
TMDAwMDEyMzQ1Ng0KQUJDRCANCjoxNlI6RklBDQo6OTRCOjpQTElTTL1hOWVMvRVhDSC9ORVddZT1JLIFNUT0
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joyMkY6OlJQT1IvL0RFRlINCjoxNlM6VFJBBRERFVA0KOjE2UjpGSUFDDQo6MzZCOjpTRVRULy9GQU1ULzEw
MDAwMCwNCjo5N0E6OlNBRkUvLzEyMzQ1Ng0KOjE2UzpGSUFDDQo6MTZTOlNFVERFVA0KOjIyRjo6U1RDTy8
vTlBBUg0KOjIyRjo6U0VUUi8vVFVSTg0KOjE2UjpTRVRRUlRZDQo6OTQQjpCVVllSLy9TV0hRQkVCQg0KOj
E2UzpTRVRRUlRZDQo6MTZTOlNFVFBBSVFkNCjo5NVA6OlNFTEwvL1NXFFCRUJCDQo6OTdBOjpTUUZFLy8xM
jM0NTYNCjoxNlM6U0VUUFJUWWQ0KOjE2UjpTRVRRUlRZDQo6OTVQOjpERUFHLy9TV0hRQkVCQg0KOjE2UzpT
RVRRUlRZDQo6MTZTOlNFVFBBSVFkNCjo5NUM6OlBTRVQvL1VTDQo6MTZTOlNFVFBBSVFkNCjoxNlM6U0VUREV
U</Body><LAU xmlns="urn:swift:saa:xsd:saa.2.0"><Signature xmlns="http://www.w3.org/
2000/09/xmldsig#"><SignedInfo><CanonicalizationMethod Algorithm="http://
```

```
www.w3.org/2001/10/xml-exc-c14n#" /><SignatureMethod Algorithm="http://
www.w3.org/2001/04/xmldsig-more#hmac-sha256" /><Reference
URI=""><Transforms><Transform Algorithm="http://www.w3.org/2000/09/
xmldsig#enveloped-signature" /></Transforms><DigestMethod Algorithm="http://
www.w3.org/2001/04/xmlenc#sha256" /><DigestValue>Y7oScHnYOUQvni/TSzZbDec+HR
+mWIFH149GXpwj1Ws=</DigestValue></Reference></SignedInfo><SignatureValue>6ynF/
FcwbPsHrtlj3h2agJigdnvpbO6hOzKSRGzqkw0=</SignatureValue></Signature></LAU>
</DataPDU>
</urn:Put>
</soapenv:Body>
</soapenv:Envelope>
```

6.1.2 ACK for MT message in XML v2 format

```
<S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/">
   <S:Header>
      <SAAHeader Id="" xmlns="urn:swift:saa:xsd:soapha">
         <SessionToken>4fd95b3e-6a30-4cc3-9de6-919fbebc</SessionToken>
         <SequenceNumber>5</SequenceNumber>
      </SAAHeader>
   </S:Header>
   <S:Body>
      <GetAckResponse xmlns="urn:swift:saa:xsd:soapha">
         <Saa:DataPDU xmlns:SwSec="urn:swift:snl:ns.SwSec"
xmlns:SwInt="urn:swift:snl:ns.SwInt" xmlns:SwGbl="urn:swift:snl:ns.SwGbl"
xmlns:Sw="urn:swift:snl:ns.Sw" xmlns:Saa="urn:swift:saa:xsd:saa.2.0">
            <Saa:Revision>2.0.7</Saa:Revision>
            <Saa:Header>
               <Saa:TransmissionReport>
                  <Saa:SenderReference>REF10812031325</Saa:SenderReference>

<Saa:ReconciliationInfo>120247SPXAINJJAXXX0132144569</Saa:ReconciliationInfo>
                  <Saa:NetworkDeliveryStatus>NetworkAcked</Saa:NetworkDeliveryStatus>
                  <Saa:OriginalInstanceAddressee>
                     <Saa:X1>SPXAINJJXXX</Saa:X1>
                  </Saa:OriginalInstanceAddressee>
                  <Saa:ReportingApplication>FINInterface</Saa:ReportingApplication>
                  <Saa:NetworkInfo>
                     <Saa:Priority>Normal</Saa:Priority>
                     <Saa:IsPossibleDuplicate>false</Saa:IsPossibleDuplicate>
                    <Saa:IsNotificationRequested>true</Saa:IsNotificationRequested>
                     <Saa:Service>swift.fin</Saa:Service>
                     <Saa:Network>FIN</Saa:Network>
                     <Saa:SessionNr>0132</Saa:SessionNr>
                     <Saa:SeqNr>174569</Saa:SeqNr>
                     <Saa:FINNetworkInfo>
                        <Saa:MessageSyntaxVersion>1105</Saa:MessageSyntaxVersion>
                     </Saa:FINNetworkInfo>
                  </Saa:NetworkInfo>
                  <Saa:Interventions>
                     <Saa:Intervention>
                        <Saa:IntvCategory>TransmissionReport</Saa:IntvCategory>
                        <Saa:CreationTime>20240117171106</Saa:CreationTime>
                        <Saa:OperatorOrigin>SYSTEM</Saa:OperatorOrigin>

<Saa:Contents>{1:F21SPXAINJJAXXX01321446321}{4:{177:1201170921}{451:0}{108:REF10812
031325}}</Saa:Contents>
                     </Saa:Intervention>
                  </Saa:Interventions>
                 <Saa:IsRelatedInstanceOriginal>true</Saa:IsRelatedInstanceOriginal>
                  <Saa:MessageCreator>ApplicationInterface</Saa:MessageCreator>
                  <Saa:IsMessageModified>false</Saa:IsMessageModified>
                  <Saa:MessageFields>NoOriginal</Saa:MessageFields>
               </Saa:TransmissionReport>
            </Saa:Header>
         </Saa:DataPDU>
      </GetAckResponse>
```

```
    </S:Body>
</S:Envelope>
```

6.1.3 Output MT message in XML v2 format

```xml
<S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/">
    <S:Header>
        <SAAHeader Id="" xmlns="urn:swift:saa:xsd:soapha">
            <SessionToken>4fd95b3e-6a30-4cc3-9de6-919fbebc</SessionToken>
            <SequenceNumber>6</SequenceNumber>
        </SAAHeader>
    </S:Header>
    <S:Body>
        <GetAckResponse xmlns="urn:swift:saa:xsd:soapha">
            <Saa:DataPDU xmlns:SwSec="urn:swift:snl:ns.SwSec"
xmlns:SwInt="urn:swift:snl:ns.SwInt" xmlns:SwGbl="urn:swift:snl:ns.SwGbl"
xmlns:Sw="urn:swift:snl:ns.Sw" xmlns:Saa="urn:swift:saa:xsd:saa.2.0">
                <Saa:Revision>2.0.7</Saa:Revision>
                <Saa:Header>
                    <Saa:Message>
                        <Saa:SenderReference>OSPXAINJJXXX54011-540-SR-
2024$12011733734</Saa:SenderReference>
                        <Saa:MessageIdentifier>fin.540</Saa:MessageIdentifier>
                        <Saa:Format>MT</Saa:Format>
                        <Saa:SubFormat>Output</Saa:SubFormat>
                        <Saa:Sender>
                            <Saa:BIC12>SPXAINJJAXXX</Saa:BIC12>
                            <Saa:FullName>
                                <Saa:X1>SPXAINJJXXX</Saa:X1>
                            </Saa:FullName>
                        </Saa:Sender>
                        <Saa:Receiver>
                            <Saa:BIC12>SPXAINJJAXXX</Saa:BIC12>
                            <Saa:FullName>
                                <Saa:X1>SPXAINJJXXX</Saa:X1>
                            </Saa:FullName>
                        </Saa:Receiver>
                        <Saa:InterfaceInfo>
                            <Saa:UserReference>REF10812031325</Saa:UserReference>
                            <Saa:MessageCreator>FINInterface</Saa:MessageCreator>
                            <Saa:MessageContext>Original</Saa:MessageContext>
                            <Saa:MessageNature>Financial</Saa:MessageNature>
                        </Saa:InterfaceInfo>
                        <Saa:NetworkInfo>
                            <Saa:Priority>Normal</Saa:Priority>
                            <Saa:IsPossibleDuplicate>false</Saa:IsPossibleDuplicate>
                            <Saa:Service>swift.fin</Saa:Service>
                            <Saa:Network>FIN</Saa:Network>
                            <Saa:SessionNr>0132</Saa:SessionNr>
                            <Saa:SeqNr>050335</Saa:SeqNr>
                            <Saa:FINNetworkInfo>
                                <Saa:MessageSyntaxVersion>1106</Saa:MessageSyntaxVersion>

<Saa:CorrespondentInputReference>120247SPXAINJJAXXX0132144569</Saa:CorrespondentInp
utReference>

<Saa:CorrespondentInputTime>20240117094100</Saa:CorrespondentInputTime>
                                <Saa:LocalOutputTime>20240117094100</Saa:LocalOutputTime>
                                <Saa:FINUserHeader>{108:REF10812031325}</Saa:FINUserHeader>
                            </Saa:FINNetworkInfo>
                        </Saa:NetworkInfo>
                        <Saa:SecurityInfo>
                            <Saa:RMAResult>Success</Saa:RMAResult>
                            <Saa:FINSecurityInfo>
                                <Saa:ChecksumResult>Success</Saa:ChecksumResult>
                                <Saa:ChecksumValue>D37613267275</Saa:ChecksumValue>
                                <Saa:MACResult>Success</Saa:MACResult>
```

```
                                  <Saa:MACSignatureValue>
                                     <SwSec:Signature>
                                        <SwSec:SignedInfo>
                                           <Sw:Reference>

<Sw:DigestValue>73lIJR0Gj7ytVeL06pGLYAwXOLh7zH7RwV9LziMGWoc=</Sw:DigestValue>
                                           </Sw:Reference>
                                        </SwSec:SignedInfo>
                                        <SwSec:SignatureValue>PEMF@Proc-Type: 4,MIC-ONLY
Content-Domain: RFC822
EntrustFile-Version: 2.0
Originator-DN: cn=fin1spxainjj,o=spxainjj,o=swift
Orig-SN: 1307136963
MIC-Info: SHA256, RSA,
 nruZOcBuZhyHUxjDaRisq6gu3EpBgnBWiwzGrYrzYtKAM9oPLEY9t2igl0lZLrBT
 Npy1BbuYTf5Z90uc5K3EePmuTjDY5W5tTZbNPIKYj4oknat6OFCA+cIPiuaUOCGg
 3gputBRdSrgQ77AOChuJQkV0/LBCoXYxr8rDWvVpSG+jAky8l2BakiWyGIfOLn4h
 YI2OpdqapQNJpGUcweiQx8/LzEjH8m4XPZA5gx6r7vmuVNxga5EGt9ULyA/l++nW
 3lUV05BaJjoD75/FOCamBTpSR1lpscw0lE00P58Q8sPxAEMsrO9+e3C5p2QkXwJt
 1clC9gc6SvTHr6OAP4IO1w==</SwSec:SignatureValue>
                                        <SwSec:KeyInfo>

<SwSec:SignDN>cn=fin1spxainjj,o=spxainjj,o=swift</SwSec:SignDN>

<SwSec:CertPolicyId>1.3.21.6.2</SwSec:CertPolicyId>
                                        </SwSec:KeyInfo>
                                        <SwSec:Manifest>
                                           <Sw:Reference>
                                              <Sw:DigestRef>M</Sw:DigestRef>

<Sw:DigestValue>tUfIIUJa6uN5oFgS5ehyfE30RDpd5G3sF14CoeTBvho=</Sw:DigestValue>
                                           </Sw:Reference>
                                           <Sw:Reference>
                                              <Sw:DigestRef>Sw.E2S</Sw:DigestRef>

<Sw:DigestValue>p4a3bGnoVDcDUBy6BHUuG8czj8ru32ROmxj9warz65M=</Sw:DigestValue>
                                           </Sw:Reference>
                                        </SwSec:Manifest>
                                     </SwSec:Signature>
                                  </Saa:MACSignatureValue>
                               </Saa:FINSecurityInfo>
                            </Saa:SecurityInfo>
                         </Saa:Message>
                     </Saa:Header>

<Saa:Body>DQo6MTZSOkdFTkwNCjoyMEM6OlNFTUUvLzExLTU0MC1TUi0yMDEwDQo6MjNHOk5FV00NCjoxN
lI6TElOSw0KOjIwQzo6UE9PTC8vUkVGRVJFTkNFNFDQo6MzZCOjpUVVJOLy9GQU1ULzEwMDAwMDAsDQo6MTZT
OkxJTksNCjoxNlM6R0VOTA0KOjE2UjpUUkFFREVUDQo6OThBOjpTRVRULy8yMDEwMTEyMA0KOjM1QjpJU0l
OIFVTMDAwMDEyMzQ1Ng0KQUJDRCANCjoxNlI6RklBDQo6OTRCOjpQTElTL1hOWVMvRVhDSC9ORVddZT1JLIF
NUT0NDIEVYQ0hBBTkdFDQo6MjJGOjpNSUNPLy9BMDEyDQo6OThBOjpNQVRVLy8yMDEwMTEyMA0KOjE2UzpGS
UENCjoyMkY6OlJQT1IvL0RFRlINCjoxNlM6VFJBRERERVFA0KOjE2UjpGSUFDDQo6MzZCOjpUVVJOLy9GQU1U
LzEwMDAwMCwNCjo5N0E6OlNBRkkUvLzEyMzQ1Ng0KOjE2UzpGSUFDDQo6MTZSOlNFVERFVA0KOjIyRjo6U1R
DTy8vTlBBUg0KOjIyRjo6U0VUUi8vVFVSTg0KOjE2UjpURVRQUlRZDQo6OTVQOjpCVVlSSLy9TV0hRQkVCQg
0KOjE2UjpTRVRSQUlRZDQo6MTZSOlNFVFFBSVkNCjo5NVA6OlNFTEwvL1NXSFFCRUJCCDQo6OTdBOjpTQUZFL
y8xMjM0NTYNCjoxNlM6U0VUUUFJUWQ0KOjE2UjpTRVRRQUlRZDQo6OTVQOjpERUFHLy9TV0hRQkVCQg0KOjE2
UzpTRVRRQUlRZDQo6MTZSOlNFVFFBSVkNCjo5NUM6OlBTRVQvL1VTDQo6MTZTOlNFVFFBSVkNCjoxNlM6U0V
UREVU</Saa:Body>
        </Saa:DataPDU>
     </GetAckResponse>
  </S:Body>
</S:Envelope>
```

6.1.4 Delivery Notification of MT Message in XML v2 format

```xml
<S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/">
   <S:Header>
      <SAAHeader Id="" xmlns="urn:swift:saa:xsd:soapha">
         <SessionToken>4fd95b3e-6a30-4cc3-9de6-919fbebc</SessionToken>
         <SequenceNumber>7</SequenceNumber>
      </SAAHeader>
   </S:Header>
   <S:Body>
      <GetAckResponse xmlns="urn:swift:saa:xsd:soapha">
         <Saa:DataPDU xmlns:SwSec="urn:swift:snl:ns.SwSec"
xmlns:SwInt="urn:swift:snl:ns.SwInt" xmlns:SwGbl="urn:swift:snl:ns.SwGbl"
xmlns:Sw="urn:swift:snl:ns.Sw" xmlns:Saa="urn:swift:saa:xsd:saa.2.0">
            <Saa:Revision>2.0.7</Saa:Revision>
            <Saa:Header>
               <Saa:DeliveryNotification>

<Saa:ReconciliationInfo>120247SPXAINJJAXXX0132144569</Saa:ReconciliationInfo>

<Saa:ReceiverDeliveryStatus>RcvDelivered</Saa:ReceiverDeliveryStatus>
                  <Saa:MessageIdentifier>fin.011</Saa:MessageIdentifier>
                  <Saa:Receiver>
                     <Saa:BIC12>SPXAINJJAXXX</Saa:BIC12>
                     <Saa:FullName>
                        <Saa:X1>SPXAINJJXXX</Saa:X1>
                     </Saa:FullName>
                  </Saa:Receiver>
                  <Saa:InterfaceInfo>
                     <Saa:MessageCreator>FINInterface</Saa:MessageCreator>
                     <Saa:MessageContext>Original</Saa:MessageContext>
                     <Saa:MessageNature>Network</Saa:MessageNature>
                  </Saa:InterfaceInfo>
                  <Saa:NetworkInfo>
                     <Saa:Priority>System</Saa:Priority>
                     <Saa:IsPossibleDuplicate>false</Saa:IsPossibleDuplicate>
                     <Saa:Service>swift.fin</Saa:Service>
                     <Saa:Network>FIN</Saa:Network>
                     <Saa:SessionNr>0132</Saa:SessionNr>
                     <Saa:SeqNr>050336</Saa:SeqNr>
                     <Saa:FINNetworkInfo>
                        <Saa:MessageSyntaxVersion>1105</Saa:MessageSyntaxVersion>

<Saa:CorrespondentInputReference>120117DYDYXXXXHXXX0001272755</Saa:CorrespondentInp
utReference>

<Saa:CorrespondentInputTime>20240117084100</Saa:CorrespondentInputTime>
                        <Saa:LocalOutputTime>20240117094200</Saa:LocalOutputTime>
                        <Saa:SystemOriginated>{SYS:}</Saa:SystemOriginated>
                     </Saa:FIN>
                  </Saa:NetworkInfo>
                  <Saa:SecurityInfo>
                     <Saa:FINSecurityInfo>
                        <Saa:ChecksumResult>Success</Saa:ChecksumResult>
                        <Saa:ChecksumValue>BF2859C0C4A9</Saa:ChecksumValue>
                     </Saa:FINSecurityInfo>
                  </Saa:SecurityInfo>
               </Saa:DeliveryNotification>
            </Saa:Header>

<Saa:Body>ezE3NTowOTQxfXsxMDY6MTIwMTE3U1BYQUlOSkpBWFhYMDEzMjE0NDU2OX17MTA4OlJFRjEwEwO
DEyMDMxMzI1fXsxNzU6MDk0MX17MTA3OjEyMDExN1NQWEFJTkpKQVhYWDAxMzIwNTAzMzV9</Saa:Body>
         </Saa:DataPDU>
      </GetAckResponse>
   </S:Body>
</S:Envelope>
```

6.1.5 Input MX message in XML v2 format

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:urn="urn:swift:saa:xsd:soapha">
   <soapenv:Header>
      <urn:SAAHeader Id="SAAHeader">
         <urn:SessionToken>c44ac82b-b062-45b0-9812-a5d8471c</urn:SessionToken>
         <urn:SequenceNumber>11</urn:SequenceNumber>
<urn:ExpiryDateTime>2024-05-02T20:33:51.373</urn:ExpiryDateTime>
      </urn:SAAHeader>
   </soapenv:Header>
   <soapenv:Body>
      <urn:Put>
       <DataPDU xmlns="urn:swift:saa:xsd:saa.2.0">
<Revision>2.0.7</Revision>
<Header>
<Message>
<SenderReference>REF10812031328</SenderReference>
<MessageIdentifier>setr.010.001.03</MessageIdentifier>
<Format>MX</Format>
<Sender>
<DN>o=spxainjj,o=swift</DN>
<FullName>
<X1>SPXAINJJXXX</X1>
</FullName>
</Sender>
<Receiver>
<DN>o=spxainjj,o=swift</DN>
<FullName>
<X1>SPXAINJJXXX</X1>
</FullName>
</Receiver>
<InterfaceInfo>
<UserReference>REF10812031333</UserReference>
</InterfaceInfo>
<NetworkInfo>
<Service>swift.if.ia!x</Service>
</NetworkInfo>
</Message></Header>
<Body><AppHdr
xmlns="urn:swift:xsd:$ahV10"><MsgRef>AppHdrMyRef67_08Dec</MsgRef><CrDate>2024-01-
23T11:15:12</CrDate></AppHdr><Document
xmlns="urn:swift:xsd:setr.010.001.03">
    <SbcptOrdrV03>
        <MsgId>
            <Id>SubsOrder001</Id>
            <CreDtTm>2024-01-23T11:15:12.0Z</CreDtTm>
        </MsgId>
        <MltplOrdrDtls>
            <InvstmtAcctDtls>
                <AcctId>
                    <Prtry>
                        <Id>BE8982190</Id>
                    </Prtry>
                </AcctId>
            </InvstmtAcctDtls>
            <IndvOrdrDtls>
                <OrdrRef>ID8965REF2768</OrdrRef>
                <FinInstrmDtls>
                    <Id>
                       <ISIN>BE1234567891</ISIN>
                    </Id>
                </FinInstrmDtls>
                <NetAmt Ccy="EUR">1001</NetAmt>
                <PhysDlvryInd>true</PhysDlvryInd>
            <PhysDlvryDtls><Nm>John Doe</Nm><Adr><StrtNm>Avenue
Adele</StrtNm><BldgNb>1</BldgNb><PstCd>B-
1310</PstCd><Ctry>BE</Ctry></Adr></PhysDlvryDtls></IndvOrdrDtls>
        </MltplOrdrDtls>
```

```
    </SbcptOrdrV03>
</Document></Body>
<LAU xmlns="urn:swift:saa:xsd:saa.2.0"><Signature xmlns="http://www.w3.org/
2000/09/xmldsig#"><SignedInfo><CanonicalizationMethod Algorithm="http://
www.w3.org/2001/10/xml-exc-c14n#" /><SignatureMethod Algorithm="http://
www.w3.org/2001/04/xmldsig-more#hmac-sha256" /><Reference
URI=""><Transforms><Transform Algorithm="http://www.w3.org/2000/09/
xmldsig#enveloped-signature" /></Transforms><DigestMethod Algorithm="http://
www.w3.org/2001/04/xmlenc#sha256" /><DigestValue>Y7oScHnYOUQvni/TSzZbDec+HR
+mWIFH149GXpwj1Ws=</DigestValue></Reference></SignedInfo><SignatureValue>6ynF/
FcwbPsHrtlj3h2agJigdnvpbO6hOzKSRGzqkw0=</SignatureValue></Signature></LAU>
</DataPDU>
</urn:Put>
</soapenv:Body>
</soapenv:Envelope>
```

6.1.6 ACK for MX Message in XML v2 format

```
<S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/">
   <S:Header>
      <SAAHeader Id="" xmlns="urn:swift:saa:xsd:soapha">
         <SessionToken>2b4ea76d-9003-466d-9c81-33eea2cd</SessionToken>
         <SequenceNumber>29</SequenceNumber>
      </SAAHeader>
   </S:Header>
   <S:Body>
      <GetAckResponse xmlns="urn:swift:saa:xsd:soapha">
         <Saa:DataPDU xmlns:SwSec="urn:swift:snl:ns.SwSec"
xmlns:SwInt="urn:swift:snl:ns.SwInt" xmlns:SwGbl="urn:swift:snl:ns.SwGbl"
xmlns:Sw="urn:swift:snl:ns.Sw" xmlns:Saa="urn:swift:saa:xsd:saa.2.0">
            <Saa:Revision>2.0.7</Saa:Revision>
            <Saa:Header>
               <Saa:TransmissionReport>
                  <Saa:SenderReference>REF10812031329</Saa:SenderReference>
                  <Saa:ReconciliationInfo>swi00001-2024-01-
17T11:53:20.1460.307385Z</Saa:ReconciliationInfo>
                  <Saa:NetworkDeliveryStatus>NetworkAcked</Saa:NetworkDeliveryStatus>
                  <Saa:OriginalInstanceAddressee>
                     <Saa:X1>SPXAINJJXXX</Saa:X1>
                  </Saa:OriginalInstanceAddressee>

<Saa:ReportingApplication>SWIFTNetInterface</Saa:ReportingApplication>
                  <Saa:NetworkInfo>
                     <Saa:Priority>Normal</Saa:Priority>
                     <Saa:IsPossibleDuplicate>false</Saa:IsPossibleDuplicate>
                     <Saa:Service>swift.if.ia!x</Saa:Service>
                     <Saa:Network>SWIFTNet</Saa:Network>
                     <Saa:SessionNr>000046</Saa:SessionNr>
                     <Saa:SeqNr>000000002</Saa:SeqNr>
                     <Saa:SWIFTNetNetworkInfo>
                        <Saa:RequestType>setr.010.001.03</Saa:RequestType>
                        <Saa:SWIFTRef>swi00001-2024-01-
17T11:53:20.1460.307385Z</Saa:SWIFTRef>
                        <Saa:SNLRef>SNL02024-2024-01-
17T11:53:11.7312.009650Z</Saa:SNLRef>
                        <Saa:Reference>a6897c3e-fbaf-4b99-9c98-
0a1b960cac0b</Saa:Reference>
                        <Saa:SnFInputTime>0137:2024-01-
17T11:53:20</Saa:SnFInputTime>
                        <Saa:ResponsePayloadAttributes>
                           <Saa:PayloadAttribute>
                              <Saa:Name>type</Saa:Name>
                              <Saa:Value>swift.emptyresponse</Saa:Value>
                           </Saa:PayloadAttribute>
                        </Saa:ResponsePayloadAttributes>
                     </Saa:SWIFTNetNetworkInfo>
                  </Saa:NetworkInfo>
```

```
                    <Saa:Interventions>
                        <Saa:Intervention>
                            <Saa:IntvCategory>TransmissionReport</Saa:IntvCategory>
                            <Saa:CreationTime>20120117172311</Saa:CreationTime>
                            <Saa:OperatorOrigin>SYSTEM</Saa:OperatorOrigin>
                            <Saa:Contents>
                                <AckNack xmlns="" xmlns:ns7="urn:swift:saa:xsd:soapha">

<PseudoAckNack>{1:F21SPXAINJJAXXX000046000000002}{4:{177:1201171723}{451:0}{311:ACK
}{108:REF10812031329}}</PseudoAckNack>
                            </AckNack>
                            </Saa:Contents>
                        </Saa:Intervention>
                    </Saa:Interventions>

<Saa:IsRelatedInstanceOriginal>true</Saa:IsRelatedInstanceOriginal>
                    <Saa:MessageCreator>ApplicationInterface</Saa:MessageCreator>
                    <Saa:IsMessageModified>false</Saa:IsMessageModified>
                    <Saa:MessageFields>NoOriginal</Saa:MessageFields>
                </Saa:TransmissionReport>
            </Saa:Header>
        </Saa:DataPDU>
      </GetAckResponse>
   </S:Body>
</S:Envelope>
```

6.1.7 Output of MX Message in XML v2

```
<S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/">
   <S:Header>
      <SAAHeader Id="" xmlns="urn:swift:saa:xsd:soapha">
         <SessionToken>2b4ea76d-9003-466d-9c81-33eea2cd</SessionToken>
         <SequenceNumber>30</SequenceNumber>
      </SAAHeader>
   </S:Header>
   <S:Body>
      <GetAckResponse xmlns="urn:swift:saa:xsd:soapha">
         <Saa:DataPDU xmlns:SwSec="urn:swift:snl:ns.SwSec"
xmlns:SwInt="urn:swift:snl:ns.SwInt" xmlns:SwGbl="urn:swift:snl:ns.SwGbl"
xmlns:Sw="urn:swift:snl:ns.Sw" xmlns:Saa="urn:swift:saa:xsd:saa.2.0">
            <Saa:Revision>2.0.7</Saa:Revision>
            <Saa:Header>
               <Saa:Message>

<Saa:SenderReference>OSPXAINJJXXX010REF10812031329$120117</Saa:SenderReference>
                  <Saa:MessageIdentifier>setr.010.001.03</Saa:MessageIdentifier>
                  <Saa:Format>MX</Saa:Format>
                  <Saa:SubFormat>Output</Saa:SubFormat>
                  <Saa:Sender>
                     <Saa:DN>o=spxainjj,o=swift</Saa:DN>
                     <Saa:FullName>
                        <Saa:X1>SPXAINJJXXX</Saa:X1>
                     </Saa:FullName>
                  </Saa:Sender>
                  <Saa:Receiver>
                     <Saa:DN>o=spxainjj,o=swift</Saa:DN>
                     <Saa:FullName>
                        <Saa:X1>SPXAINJJXXX</Saa:X1>
                     </Saa:FullName>
                  </Saa:Receiver>
                  <Saa:InterfaceInfo>
                     <Saa:UserReference>REF10812031329</Saa:UserReference>
                     <Saa:MessageCreator>SWIFTNetInterface</Saa:MessageCreator>
                     <Saa:MessageContext>Original</Saa:MessageContext>
                     <Saa:MessageNature>Financial</Saa:MessageNature>
```

```
                    </Saa:InterfaceInfo>
                    <Saa:NetworkInfo>
                        <Saa:Priority>Normal</Saa:Priority>
                        <Saa:IsPossibleDuplicate>false</Saa:IsPossibleDuplicate>
                        <Saa:Service>swift.if.ia!x</Saa:Service>
                        <Saa:Network>SWIFTNet</Saa:Network>
                        <Saa:SessionNr>002290</Saa:SessionNr>
                        <Saa:SeqNr>000000111</Saa:SeqNr>
                        <Saa:SWIFTNetNetworkInfo>
                            <Saa:RequestType>setr.010.001.03</Saa:RequestType>
                            <Saa:SWIFTRef>swi00001-2024-01-
17T11:53:20.1460.307385Z</Saa:SWIFTRef>
                            <Saa:SNLRef>SNL02013-2024-01-
17T11:53:11.7312.009650Z</Saa:SNLRef>
                            <Saa:Reference>a6897c3e-fbaf-4b99-9c98-
0a1b960cac0b</Saa:Reference>
                            <Saa:SnFQueueName>spxainjj_msg!x</Saa:SnFQueueName>
                            <Saa:SnFInputTime>0137:2024-01-
17T11:53:20</Saa:SnFInputTime>
                            <Saa:SnFDeliveryTime>2024-01-
17T11:53:20Z</Saa:SnFDeliveryTime>
                            <Saa:ValidationDescriptor>
                                <SwInt:ValResult>Success</SwInt:ValResult>
                            </Saa:ValidationDescriptor>
                        </Saa:SWIFTNetNetworkInfo>
                    </Saa:NetworkInfo>
                    <Saa:SecurityInfo>
                        <Saa:SWIFTNetSecurityInfo>

<Saa:SignerDN>cn=fin1spxainjj,o=spxainjj,o=swift</Saa:SignerDN>
                            <Saa:NRType>SvcMand</Saa:NRType>
                            <Saa:SignatureResult>Success</Saa:SignatureResult>
                            <Saa:SignatureValue>
                                <SwSec:CryptoInternal>

<SwSec:CipherKey>UEVNRkBQcm9jLVR5cGU6IDQsTUlDDLU9OTFkNCkNvbnRlbnQtRG9tYWluOiBSRkM4Mj
INCkVudHJ1c3RGaWxlLVZlcnNpb246IDIuMA0KT3JpZ2luYXRvci1ETjogY249ZmluMXNweGFpbmpqLG89c
3B4YWluamosbz1zd2lmdA0KT3JpZ2y1TTjogMTMwNzEzNjk2Mw0KTUlDLlUluZm86IFNIQTI1NiwgUlNBLA0K
IHhuRG1uOW1ad3RCTjNvcTVBrc3o0cjl5d2JYM3VVQWllTHlZOUJsRXllUTDdJSEhK0hKVWlZcHFttODRFSGI
rMWoNCiBiTkYyR0pzdXlXWFlaS0wzTXpUVkhrWk5UFpSU2xzZnN1aHNDRmtKSlVGZkV0aVNNOQ3ZOeFJUSj
BSdHhwMjVPDQogUG4xUit2V2FocEpOcHF2ald5aUpEMDlObFhtTWZZMjBvaDJQVmtZbkktYzNCZTEzT1NTM
nhvZS9oNC9jdkFwRA0KIHR4VmVVNMWF4aEVMaHFJN1c3bFlKK1RSSDg1UUduZ0JCU092ZCtpcmhKcHZZVTmpP
L0svdDk1VU54ZlBOUzFLMXgNCiBWd0lQaUx6NzhhYzlRVlJMM3RHZHVDajZmYU9RZGJlMGVKa2IwYVpTREx
JMDNEcXE3NWx2eGtYdzkwRHd6am5SDQogVXJFcVFWSEY0T3hJUHN1NUFJWFhLdz09DQo=</SwSec:Cipher
Key>
                                    <SwSec:CryptoProtocol>4.0:3.0</SwSec:CryptoProtocol>
                                </SwSec:CryptoInternal>
                                <SwSec:CryptoDescriptor>
                                    <SwSec:MemberRef>RequestPayload</SwSec:MemberRef>
                                    <SwSec:MemberRef>RequestHeader</SwSec:MemberRef>

<SwSec:MemberRef>RequestDescriptor.SwiftRequestRef</SwSec:MemberRef>

<SwSec:SignDN>cn=fin1spxainjj,o=spxainjj,o=swift</SwSec:SignDN>
                                    <SwSec:CertPolicyId>1.3.21.6.2</SwSec:CertPolicyId>
                                </SwSec:CryptoDescriptor>
                            </Saa:SignatureValue>
                        </Saa:SWIFTNetSecurityInfo>
                    </Saa:SecurityInfo>
                </Saa:Message>
            </Saa:Header>
            <Saa:Body>
                <AppHdr:AppHdr xmlns="urn:swift:xsd:$ahV10"
xmlns:AppHdr="urn:swift:xsd:$ahV10">
                    <MsgRef>AppHdrMyRef67_02Jan</MsgRef>
                    <CrDate>2024-06-23T11:15:12</CrDate>
                </AppHdr:AppHdr>
                <Document:Document xmlns="urn:swift:xsd:setr.010.001.03"
xmlns:Document="urn:swift:xsd:setr.010.001.03">
```

```
                    <SbcptOrdrV03>
                        <MsgId>
                            <Id>SubsOrder001</Id>
                            <CreDtTm>2024-06-23T11:15:12.0Z</CreDtTm>
                        </MsgId>
                        <MltplOrdrDtls>
                            <InvstmtAcctDtls>
                                <AcctId>
                                    <Prtry>
                                        <Id>BE8982189</Id>
                                    </Prtry>
                                </AcctId>
                            </InvstmtAcctDtls>
                            <IndvOrdrDtls>
                                <OrdrRef>ID8965REF2767</OrdrRef>
                                <FinInstrmDtls>
                                    <Id>
                                        <ISIN>BE1234567890</ISIN>
                                    </Id>
                                </FinInstrmDtls>
                                <NetAmt Ccy="EUR" xmlns=""
xmlns:ns9="urn:swift:xsd:setr.010.001.03">1000</NetAmt>
                                <PhysDlvryInd>true</PhysDlvryInd>
                                <PhysDlvryDtls>
                                    <Nm>John Doe</Nm>
                                    <Adr>
                                        <StrtNm>Avenue
Adele</StrtNm>
                                        <BldgNb>1</BldgNb>
                                        <PstCd>B-1310</PstCd>
                                        <Ctry>BE</Ctry>
                                    </Adr>
                                </PhysDlvryDtls>
                            </IndvOrdrDtls>
                        </MltplOrdrDtls>
                    </SbcptOrdrV03>
                </Document:Document>
            </Saa:Body>
        </Saa:DataPDU>
      </GetAckResponse>
   </S:Body>
</S:Envelope>
```

6.1.8 Delivery Notification of MX Message in XML v2

```
<S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/">
   <S:Header>
      <SAAHeader Id="" xmlns="urn:swift:saa:xsd:soapha">
         <SessionToken>2b4ea76d-9003-466d-9c81-33eea2cd</SessionToken>
         <SequenceNumber>31</SequenceNumber>
      </SAAHeader>
   </S:Header>
   <S:Body>
      <GetAckResponse xmlns="urn:swift:saa:xsd:soapha">
         <Saa:DataPDU xmlns:SwSec="urn:swift:snl:ns.SwSec"
xmlns:SwInt="urn:swift:snl:ns.SwInt" xmlns:SwGbl="urn:swift:snl:ns.SwGbl"
xmlns:Sw="urn:swift:snl:ns.Sw" xmlns:Saa="urn:swift:saa:xsd:saa.2.0">
            <Saa:Revision>2.0.7</Saa:Revision>
            <Saa:Header>
               <Saa:DeliveryNotification>
                  <Saa:ReconciliationInfo>swi00001-2024-01-
17T11:53:20.1460.307385Z</Saa:ReconciliationInfo>

<Saa:ReceiverDeliveryStatus>RcvDelivered</Saa:ReceiverDeliveryStatus>
                  <Saa:MessageIdentifier>Delivery
Notification</Saa:MessageIdentifier>
                  <Saa:InterfaceInfo>
                     <Saa:MessageCreator>SWIFTNetInterface</Saa:MessageCreator>
```

```
                    <Saa:MessageContext>Original</Saa:MessageContext>
                    <Saa:MessageNature>Network</Saa:MessageNature>
                </Saa:InterfaceInfo>
                <Saa:NetworkInfo>
                    <Saa:Priority>Normal</Saa:Priority>
                    <Saa:IsPossibleDuplicate>false</Saa:IsPossibleDuplicate>
                    <Saa:Network>SWIFTNet</Saa:Network>
                    <Saa:SessionNr>006080</Saa:SessionNr>
                    <Saa:SeqNr>000000080</Saa:SeqNr>
                </Saa:NetworkInfo>
            </Saa:DeliveryNotification>
        </Saa:Header>
        <Saa:Body>
            <Sw:NotifySnFRequestHandle>
                <Sw:SnFRef>swi00001-2024-01-17T11:53:20.1460.307385Z</Sw:SnFRef>
                <Sw:SnFRefType>InterAct</Sw:SnFRefType>
                <Sw:AcceptStatus>Accepted</Sw:AcceptStatus>
                <Sw:AckSwiftTime>2024-01-17T11:53:24Z</Sw:AckSwiftTime>
                <Sw:AckInfo>Acked</Sw:AckInfo>
            </Sw:NotifySnFRequestHandle>
        </Saa:Body>
        </Saa:DataPDU>
    </GetAckResponse>
  </S:Body>
</S:Envelope>
```

*** End of Document ***

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