Enhanced Reporting Requirements

Service User Group
18th May 2023

The information in this document is provided as a guide only and is not professional advice, including legal advice. It should not be assumed that the guidance is comprehensive or that it provides a definitive answer in every case.

Agenda

- SOAP Security Walkthrough
- Schema documentation release schedule
- Published Documentation
- PIT Updates
- ROS permissions for employers
- Actions
- AOB

SOAP Security Walkthrough

Contents of Workshop

- SOAP and Revenue

- Employer Reporting SOAP Endpoints

- SOAP Security

- SOAP Message Security OASIS Standard 200401

- SOAP Message Structure

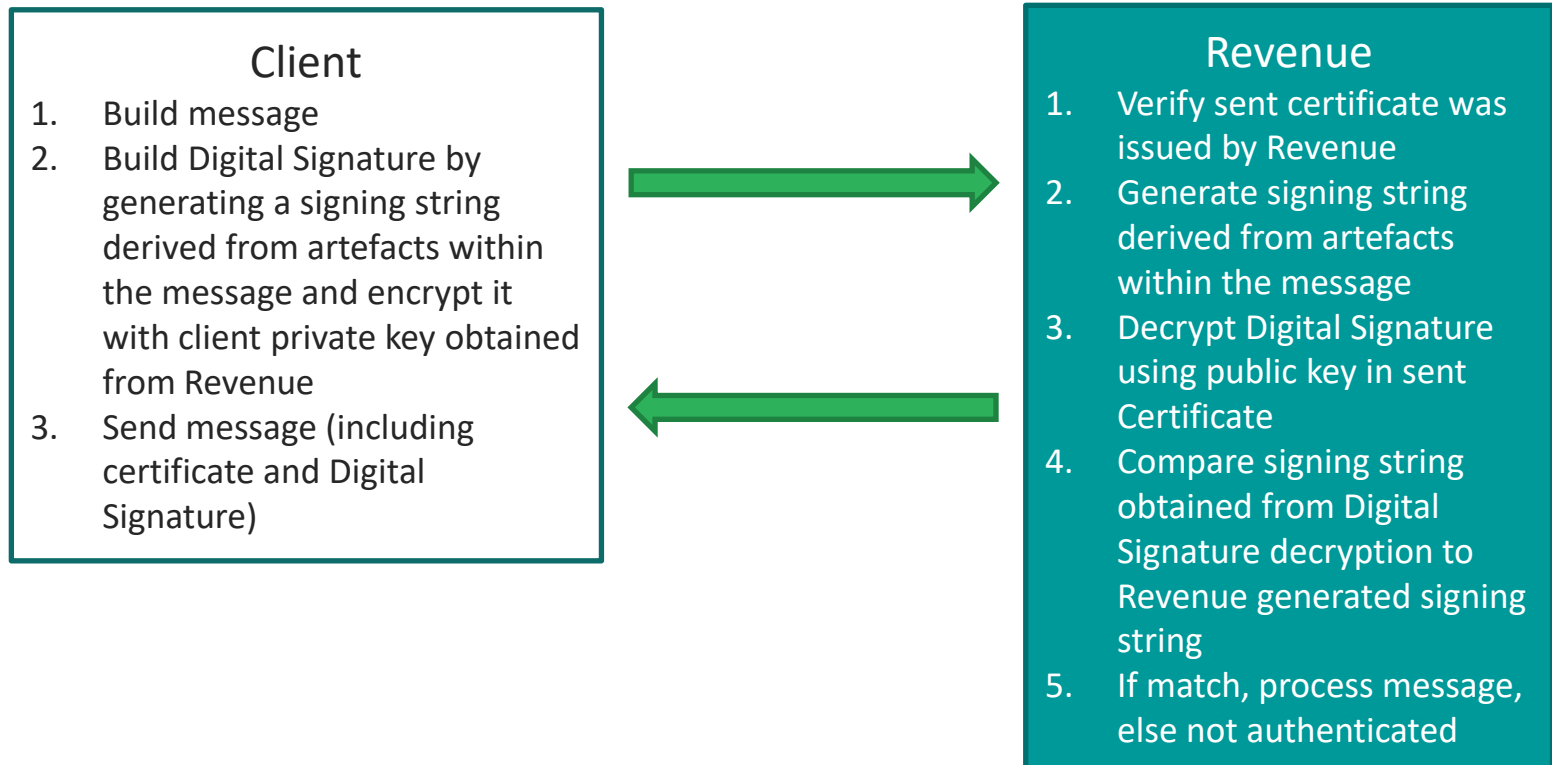- SOAP Message Structure Described

- Questions?

SOAP and Revenue

- Documentation
  - https://revenue-ie.github.io/paye-employers-documentation/index.html

- The Employer Reporting API is described and documented using WSDL
  - WSDL is a W3C standard for describing web services. Details of each web service described can be found in each supporting WSDL file. Each file references the necessary schemas and includes the endpoints that should be called for each SOAP service. All endpoints use the HTTPS protocol to ensure the privacy of all communication between ROS and the web service client

- The Web Service Description Language (WSDL) files for each web service can be found in the 'ERR Technical Support Documentation' section.

Employer Reporting SOAP Endpoints

Name	Endpoint
HandshakeRequest	http://www.ros.ie/schemas/paye-employers/pmod/v1/handshake/
LookUpERNRequest	http://www.ros.ie/schemas/paye-employers/err/v1/ern/
EnhancedReportingSubmission Request	http://www.ros.ie/schemas/paye-employers/err/v1/enhanced_reporting/
CheckErrSubmissionRequest	http://www.ros.ie/schemas/paye-employers/err/v1/enhanced_reporting/
CheckErrRunRequest	http://www.ros.ie/schemas/paye-employers/err/v1/enhanced_reporting/

SOAP Security

- Any Revenue web service request that either returns confidential information or accepts submission of information must be digitally signed. This must be done using a digital certificate that has been previously retrieved from Revenue.

- The digital signature ensures the integrity of the document. By signing the document we can ensure that no malicious intruder has altered the document in any way. It is also be used for nonrepudiation purposes.

Client

1. Build message
2. Build Digital Signature by generating a signing string derived from artefacts within the message and encrypt it with client private key obtained from Revenue
3. Send message (including certificate and Digital Signature)

Revenue

1. Verify sent certificate was issued by Revenue
2. Generate signing string derived from artefacts within the message
3. Decrypt Digital Signature using public key in sent Certificate
4. Compare signing string obtained from Digital Signature decryption to Revenue generated signing string
5. If match, process message, else not authenticated

SOAP Message Security OASIS Standard 200401

- The goal of this specification is to enable applications to conduct secure SOAP message exchanges through the use of message integrity and confidentiality. Employer Reporting uses the specification to insure integrity.

- The specification provides an abstract message security model that uses digital signatures to verify the message origin and integrity of each SOAP message.

- The <wsse:Security> header block provides a mechanism for attaching security related information to the SOAP request

- As elements are added to a <wsse:Security> header block, they SHOULD be prepended to the existing elements. As such, the <wsse:Security> header block represents the signing and encryption steps the message producer took to create the message. The prepending rule ensures that the receiving application can process sub-elements in the order they appear in the <wsse:Security> header block as there will be no forward dependency among the sub-elements.

SOAP Message Structure

```
<wsse:Security xmlns:wsse="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-secext-1.0.xsd" xmlns:wsu="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-1.0.xsd">
   <wsse:BinarySecurityToken EncodingType="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-soap-message-security-1.0#Base64Binary"
   ValueType="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-x509-token-profile-1.0#X509v3" wsu:Id="X509Token">
      MIIEmDCCA4CgAwIBAgIQWqFOg5Xcex9Y/6mNfeipuDANBgkqhBAsTCTk5OTk2MzExMDE.....iw45HSPtuyUEsfpdBqQ==
   </wsse:BinarySecurityToken>
   <wsu:Timestamp wsu:Id="TS">
      <wsu:Created>2018-09-05T13:57:41.449Z</wsu:Created>
      <wsu:Expires>2018-09-05T13:58:11.462Z</wsu:Expires>
   </wsu:Timestamp>
   <ds:Signature
      xmlns:ds="http://www.w3.org/2000/09/xmldsig#">
      <ds:SignedInfo>
         <ds:CanonicalizationMethod Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
         <ds:SignatureMethod Algorithm="http://www.w3.org/2001/04/xmldsig-more#rsa-sha512"/>
         <ds:Reference URI="#Body">
            <ds:Transforms>
               <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
            </ds:Transforms>
            <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha512"/>
            <ds:DigestValue>+I/W7eTNgtLlOtxazFh+vjAG+MCUET2+LJ2yu3+iP4A6yJznTkdQiJ34onWE8SYAoZUYD2MKvsHtWz++X9wzEA==</ds:DigestValue>
         </ds:Reference>
         <ds:Reference URI="#TS">
            <ds:Transforms>
               <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
            </ds:Transforms>
            <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha512"/>
            <ds:DigestValue>Jr/9zWaQ0Y7VBQE9OM6HPwzX+AD7tNnAiJFYqRdF0E+b40c9JZt/f4w0x25v9kKMszAovhgmbEQc1ZrVzG5d2Q==</ds:DigestValue>
         </ds:Reference>
      </ds:SignedInfo>
      <ds:SignatureValue>GPBxhqQ6aBcIQDpphqboZsTJYjbM6FJcnpDckUjNymp4MZZpPpasn1eo0CWKOM3GxqKh1BiNt586YIPrDne6gkyYtadRiLMKQKFwWpQDvjGTtjfLfi5EHzTyD2OhAH+VswOvsNraLlDC8Ph4qc6rpCu2HwiRW/vl+8a2v3pyL/c=</ds:SignatureValue>
      <ds:KeyInfo>
         <wsse:SecurityTokenReference>
            <wsse:Reference URI="#X509Token"/>
         </wsse:SecurityTokenReference>
      </ds:KeyInfo>
   </ds:Signature>
</wsse:Security>
```

SOAP Message Structure Described

- The WS-Security namespace should be http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-secext-1.0.xsd

- The WSU namespace should be http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-1.0.xsd

- All Id references should now be of the form wsu:Id e.g. <x:myElement wsu:Id="ID1" xmlns="…" xmlns:wsu="…"/>

- The security header should contain three elements:
  - The Binary Security Token – Revenue Base 64 encoded X509 cert obtained from the revenue P12 file
  - The Timestamp – Must contain Created and Expired Date
  - The Signature containing the following 3 elements
    - The SignedInfo element
      - Reference element 1 should refer to the payload or soap body(URI=#Body) of the message. The DigestValue is a digest of the soap body
      - Reference element 2 should refer to the Timestamp element(URI=#TS) within the Security element of the message. The DigestValue is a digest of the Timestamp element
      - Both digests are generated using sha-512
    - The SignatureValue element is generated from the above digests concatenated and signed with the p12 private key
    - The KeyInfo element is a reference back to the BinarySecurityToken element (URI=#X509Token)

Questions

Schema documentation release schedule

Documentation release schedule

Date	Documentation	Status
20-April	▪ ERR submission SOAP schema reference	▪ Delayed- schema data available and reference document will be made available as a top priority.
04-May	▪ Validation: Submission, Check submission, Check run, ERN ▪ Check submission – REST schema ▪ Check run – REST schema ▪ Change log updates	▪ Validations published ▪ REST schemas published
18-May	▪ Check submission – SOAP schema ▪ Check run – SOAP schema ▪ ERN – REST schema ▪ Change log updates	▪ ERN REST schema published 04/05 ▪ SOAP schemas published 04/05
01-June	▪ ERN – SOAP schema ▪ Change log updates	▪ ERN SOAP schema published 04/05

Published Documentation

Published Documentation

- The PIT technical documentation page reflects the latest versions of the REST and SOAP APIs: https://revenue-ie.github.io/paye-employers-documentation/

Published Documentation

ERR Technical Support Documentation

Document Description	Type	Environment	Date Last Updated
Enhanced Reporting Requirements Overview	Link	All Versions	12/04/2023
Handshake Web Service Definition	WSDL File	PIT Next Version	22/11/2018
Handshake Schema	Schema	PIT Next Version	22/11/2018
SOAP Connectivity Handshake Guide	PDF	PIT Next Version	02/03/2020
REST Connectivity Handshake Guide	PDF	PIT Next Version	08/01/2019
Enhanced Reporting Submission Request: Data Items	PDF	PIT Next Version	06/04/2023
Enhanced Reporting Validation Rules	Excel File	PIT Next Version	04/05/2023
REST Web Service Integration Guide	PDF	PIT Next Version	04/05/2023
REST Open API Specification	API File	PIT Next Version	04/05/2023
REST API Reference	LINK	PIT Next Version	04/05/2023
SOAP Web Service Integration Guide	PDF	PIT Next Version	04/05/2023
Enhanced Reporting Web Service Definition	WSDL File	PIT Next Version	20/04/2023
Enhanced Reporting Schema	Schema	PIT Next Version	20/04/2023
ERN Web Service Definition	WSDL File	PIT Next Version	04/05/2023
ERN Schema	Schema	PIT Next Version	04/05/2023
Common PAYE Types Schema	Schema	PIT Next Version	20/04/2023

PIT Update

PIT Activity

- Open tickets -> 0

- Closed tickets -> 10

PIT Schedule

PIT Release	Functionality
06-April	- ERR PIT helpdesk - ERR Github for technical support documentation ✓ - ROS handshake service
24-May	- ERR submission REST/SOAP with immediate/synchronous processing - Accepting Inbound submission File REST/SOAP - Bug fixes
21-June	- Look up ERN REST/SOAP - Bug fixes
19-July	- ERR submission REST/SOAP with additional/asynchronous processing - Agent access - Bug fixes

ROS permissions for employers

ROS permissions for employers

- No impact on ROS payroll security

- Employer-specific – Agent permissions will be addressed in a later SUG meeting

- Two new permissions will be available to employers:

  - **Submit ERR Expenses/Benefits**: User can submit and amend ERR submissions.

  - **View ERR Expenses/Benefits**: User can view ERR submissions.

- These new permissions can be added to existing sub-certs by employers if desired.

ROS permissions for employers

The new permissions can be added to a sub-cert under Admin Services on ROS:

Permissions on Administration Services

- **No**: Permission not available, **Yes**: Permission available

Service	No	Yes	
Add New	☑	☐	
Revise	☑	☐	
Amend Email Addresses	☑	☐	
Revoke	☑	☐	
Set Signature Requirements	☑	☐	
Inbox Administration	☑	☐	
Submit Registration	☑	☐	
Amend Address	☑	☐	
Access Direct Debit Instruction	☑	☐	
Access Electronic Funds Transfer	☑	☐	
Access Secure Upload	☑	☐	
Access Manage Tax Clearance	☑	☐	
Access Verify Tax Clearance	☑	☐	
Access DPD System	☑	☐	
Access ePSWT System	☑	☐	
Access Residential Zoned Land Tax	☑	☐	
Access Phased Payment Arrangement	☑	☐	
Submit ERR Expenses/Benefits	☐	☑	
View ERR Expenses/Benefits	☐	☑	

All Administration Services   [All No]   [All Yes]

[Confirm]

Actions

Action Update

Action/Question	Responsibility	Update
The ERR request has an ARRAY, but feedback is it may not be sufficient. For example In a members system they will use the array "expenseBenefits" to send expenses for multiple employees and/or multiple payroll periods. they generate "lineItemID" based on Employee + Payroll Result. But the problem will be employees can have more than one expense item in a single payroll result. If we only have the model above, then we will have to generate additional item numbers per payroll result (this is not a huge issue). The problem with generating additional "lineitemID"s is there will be redundant/duplicated data that is completely pointless to include in the file.	Revenue	Revenue design for ERR is consistent with the design used for Payroll. i.e. multiple expenses benefits for one employment in the same run require one lineItemId per expense benefit. This approach keeps processing to a minimum but most importantly gives a unique key per expense just as is the case for payslips.

Action Update

Action/Question	Responsibility	Update
Process for matching unlinked payroll.	Revenue	If an employer has made payroll submissions without the employee's PPSN, they must take action to ensure the matching process used by Revenue is successful when they are provided with the employees PPSN. Programmatically, employee first name, family name and Employment Reference Number are used in an exact match to link the payslips. If manually matching is required employee first name, family name, Employment Reference Number, DOB and employee address are used to determine a match and link payslips. Documentation will be shared with SUG on the 25th of May. Documentation is scheduled to be released publicly in English and Irish on the 1st of June.

Action Update

Action/Question	Responsibility	Update
Unlinked scenario 2 GDPR violation if employer does not correct employee details and continues to hold incorrect surname data.	Revenue	The unlinked documentation will provide examples and details for how payslips are linked which will enable employers to align with their GDPR regulations and ensure data reported to Revenue is accurate.
Unmatched scenario 1 You mention Unmatched Active employments. But should this not also be inactive employments such as processed through as post cessation payment?	Revenue	By 'active employment' we mean an employment that is live or ceased in the current year. An in-year post-cessation payment would therefore be matched to the taxpayer's record. An 'inactive employment' would be an employment that is deleted or not on file in the current year. If e.g. a payment was made in 2025 for an employment that was ceased in 2024, there will be no active employment on file and the submission will remain unmatched.

Action Update

Action/Question	Responsibility	Update
Employer connectivity test in advance of first ERR submissions.	Revenue	The ERN service will be made available in advance so that employers can confirm their connection and ROS cert if required.

AOB

AOB

- SUG meeting schedule 2023
  - ~~1st June~~ *Cancelled*
  - 15th June
  - 29th June