NATIONAL AUTOMATIC ENROLMENT RETIREMENT SAVINGS AUTHORITY (NAERSA) - DSP, IRELAND

EXT Environment Connectivity Testing Guide

Version 1.3.1

June 2025

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Version Control

Version No.	Release Date	Amendments
1.0.0	April 2025	First Version
1.1.0	June 2025	1. The content type for incoming SOAP requests has been corrected 2. The SOAP sample for handshake has been corrected 3. Signing string added for the JSON API sample and a note added about the signing string. 4. Handshake XSD added
1.1.1	June 2025	1. SOAP protocol changed from 1.1 to 1.2 and hence Content-Type and namespace had been updated.

1. Introduction

This document provides details for checking the connectivity to the NAERSA EXT environment, for payroll providers. This environment is geo-fenced.

There are two APIs available.

2. testConnection

It is a simple "Hello World" test and will only confirm that the environment is available and accessible via a https link or browser to the end user. The incoming request is not authenticated or validated.

2.1. REST service

Attribute	Value
URI	/payrollapi/v1/testconnection/{payrollprovidername}
Supported methods	GET
Description	This service is used to test the connection by passing payrollprovidername and returns a success message.
Input Media type (MIME)	application/json
Status code for successful response	200
Response	As detailed in Section below
Output Media type	application/json

Table 1:Attributes of REST testConnection API.

2.1.1. Request Structure

https://b2b.myfuturefund-nonprod.ie/payrollapi/v1/testconnection/{payrollprovidername}

2.1.2. Path parameters

Headers	Description	Revenue Field	Mandatory/ Optional	Sample Value
payrollprovidername	Name to identify the payroll provider testing the connection.	N	M	PKF Payroll

Table 2: Path parameters of testConnection API.

2.1.3. Sample JSON Request

URL:
https://b2b.myfuturefund-nonprod.ie/payrollapi/v1/testconnection/PKF Payroll

Headers:
Accept:application/json.
Content-Type:application/json

Path Params:
Payrollprovidername : PKF Payroll

2.1.4. JSON Response

Details below are for the success response.

2.1.5. Response Headers:

Headers	Description	Sample Values
Accept	Indicates the media types the client can handle	application/json
Content-Type	Indicates the media type of the request body.	application/json
Status-code	https status code	200 Ok

Table 3: Response headers of success response of testConnection API

2.1.6. Sample JSON Response

Connected successfully to NAERSA, Thanks.

2.2. SOAP/XML

Attribute	Value
URI	/payrollapi/v2/testconnection
Supported methods	POST
Description	This service is used to test the connection by passing payrollprovidername and returns a success message.
Input Media type (MIME)	application/soap+xml
Status code for successful response	200
Response	As detailed in Section below
Output Media type	application/soap+xml

Table 4: Attributes of SOAP testConnection API.

2.2.1. Request Structure

https://b2b.myfuturefund-nonprod.ie/payrollapi/v2/testconnection/

2.2.2. Request header fields:

Headers	Description	Mandatory/ Optional	Value
Accept	Indicates the media types the client can handle	M	application/soap+xml
Content-Type	Indicates the media type of the request body	M	application/soap+xml

Table 5: Http Header parameters of testConnection API.

2.2.3. Request body fields:

Field Name	Description	Mandatory/ Optional	Sample Values
payrollProviderName	Name to identify the payroll provider testing the connection.	M	PKF Payroll

Table 6: Request body parameters of testConnection API.

2.2.4. Sample Request of SOAP

URL: https://b2b.myfuturefund-nonprod.ie/payrollapi/v2/testconnection

```
<SOAP-ENV:Envelope xmlns:SOAP-ENV=" http://www.w3.org/2003/05/soap-envelope">
  <SOAP-ENV:Header/>
  <SOAP-ENV:Body>
    <b2b:testApiRequest xmlns:b2b="http://testapi.dto.ws.payroll.b2b.dsp.com">
      <b2b:payrollProviderName>PKF Payroll</b2b:payrollProviderName>
    </b2b:testApiRequest>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```

2.2.5. XML/SOAP Response

Details below are for the success response.

2.2.6. Response header fields:

Headers	Description	Values
Accept	Indicates the media types the client can handle	application/soap+xml
Content-Type	Indicates the media type of the request body	application/soap+xml
Status-code	https status code	200

Table 7: Response http headers of success response of testConnection API.

2.2.7. Response body fields:

Field name	Description	Repeats	Value
testApiResponse	Success message	N	Connected successfully to NAERSA, Thanks.

Table 8: XML Response fields of testConnection API.

2.2.8. Sample response in XML

```
<SOAP-ENV:Envelope xmlns:SOAP-ENV=" http://www.w3.org/2003/05/soap-envelope">
  <SOAP-ENV:Header/>
  <SOAP-ENV:Body>
    <ns2:testApiResponse xmlns:ns2="http://testapi.dto.ws.payroll.b2b.dsp.com">
      <ns2:response>Connected successfully to NAERSA, Thanks</ns2:response>
    </ns2:testApiResponse>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```

3. Handshake

This API accepts the payroll software request with the digital signature, authenticates the incoming requests and then calls revenue to verify the employerReg or agentTAIN associated with the certificate.

3.1. REST Service

Attribute	Value
URI	/payrollapi/v1/handshake
Supported methods	GET
Description	This service is used to test the connection between payroll software, NAERSA and Revenue.
Input Media type (MIME)	application/json
Status code for successful response	200
Response	As detailed in Section below
Output Media type	application/json

Table 9:Attributes of REST handshake API.

3.1.1. Request Structure

https://b2b.myfuturefund-nonprod.ie/payrollapi/v1/handshake

3.1.2. Path parameters

There are no path parameters.

3.1.3. Request input fields

3.1.3.1. Headers fields

These fields are to be sent as Http headers

Headers	Description	Sample Values
Accept	Indicates the media types the client can handle	application/json
Content-Type	Indicates the media types the client can handle	application/json
Cache-Control	Specifies caching directives for the client (e.g., no-cache, max-age=3600).	no-cache
X-trace-id	Used for end-to-end tracing. UUID to be generated by payroll software for the request.	550e8400-e29b-41d4-a716-446655440000
Date/X-Date	Date & time of creation of the request. Date or X-Date can be used as the field name.	2018-01-01T12:00:00.000Z
Host	Hostname of the service being called. This would be a fixed value for different environments. EXT: b2b.myfuturefund-nonprod.ie	b2b.myfuturefund-nonprod.ie
Signature	Digital signature generated using the private key of the ROS certificate. Should consist of keyId, algorithm, headers and signature. This is identical to the field expected by Revenue	Signature::keyId="MIIFejC..truncated",algorithm="rsa-sha512", headers="(request-target) host date",signature="dFQv2+RsH2..truncated"

Table 10: Request headers of handshake API

3.1.3.2. Query parameters

Field Name	Field Description	Mandatory	Example
softwareUsed	Name of payroll software used for calling the API. This will be used for helpdesk purposes.	M	Payroll Software
softwareVersion	Version of payroll software used for calling the API. This will be used for helpdesk purposes.	M	1.2.2
employerReg	Employer registration number associated with the certificate used.	O	1234567T
agentTAIN	Tax Advisor Identification Number associated with the certificate used.	O	99999A

Table 11: Query parameters of handshake API

employerReg and agentTAIN are conditionally optional. Either of them needs to be provided depending on the certificate being used in the API call. If both fields are missing then API will throw an error. If the incorrect field is passed then, agentTAIN set with an employer cert and vice versa will also give an error response.

When creating the signing string please note the sequence of the query parameters being passed should be the same as above.

3.1.4. Response Headers:

Headers	Description	Sample Values
Accept	Media type of the response	application/json
Content-Type	Media type of the response	application/json
Cache-Control	Specifies caching directives for the client. This will always be set to no-cache	no-cache
Status-code	http status code	200 for success
X-trace-id	UUID which was passed as part of the request	550e8400-e29b-41d4-a716-446655440000

Table 12: Response headers of success response of handshake API

3.1.5. Sample JSON Request

URL:
https://b2b.myfuturefund-nonprod.ie/payrollapi/v1/handshake

Headers:

Http header Accept application/json
Http header Content-Type application/json; charset=UTF-8
Http header Cache-Control no-cache
Http header X-trace-id 550e8400-e29b-41d4-a716-446655440000
Http header Date/X-Date 2018-01-01T12:00:00.000Z
Http header Host b2b.myfuturefund-nonprod.ie
Http header Signature Signature::keyId="MIIFejC..truncated",algorithm="rsa-sha512",headers="request-target host date",signature="dFQv2+RsH2..truncated"

Query parameters :

softwareUsed - "Payroll_Software"
softwareVersion - "1.2.2"
agentTAIN - "99999A"

headers & Signing String :

headers="(request-target) date host"

(request-target): get
/payrollapi/v1/handshake?softwareUsed=Payroll_Software&softwareVersion=1.2.2&agentTAIN=99999A
date: 2018-01-01T12:00:00.000Z
host: b2b.myfuturefund-nonprod.ie

3.1.6. JSON Response

Details below are for the success response.

3.1.7. Sample JSON Response

Successful scenario

Response Body:

{
"Handshake successful."
}

Error scenario

Response Body:

{
"Invalid Signature"
}

3.2. SOAP/XML

3.2.1. Request Structure

URL: https://b2b.myfuturefund-nonprod.ie/payrollapi/v2/handshake

Attribute	Value
URI	/payrollapi/v2/handshake
Supported methods	POST
Description	This service is used to test the connection between payroll software, NAERSA and Revenue.
Input Media type (MIME)	application/soap+xml
Status code for successful response	200
Response	As detailed in Section below
Output Media type	application/soap+xml

Table 13: Attributes of SOAP handshake API.

3.2.1.1. Headers fields

These fields are to be sent as Http headers

Headers	Description	Sample Values
Accept	Indicates the media types the client can handle	application/soap+xml
Content-Type	Indicates the media types the client can handle	application/soap+xml
Cache-Control	Specifies caching directives for the client (e.g., no-cache, max-age=3600).	no-cache
X-trace-id	Used for end-to-end tracing. UUID to be generated by payroll software for the request.	550e8400-e29b-41d4-a716-446655440000

Table 14: Http headers of SOAP handshake API.

3.2.1.2. SOAP Header

The structure of the SAOP header is as per Revenue specifications. The header fields will be required for authentication.

3.2.1.3. SOAP Body

Field Name	Field Description	Mandatory	Example
softwareUsed	Name of payroll software used for calling the API. This will be used for helpdesk purposes.	M	Payroll Software
softwareVersion	Version of payroll software used for calling the API. This will be used for helpdesk purposes.	M	1.2.2
employerReg	Employer registration number associated with the certificate used.	O	1234567T
agentTAIN	Tax Advisor Identification Number associated with the certificate used.	O	99999A

Table 15:Attributes of SOAP body handshake API.

employerReg and agentTAIN are conditionally optional. Either of them needs to be provided depending on the certificate being used in the API call. If both fields are missing then API will throw an error.

3.2.2. Sample Request of SOAP

URL: https://b2b.myfuturefund-nonprod.ie/payrollapi/v2/handshake

```
<SOAP-ENV:Envelope xmlns:SOAP-ENV=" http://www.w3.org/2003/05/soap-envelope">
<SOAP-ENV:Header>
        <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="X509">MIIFejCCA2KgAwIBAgIUVUDNnmL6ED...truncated
        </wsse:BinarySecurityToken>
                <wsu:Timestamp wsu:Id="timeStamp">
                        <wsu:Created>2025-06-04T08:05:46.215Z</wsu:Created>
                        <wsu:Expires>2025-06-04T10:05:46.216Z</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="#messageBody">
                                        <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>SBLa1nOpaU6G1MXGYm0H...truncated</ds:DigestValue>
                                </ds:Reference>
                                <ds:Reference URI="#timeStamp">
                                        <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>wq724B+sNnj6wIQMu2gILsziaVY...truncated</ds:DigestValue>
                                </ds:Reference>
                        </ds:SignedInfo>
                        <ds:SignatureValue>QdGLPx6OXLVjbqhZDmPfMwJgTD4b...truncated</ds:SignatureValue>
                        <ds:KeyInfo>
                                <wsse:SecurityTokenReference>
                                        <wsse:Reference URI="#X509"/>
                                </wsse:SecurityTokenReference>
                        </ds:KeyInfo>
                </ds:Signature>
        </wsse:Security>
</SOAP-ENV:Header>
<SOAP-ENV:Body xmlns:wsu="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-1.0.xsd"
wsu:Id="messageBody">
        <han:handshakeRequest xmlns:han="http://handshake.dto.ws.payroll.b2b.dsp.com">
                <han:softwareUsed>Payroll_Software</han:softwareUsed>
                <han:softwareVersion>1.2.2</han:softwareVersion>
                 <!--Optional:-->
                <han:employerReg>1234567T</han:employerReg>
                <!--Optional:-->
```

```
                <han:agentTAIN>99999A</han:agentTAIN>
            </han:handshakeRequest>
</SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```

3.2.3. Response Headers:

Headers	Description	Sample Values
Accept	Media type of the response	text/xml
Content-Type	Media type of the response	text/xml
Cache-Control	Specifies caching directives for the client. This will always be set to no-cache	no-cache
Status-code	http status code	200 for success
X-trace-id	UUID which was passed as part of the request	550e8400-e29b-41d4-a716-446655440000

Table 16: Response http headers of success response of handshake API

3.2.4. Sample response in XML

```
<SOAP-ENV:Envelope xmlns:SOAP-ENV=" http://www.w3.org/2003/05/soap-envelope">
  <SOAP-ENV:Header/>
  <SOAP-ENV:Body>
    <ns2:handshakeResponse xmlns:ns2="http://handshake.dto.ws.payroll.b2b.dsp.com">
      <ns2:response>Handshake with NAERSA successful.</ns2:response>
    </ns2:handshakeResponse>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```

3.2.5. Schema

handshake.xsd