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Te Tari Taake

Inland Revenue

Build pack: Return Service—Portfolio Investment Entities

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Contents

1   Overview

1.1   This solution

Inland Revenue has a suite of digital services available for consumption by our service providers that support efficient, electronic business interactions with Inland Revenue. The Portfolio Investment Entity (PIE) Return Service described in this build pack document forms part of a suite of Gateway Services.

This is a stand-alone document intended to provide the technical details required to support the end-to-end onboarding Gateway Services. It describes the architecture of the technical solution, schemas, end points, sample payloads to view, and also its interaction with other build packs that cover different aspects of Gateway Services.

> Before continuing, please consult
> www.ird.govt.nz/digital-service-providers/services-catalogue
> for business-level context, use cases and links to relevant policy.
> The information available here explains how to integrate with
> Inland Revenue's services.

1.2   Intended audience

The solution outlined in this document is intended to be used by technical teams and development staff. It describes the technical interactions, including responses, provided by the PIE Return Service.

The reader is assumed to have a suitable level of technical knowledge in order to comprehend the information provided. A range of technical terms and abbreviations are used throughout this document, and while most of these will be understood by the intended readers, a glossary is provided at the end.

1.3   Related services

The following application programming interfaces (APIs) complement this Gateway Service. Instructions on where to find the build packs for these APIs can be found in section 4 of this document.

1.3.1   Identity and Access Services (required)

The Identity and Access Services (IAS) are used to authenticate access. Authentication tokens will need to be retrieved via IAS prior to making calls to the Return Service.

This Return Service build pack was written using information from version 1.5 of the IAS build pack.

1.3.2   Intermediation Service (recommended)

The Intermediation Service build pack supports software providers with the process of linking tax intermediaries (such as tax agents) to their clients so intermediaries can act on their behalf through the Return service.

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2 Solution design

2.1 Architecture

Inland Revenue is offering a suite of web services in order to facilitate interactions with via software packages. The Gateway Services suite will be used by approved software vendors to facilitate everything from registration activities, filing returns, making payments and other service offerings in order to allow customers to interact with Inland Revenue.

The diagram below illustrates the flow of data from the customer to Inland Revenue.
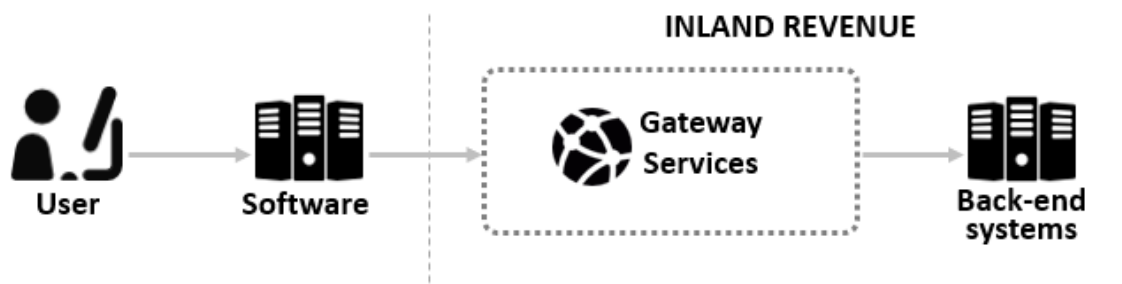
The WSDLs for the Gateway Services define an 'any' XML request and response structure, which then relies on a group of XSDs to define the data structure of those requests and responses. Each request and response type will define a lower, 'wrapper' element.

Any malformed XML will instantly be rejected by the Gateway Services prior to any schema validation.

2.2 Service scope

The PIE Return Service supports the following operations:

- **File:** This service is used to submit a return to Inland Revenue for a customer.
- **RetrieveStatus:** This service is used by software to return a status for a particular return.
- **RetrieveReturn:** This service retrieves a previously submitted return and the values associated to that return.

2.3 Messaging

The Return Service is a SOAP-based web service. All SOAP messages require a SOAP header and a SOAP body containing a structured XML payload. Correct values can be found in the relevant WSDL, the link to which is provided in of this document.

The Gateway Services allow the consumption of any structured XML payload but will be validated against the Inland Revenue-published XSDs.

This is a late binding validation, performed after authentication has been reviewed. The message structure of these services is a simple request/response.

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The XML request will be checked for well-formed XML before the schema validation. Responses to these requests will be in XML format as well and will be defined in the same schemas that define the requests.

Any XML submissions in the SOAP body that do not meet the provided schemas will not be accepted by the Gateway Services. Incorrect namespaces will also fail validation against the published schemas.

Example SOAP request structure

```
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope"
      xmlns:a="http://www.w3.org/2005/08/addressing">
  <soap:Header>
      <a:Action>https://services.ird.govt.nz/GWS/Returns/Return/Operation</a:
      Action>
  </soap:Header>
  <soap:Body>
   <rc:fileHeader>...</rc:fileHeader>
   <rc:fileBody>
    <rc:standardFields>
    <rc:formFields xsi:type="r:FormFieldsType">
     <...tax specific fields...>
    </rc:formFields>
   </rc:fileBody>
  </r:fileRequest>
  </soap:Body>
</soap:Envelope>
```

Example SOAP response structure

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope"
xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
      <a:Action s:mustUnderstand="1">
      https://services.ird.govt.nz/GWS/Returns/Return/FileResponse
      </a:Action>
  </s:Header>
  <s:Body>
    <FileResponse xmlns="https://services.ird.govt.nz/GWS/Returns/">
     <FileResult
    xmlns:b=https://services.ird.govt.nz/GWS/Returns/:types/FileResponse
    xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
        <b:FileResponseWrapper>
           <fileResponse
    xmlns="urn:www.ird.govt.nz/GWS:types/Common.v2">
             <statusMessage>
                <statusCode>0</statusCode>
                <errorMessage/>
             </statusMessage>
           </fileResponse>
        </b:FileResponseWrapper>
      </FileResult>
     </FileResponse>
  </s:Body>
</s:Envelope>
```

2.4 Security

2.4.1 Information classification

The information exchanged via the Return Service has an information classification of "**IN CONFIDENCE**". The following security standards therefore apply.

2.4.2 Transport layer security and certificates

Mutual Transport Layer Security (TLS) is implemented for this service. This requires the use of a publicly-issued X.509 certificate from one of the trusted certificate authorities. Please refer to the Identity and Access Services build pack for more details.

2.4.3 Ciphers

Inland Revenue currently supports TSL1.2 and TLS1.3. Please refer to Identity and Access Services build pack for supported ciphers.

2.4.4 End points

There are two end points, which are summarised in the bullet points below (the table immediately afterwards provides more detail):

1. There is an end point to which service providers' centralised **cloud** locations can connect. This will require X.509 certificates for mutual TLS with an agreed common name, however certificates no longer need to be exchanged with Inland Revenue. On the cloud end point, Inland Revenue has controls to shield service providers from issues caused by heavy usage from other providers.

2. For service providers connecting from **desktops/native apps** that are unable to securely store certificates and access tokens. There is a separate end point that does not use mutual TLS and therefore does not require certificates. On the desktop end point, Inland Revenue has less ability to shield consumers of the service from heavy usage by others.

	End point for cloud-based connections	End point for desktop connections
Purpose	• Primary preferred end point to connect to from service providers for Gateway Services	• Additional transitory end point provided to facilitate connecting from desktops which might be high volumes of sources addresses, transient DHCP addresses, not realistically associated with client-side TLS certificates, not individually onboarded to set up certificate trust
Client application type	• Cloud applications	• Desktop/native applications • For connecting from multiple decentralised clients

	End point for cloud-based connections	**End point for desktop connections**
Constraints	- Only for source locations with client-side TLS certificates - On the cloud end point Inland Revenue has controls to shield service providers from issues caused by heavy usage from other providers	- Less scalable - Subject to tighter security controls - On the desktop end point Inland Revenue has less ability to shield consumers of the service from heavy usage by others - OAuth2 refresh tokens will not be offered to desktop clients

	End point for cloud-based connections	End point for desktop connections
Mutual TLS	• Inland Revenue explicitly trusts the certificate the service provider associates with the TLS connection as client for Mutual TLS connections and uses it to identify the service provider in conjunction with the web service identification below	• Server-side certificates only
Minimum TLS version	• 1.2	• 1.2
URL	• Contains …/gateway/..	• Contains …/gateway2/..
Port	• 4046	• 443 (Default https port)
Web service consumer identification	• To be identified in web service calls—each cloud application will be given client_id/client_secret credentials during onboarding to allow it to call this end point	• Desktop clients will be given client_id/client_secret credentials in the same manner as cloud application clients. However, desktop clients will not be able to redeem refresh tokens to obtain a new OAuth token when it expires.
Firewalling in production	• No IP address restrictions • Access limited by certificate enrolment	• No IP address restrictions
Firewalling in non-production environments	• No IP address restrictions • Access limited by certificate enrolment	• Firewalled—IP whitelisting needed

2.4.5 Authentication and authorisation

Authentication and authorisation are the mechanisms by which the consumer of the service is identified, and their access rights enforced. The Return Service uses the standard OAuth2 authorisation code flow. For instructions on how to acquire an OAuth access token, and the properties of this token (eg its expiry and refresh parameters) please refer to the Identity and Access build pack.

Authentication and authorisation are described in terms of two parties:

- **Consumer**—this is the party under whose identity the interaction is being transacted (the party who has been authenticated)
- **Resource**—this is the data entity/object being accessed (eg created, read, updated or deleted) via the service.

When using OAuth, the consumer is authenticated using their Inland Revenue myIR credentials and their access is authorised using the same access rights as myIR. For example, if a myIR user does not have permission to file a return online, they will not be able to file a return via Gateway Services either. This applies to users who are granted access as staff inside an organisation or as staff in a tax agency.

The following steps are applied by the Gateway Services when authorising access by the consumer to a resource:

1. If the consumer is the resource owner then access to the resource is authorised (ie the consumer is authorised to manage their own affairs).
2. Otherwise, if the consumer's myIR credential has been granted access to the resource, with the appropriate level of access, then access is authorised.
3. Otherwise, if the consumer is an intermediary of an appropriate type who has been delegated access by being linked to the resource, with the appropriate level of access, then access is authorised.
4. Otherwise access is denied.

3   Operations

IMPORTANT
The end points, schemas and WSDLs listed here are subject to change.
For the authoritative definitions, please visit
www.ird.govt.nz/digital-service-providers/services-catalogue

The structures of all Gateway Service operations are intended to produce the most efficient requests and responses. Any common structures and fields will be used across many schemas and tax types through an intentional inheritance method. The section below describes the structure of each operation and the scenarios in which certain fields will be used in XML requests and responses.

This section contains schema aliases:

- cmn: Common.v2.xsd
- rc: ReturnCommon.v2.xsd
- r: returnSpecific.xsd (for example ReturnPIEa.v1.xsd)

NOTE: Some requests and responses live in ReturnCommon.v2.xsd but can still be generated from an inheriting return-specific XSD. This could mean the schemaLocation could be different, depending on where the payload was generated from. Any method of generating these payloads is accepted. This applies to the fileResponse XML directly below.

The response structure for all File requests will use the two default service response fields: **statusCode** and **errorMessage**. The identifier for this XML is fileResponse in the ReturnCommon namespace.

The response structure for all File requests will have the **gatewayId** field populated. The gatewayId is a unique identifier passed back in the responseBody, assuming the response code for the request is zero (refer to Chapter 5 Responses). The gatewayId should be recorded and can be used by technical teams for troubleshooting. The gatewayId will not appear in search results when searching myIR. The gatewayId is also not available to Inland Revenue's front line staff (such as in the telephone contact centre) to search on.

For example:

```
<fileResponse
xmlns="urn:www.ird.govt.nz/GWS:types/ReturnCommon.v2">
      <StatusMessage
xmlns="urn:www.ird.govt.nz/GWS:types/Common.v2">
            <statusCode>0</statusCode>
            <errorMessage></errorMessage>
      </StatusMessage>
      <responseBody>
            <gatewayId>0000 002J ZJ5N 6</gatewayId>
      </responseBody>
</fileResponse>
```

All operations for the Return Service will contain two standard header fields: **softwareProviderData** and **identifier**.

The **identifier** field is common across all Gateway Services but refers to different parties in different services. In all cases it is the party with delegated permissions to whom an OAuth token is provided. If the value cannot be resolved to a known context, or if it can but the provided OAuth token does not have the necessary delegated permissions then the error code 4 "unauthorised delegation" is returned. Please refer to individual operations for the nature of the identifier expected in this parameter in any given context.

For example:

```
<cmn:softwareProviderData>
    <cmn:softwareProvider>SoftwareProvider</cmn:softwareProvider>
    <cmn:softwarePlatform>SoftwarePlatform</cmn:softwarePlatform>
    <cmn:softwareRelease>v1</cmn:softwareRelease>
</cmn:softwareProviderData>
<cmn:identifier
IdentifierValueType="ACCIRD">012345678</cmn:identifier>
<cmn:accountType>PIE</cmn:accountType>
```

Field	Description
softwareProvider	The company that developed the software
softwarePlatform	The field value will be provided by Inland Revenue during the onboarding process
softwareRelease	The version of the software package
IdentifierValueType	The ID type being submitted. This can be ACCIRD or IRD. The value submitted for this field should contain only digits, with no dashes. IRD numbers that are eight digits must be padded with a leading zero.
identifier	The value submitted for this field should contain only digits, with no dashes. IRD numbers that are eight digits must be padded with a leading zero.
accountType	The account type being submitted (PIE)

Proper use:

- The only softwareProviderData fields users will be able to input are the ones that were provided to Inland Revenue at the time of on-boarding.
- The identifier is that of the owner or institution on whose behalf the operations are being performed.

3.1 File

The File operation will be used to submit all returns, regardless of the tax type. Note that the request and response structure is the same for all tax types.

Base structure:

```
<r:fileRequest namespaces...>
    <rc:fileHeader>...</rc:fileHeader>
    <rc:fileBody>
      <rc:standardFields>
      <rc:formFields xsi:type="r:FormFieldsType">
            <...tax specific fields...>
      </rc:formFields>
      </rc:fileBody>
  </r:fileRequest>
```

Field	Description
fileHeader	The standard header for File requests across all tax types
fileBody	The standard body structure for File requests across all tax types
standardFields	A group of fields standard across all tax types
formFields	A wrapper that will contain tax form-specific fields

<**FileHeader**> structure:

```
<r:fileRequest namespaces...>
    <rc:fileHeader>
        <cmn:softwareProviderData>
                <cmn:softwareProvider>SoftwareProvider</cmn:softwareProvider>
                <cmn:softwarePlatform>SoftwarePlatform</cmn:softwarePlatform>
                <cmn:softwareRelease>v1</cmn:softwareRelease>
        </cmn:softwareProviderData>
        <cmn:identifier IdentifierValueType="IRD">123047710</cmn:identifier>
        <cmn:accountType>PIE</cmn:accountType>
        <rc:periodEndDate>2021-03-31</rc:periodEndDate>
        <rc:majorFormType>PIE</rc:majorFormType>
        <rc:minorFormType>ANN</rc:minorFormType>
    </rc:fileHeader>
      <rc:fileBody>
        <rc:standardFields>
        <rc:formFields xsi:type="r:FormFieldsType">
                <...tax specific fields...>
        </rc:formFields>
        </rc:fileBody>
  </r:fileRequest>
```

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Field	Requirement	Description
periodEndDate	Required	The period in which a return exists or the period for which it is being submitted. PRD – periods only allowed from 01/04/2020 ANN/CER - periods only allowed from 31/03/2021
majorFormType	Required	The form type (PIE)
minorFormType	Required	Minor Form type (ANN [annual], CER [Certificate] or PRD [periodic])

Proper uses:

• The major and minor form types will be used together to determine the submission form.

Example scenario:

• Attempting to submit a PIE Annual Return for the 2021-March period.
        <cmn:accountType>PIE</cmn:accountType>
        <rc:periodEndDate>2021-03-31</rc:periodEndDate>
        <rc:majorFormType>PIE</rc:majorFormType>
        <rc:minorFormType>ANN</rc:minorFormType>

3.1.1 FileBody structures

FileBody is simply the wrapper of standardFields and formFields. The standard fields will be constant in every fileBody, along with most formFields—additional details for the FileBody will be provided in the following sub-sections.

The <**StandardFields**> structure is used in ANN, CER, and PRD file requests:

```
<r:fileRequest namespaces...>
    <rc:fileHeader>...</rc:fileHeader>
    <rc:fileBody>
      <rc:standardFields>
          <rc:amendmentRequest>
              <rc:isAmended>false</rc:isAmended>
              <rc:amendReason></rc:amendReason>
              <rc:amendDetails></rc:amendReason>
          </rc:amendmentRequest>
      </rc:standardFields>
      <rc:formFields xsi:type="r:FormFieldsType">
          <...tax specific fields...>
      </rc:formFields>
      </rc:fileBody>
   </r:fileRequest>
```

Field	Requirement	Description
isAmended	Required	This allows for a return to be filed as an amendment. NOTE: If isAmended=true then amendReason and amendDetails are required.
amendReason	Optional	This is attached to the amendmentRequest as the reason for the amendment and is required when isAmended is true. This can be either KEY (incorrect amount), MATH (calculation error), OTHER, or TRNSPO (transposition error).
amendDetails	Optional	This allows for any further details on the amendmentRequest and is required when isAmended is true
creditTransferRequest	Optional	This is not supported for PIE
isNilReturn		
isFinalReturn		

Proper uses:

- Most standard submissions will require isNilReturn to be *false*, isFinalReturn to be *false*, and isAmended to be *false.*

- When attempting to amend a PIE return, supply the following fields similar to this:

  <rc:isAmended>true</rc:isAmended>
  <rc:amendReason>*KEY*</rc:amendReason>
  <rc:amendDetails>*Explanation of the reason for amending.*</rc:amendDetails>

3.1.1.1 Annual PIE Reconciliation (ANN)

<**fileBody**> structure:

```
<r:fileRequest namespaces...>
  <rc:fileHeader> ... </rc:fileHeader>
     <rc:fileBody>
            <rc:standardFields> ... </rc:standardFields>
            <rc:formFields xsi:type="r:FormFieldsType">
                    <r:submissionKey/>
               <r:externalID>testId1</r:externalID>
               <r:totalCertificates>100</r:totalCertificates>
                    <r:totalIncomeLoss>1000.00</r:totalIncomeLoss>
                    <r:totalTaxCreditOnInvestorIncome>1000.00</r:totalTaxCreditOnInvestorIncome>
                    <r:netTaxPaidOnInvestorIncome>1000.00</r:netTaxPaidOnInvestorIncome>
                    <r:taxableIncomeLowMid>1000.00</r:taxableIncomeLowMid>
                    <r:netTaxPaidOnInvestorIncomeLowMid>1000.00</r:netTaxPaidOnInvestorIncomeLowMid>
                    <r:totalTaxCreditOnInvestorIncomeLowMid>1000.00</r:totalTaxCreditOnInvestorIncomeLowMid>
                    <r:zeroExitedTaxableIncome>1000.00</r:zeroExitedTaxableIncome>
                    <r:zeroRateTotalForeignTaxCredits>1000.00</r:zeroRateTotalForeignTaxCredits>
                    <r:zeroRateTotalOtherTaxCredits>1000.00</r:zeroRateTotalOtherTaxCredits>
                    <r:zeroRateTotalICTaxCredits>1000.00</r:zeroRateTotalICTaxCredits>
                    <r:zeroRateTotalRWTTaxCredits>1000.00</r:zeroRateTotalRWTTaxCredits>
                    <r:zeroRateTaxPaymentExitedInvestors>1000.00</r:zeroRateTaxPaymentExitedInvestors>
               </rc:formFields>
        </rc:fileBody>
</r:fileRequest>
```

Field	Requirement	Description
submissionKey	Optional	This field is required on amendments. This field is used to determine the corresponding return submission.
totalCertificates	Optional	The number of certificates associated with the return
totalIncomeLoss	Optional	Total income or loss

Field	Requirement	Description
totalTaxCreditOnInvestorIncome	Optional	Total tax credits used for investors on low/mid/top rate
netTaxPaidOnInvestorIncome	Optional	PIE tax paid (credited) on investors' income (loss) at low/mid/top rate
TaxableIncomeLowMid	Optional	Taxable income (loss) at low/mid rate
netTaxPaidOnInvestorIncomeLowMid	Optional	PIE tax paid (credited) on investors' income (loss) at low/mid rate
totalTaxCreditOnInvestorIncomeLowMid	Optional	Total tax credits on investors' income (loss) at low/mid rate
zeroExitedTaxableIncome	Optional	Zero-rated exited investors' taxable income (loss)
zeroRateTotalForeignTaxCredits	Optional	Total zero-rated attributed foreign tax credits
zeroRateTotalOtherTaxCredits	Optional	Total zero-rated attributed other tax credits
zeroRateTotalICTaxCredits	Optional	Total zero-rated attributed imputation credits
zeroRateTotalRWTTaxCredits	Optional	Total zero-rated attributed RWT credits
zeroRateTaxPaymentExitedInvestors	Optional	Zero-rated exited investors' tax payment for exit period

3.1.1.2 Annual PIE Certificates (CER)

<fileBody> structure:

```
<r:fileRequest namespaces…>
        <rc:fileHeader> … </rc:fileHeader>
        <rc:fileBody>
                <rc:standardFields> … </rc:standardFields>
                <rc:formFields xsi:type="r:FormFieldsType">
                        <r:submissionKey/>
                        <r:isReverseReplace>false</r:isReverseReplace>
                        <r:lineItems>
                                <r:referenceId>fb7883b2</r:referenceId>
                                <r:amendType>A</r:amendType>
                                <r:issuerIRD>139125150</r:issuerIRD>
                                <r:investorName>John Doe</r:investorName>
                                <r:investorIRD>132340307</r:investorIRD>
                                <r:investorDOB>1985-12-31</r:investorDOB>
                                <r:investorCertID>abc</r:investorCertID>
                                <r:investorEmail>email@domain.com</r:investorEmail>
                                <r:investorPhone>38852277</r:investorPhone>
                                <r:jointInvestor>true</r:jointInvestor>
                                <r:certPeriodEndDate>2021-03-31</r:certPeriodEndDate>
                                <r:contactAddress>wellington</r:contactAddress>
                                <r:country>NZ</r:country>
                                <r:homeCountryTaxFilerNumber>xyz123</r:homeCountryTaxFilerNumber>
                                <r:nfidtaCountry>NFIDTA</r:nfidtaCountry>
                                <r:noTaxFileNumber>true</r:noTaxFileNumber>
                                <r:accountHolders>
                                        <ret1:irdNumber>123769732</ret1:irdNumber>
                                        <ret1:dateOfBirth>1985-09-09</ret1:dateOfBirth>
                                        <ret1:name>John Doe</ret1:name>
                                        <ret1:address>123 Easy street</ret1:address>
                                        <ret1:phone>0221234567</ret1:phone>
                                        <ret1:email>email@domain.com</ret1:email>
                                        <r:country>NZ</r:country>
                                </r:accountHolders>
                                <r:incomeInformation>
                                        <ret1:incomeType>NRINT</ret1:incomeType>
                                        <ret1:grossAmount>5005</ret1:grossAmount>
                                        <ret1:deductedAmount>53</ret1:deductedAmount>
```

```
                <ret1:rate>10.5</ret1:rate>
                <r:rateChanged>true</r:rateChanged>
                <r:unitsAtYearEnd>1000</r:unitsAtYearEnd>
                <r:totalTaxCredits>1000</r:totalTaxCredits>
                <r:taxableIncomeLowMid>1000</r:taxableIncomeLowMid>
        <r:netTaxPaidOnInvestorIncomeLowMid>1000</r:netTaxPaidOnInvestorIncomeLowMid>
        <r:totalTaxCreditOnInvestorIncomeLowMid>1000</r:totalTaxCreditOnInvestorIncomeLowMid>
                <r:zeroRateExitedTaxableIncome>1000</r:zeroRateExitedTaxableIncome>
                <r:zeroRateTotalForeignTaxCredits>1000</r:zeroRateTotalForeignTaxCredits>
                <r:zeroRateTotalOtherTaxCredits>1000</r:zeroRateTotalOtherTaxCredits>
                <r:zeroRateTotalICTaxCredits>1000</r:zeroRateTotalICTaxCredits>
                <r:zeroRateTotalRWTTaxCredits>1000</r:zeroRateTotalRWTTaxCredits>
                <r:zeroRateTaxPaymentExitedInvestors>1000</r:zeroRateTaxPaymentExitedInvestors>
        </r:incomeInformation>
        <r:incomeInformation>
                <ret1:incomeType>NRINT</ret1:incomeType>
                <ret1:grossAmount>5005</ret1:grossAmount>
                <ret1:deductedAmount>53</ret1:deductedAmount>
                <ret1:rate>10.5</ret1:rate>
                <r:rateChanged>true</r:rateChanged>
                <r:unitsAtYearEnd>1000</r:unitsAtYearEnd>
                <r:totalTaxCredits>1000</r:totalTaxCredits>
                <r:taxableIncomeLowMid>1000</r:taxableIncomeLowMid>
        <r:netTaxPaidOnInvestorIncomeLowMid>1000</r:netTaxPaidOnInvestorIncomeLowMid>
        <r:totalTaxCreditOnInvestorIncomeLowMid>1000</r:totalTaxCreditOnInvestorIncomeLowMid>
                <r:zeroRateExitedTaxableIncome>1000</r:zeroRateExitedTaxableIncome>
                <r:zeroRateTotalForeignTaxCredits>1000</r:zeroRateTotalForeignTaxCredits>
                <r:zeroRateTotalOtherTaxCredits>1000</r:zeroRateTotalOtherTaxCredits>
                <r:zeroRateTotalICTaxCredits>1000</r:zeroRateTotalICTaxCredits>
                <r:zeroRateTotalRWTTaxCredits>1000</r:zeroRateTotalRWTTaxCredits>
                <r:zeroRateTaxPaymentExitedInvestors>1000</r:zeroRateTaxPaymentExitedInvestors>
        </r:incomeInformation>
</r:lineItems>
<r:lineItems>
        <r:referenceId>50f88731</r:referenceId>
        <r:amendType>A</r:amendType>
        <r:issuerIRD>139125150</r:issuerIRD>
        <r:investorName>John Doe</r:investorName>
        <r:investorIRD>132340307</r:investorIRD>
        <r:investorDOB>1985-12-31</r:investorDOB>
        <r:investorCertID>abc</r:investorCertID>
        <r:investorEmail>email@domain.com</r:investorEmail>
```

```xml
<r:investorPhone>38852277</r:investorPhone>
<r:jointInvestor>true</r:jointInvestor>
<r:certPeriodEndDate>2021-03-31</r:certPeriodEndDate>
<r:contactAddress>wellington</r:contactAddress>
<r:country>NZ</r:country>
<r:homeCountryTaxFilerNumber>xyz123</r:homeCountryTaxFilerNumber>
<r:nfidtaCountry>NFIDTA</r:nfidtaCountry>
<r:noTaxFileNumber>true</r:noTaxFileNumber>
<r:accountHolders>
        <ret1:irdNumber>123769732</ret1:irdNumber>
        <ret1:dateOfBirth>1985-09-09</ret1:dateOfBirth>
        <ret1:name>John Doe</ret1:name>
        <ret1:address>123 Easy street</ret1:address>
        <ret1:phone>0221234567</ret1:phone>
        <ret1:email>mail@domain.com</ret1:email>
        <r:country>NZ</r:country>
</r:accountHolders>
<r:incomeInformation>
        <ret1:incomeType>NRINT</ret1:incomeType>
        <ret1:grossAmount>5005</ret1:grossAmount>
        <ret1:deductedAmount>53</ret1:deductedAmount>
        <ret1:rate>10.5</ret1:rate>
        <r:rateChanged>true</r:rateChanged>
        <r:unitsAtYearEnd>1000</r:unitsAtYearEnd>
        <r:totalTaxCredits>1000</r:totalTaxCredits>
        <r:taxableIncomeLowMid>1000</r:taxableIncomeLowMid>
<r:netTaxPaidOnInvestorIncomeLowMid>1000</r:netTaxPaidOnInvestorIncomeLowMid>
<r:totalTaxCreditOnInvestorIncomeLowMid>1000</r:totalTaxCreditOnInvestorIncomeLowMid>
        <r:zeroRateExitedTaxableIncome>1000</r:zeroRateExitedTaxableIncome>
        <r:zeroRateTotalForeignTaxCredits>1000</r:zeroRateTotalForeignTaxCredits>
        <r:zeroRateTotalOtherTaxCredits>1000</r:zeroRateTotalOtherTaxCredits>
        <r:zeroRateTotalICTaxCredits>1000</r:zeroRateTotalICTaxCredits>
        <r:zeroRateTotalRWTTaxCredits>1000</r:zeroRateTotalRWTTaxCredits>
        <r:zeroRateTaxPaymentExitedInvestors>1000</r:zeroRateTaxPaymentExitedInvestors>
</r:incomeInformation>
<r:incomeInformation>
        <ret1:incomeType>NRINT</ret1:incomeType>
        <ret1:grossAmount>5005</ret1:grossAmount>
        <ret1:deductedAmount>53</ret1:deductedAmount>
        <ret1:rate>10.5</ret1:rate>
        <r:rateChanged>true</r:rateChanged>
        <r:unitsAtYearEnd>1000</r:unitsAtYearEnd>
```

```
                        <r:totalTaxCredits>1000</r:totalTaxCredits>
                        <r:taxableIncomeLowMid>1000</r:taxableIncomeLowMid>
            <r:netTaxPaidOnInvestorIncomeLowMid>1000</r:netTaxPaidOnInvestorIncomeLowMid>
        <r:totalTaxCreditOnInvestorIncomeLowMid>1000</r:totalTaxCreditOnInvestorIncomeLowMid>
                        <r:zeroRateExitedTaxableIncome>1000</r:zeroRateExitedTaxableIncome>
                        <r:zeroRateTotalForeignTaxCredits>1000</r:zeroRateTotalForeignTaxCredits>
                        <r:zeroRateTotalOtherTaxCredits>1000</r:zeroRateTotalOtherTaxCredits>
                        <r:zeroRateTotalICTaxCredits>1000</r:zeroRateTotalICTaxCredits>
                        <r:zeroRateTotalRWTTaxCredits>1000</r:zeroRateTotalRWTTaxCredits>
                        <r:zeroRateTaxPaymentExitedInvestors>1000</r:zeroRateTaxPaymentExitedInvestors>
                    </r:incomeInformation>
                </r:lineItems>
        </rc:formFields>
        </rc:fileBody>
</r:fileRequest>
```

Field	Requirement	Description
submissionKey	Optional	This field is required on amendments. This field is used to determine the line items to update.
isReverseReplace	Optional	If "isAmended=true", the isReverseReplace flag can be used to reverse all previously sent line items and replace with line items in the current submission. Using reverse/replace is supported, but is a heavy operation as it requires a full resubmission of the full form. A more efficient update is to use the lineItemAmendType (see description below).
lineItems	At least one	Repeating element for line item details—can have between 1 and 3,000 repeating elements
referenceId	Required	Unique reference field created by the software provider. Must be submitted on initial file, then used as the unique line item identifier for amended lines.

Field	Requirement	Description
amendType	Optional [A, U, D]	If "IsAmended=true", the "amendType" indicator can be used to signify an add, update, or delete. This operation requires a **referenceID** in order to correctly target the exact record to update. The **referenceID** fields are supplied along with the file operation, allowing software providers and financial institutions to use their own internal keys to reference specific line items.
issuerIRD	Required	IRD number of the PIE or PIP
investorName	Required	Name of investor
investorIRD	Required	IRD number of investor
investorDOB	Optional	Date of birth of investor
investorCertID	Required	An ID assigned by the MRP to uniquely identify the certificate. This may be a sequential number or other unique identifier, particularly relevant if more than one certificate is being filed for any single investor. The certificate number will show that it isn't a duplicate or amendment.
investorEmail	Optional	Investor email address
investorPhone	Optional	Investor phone number
jointInvestor	Optional	Determines if investor is a joint investor
certPeriodEndDate	Required	Monthly—end of each month for periods that have exited investors or optional payments. Annually—31 March for all remaining investors and March exitors. Quarterly—30 June, 30 September, 31 December and 31 March.

Field	Requirement	Description
contactAddress	Optional	Contact address
country	Optional	Country of residence for a notified foreign investor. ISO 3166 alpha-2 standard country code.
homeCountryTaxFilerNumber	Optional	Equivalent of the notified foreign investor's tax file number in the country or territory where they reside for tax purposes
nfidtaCountry	Optional	This is a flag signifying whether the home country of the notified foreign investor (NFI) has a double taxation agreement (DTA) with New Zealand. The following values are accepted: • NFIDTA • NFINONDTA • NFINONE
noTaxFileNumber	Optional	Flag signifying that the notified foreign investor did not provide a **homeCountryTaxFilerNumber**
accountHolders	Optional	Repeating element for joint account holder details-can have between 0 and 500 repeating elements
incomeInformation	At least one	Repeating element for income details-can have between 1 and 10 repeating elements

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<**accountHolders**> fields:

Field	Requirement	Description
irdNumber	Optional	Joint account holder IRD number
dateOfBirth	Optional	Joint account holder date of birth
name	Optional	Joint account holder name
phone	Optional	Joint account holder phone number
email	Optional	Joint account holder email address
country	Optional	Joint account holder country. ISO 3166 alpha-2 standard country code.

<**incomeInformation**> fields:

Field	Requirement	Description
incomeType	Optional	This will automatically be calculated to 'PIE'. No need to supply a value.
grossAmount	Required	Total income (loss). The taxable income or loss for the investors. Include a zero-rated investor.
deductedAmount	Optional	Net tax paid. Total of net tax position for the investor with a PIR greater than zero.
rate	Optional	Latest notified investor rate used by MRP for the income year. Must be one of the following values: • 0 • 10.5 • 17.5 • 28 **NOTE:** If rate is omitted from payload it will be assumed rate is 0.
rateChanged	Optional	If there has been a rate change, the information for each rate needs to be identified so that any shortfall relating to that income can be assessed. If there was no change then this field can be omitted, on an investor basis.
unitsAtYearEnd	Optional	Units held year end. The total asset value of the PIE at end of tax year.

Field	Requirement	Description
totalTaxCredits	Optional	Total of all various tax credits (FTC, IC, MAC, FDP and RWT) for an investor who had a low, mid and/or top PIR used in a final tax calculation
TaxableIncomeLowMid	Optional	Taxable income or loss for an investor who had tax calculated during the year at two or more of the rates greater than zero
netTaxPaidOnInvestorIncomeLowMid	Optional	PIE tax paid or credited for the investor who had tax calculated during the year at two or more of the rates greater than zero
totalTaxCreditOnInvestorIncomeLowMid	Optional	Total tax credits for the investor who had tax calculated during the year at two or more of the rates greater than zero. Total of the various tax credits (FTC, IC, MAC, FDP and RWT) attributed to the attribution period in which the low and/or mid PIR(s) were used in a final tax calculation.
zeroRateExitedTaxableIncome	Optional	Taxable income or loss for investors that have had zero and any other rate applied during the year
zeroRateTotalForeignTaxCredits	Optional	Total FTCs attributed to the investor who had the 0% PIR applied
zeroRateTotalOtherTaxCredits	Optional	Total of all FDP tax credits and Māori authority credits (MAC) attributed to the investor who had the 0% PIR applied
zeroRateTotalICTaxCredits	Optional	Total of all imputation credits (IC) attached to dividends attributed to the investor who had the 0% PIR applied
zeroRateTotalRWTTaxCredits	Optional	Total of all RWT credits attributed to the investor who had the 0% PIR applied

Field	Requirement	Description
zeroRateTaxPaymentExitedInvestors	Optional	If an exited investor, in a quarterly MRP, has any units/interests left at the end of the exit period, the MRP will pay the value of the units/interests as tax

3.1.1.3   Line item amendments

The amendType is used to determine how incoming amendment records should be processed. These values are not reflected in the **retrieveReturn** operation and are only used for **file/amend**. As well as specifying an amendType, a **referenceId** must be provided to target a unique certificate.

Amend type	Code	Description
Add	A	The incoming record is new
Update	U	The incoming record is an update to an existing record
Delete	D	The incoming record should delete an existing record

Line item amendments must be submitted using the CER operation with isAmended set to true and must include a valid amendReason and include amendDetails. A submissionKey must always be provided when updating (U) or deleting (D) line items, and the submissionKey must correspond to the line items you are attempting to amend. The only case in which a submissionKey is not required on a CER amendment is when the only amendType included in the payload is Add (A), or in other words, you are only adding new line items. In this case you do not need to provide a submissionKey, and instead upon successful submission you will recieve a new submissionKey that must be kept track of.

Additional certificates can be added after an ANN operation, but must be done with the following values:
- isAmended=true
- isReverseReplace=false
- amendType=A (A=add)
- submissionKey element omitted (null)

Please note that you can submit multiple CER amendments if there are line items with separate submission keys that need amending. Once all CER amendments have been successfully submitted, please submit an amended ANN operation to complete the amendment.

![Inland Revenue Te Tari Taake logo]

3.1.1.4 Periodic PIE Return (without reconciliation)

<**FileBody**> structure:

```
<r:fileRequest namespaces…>
        <rc:fileHeader> … </rc:fileHeader>
    <rc:fileBody>
            <rc:standardFields> … </rc:standardFields>
            <rc:formFields xsi:type="r:FormFieldsType">
                    <r:submissionKey>1425976960</r:submissionKey>
                    <r:includeAprilToFeb>true</r:includeAprilToFeb>
                    <r:totalInvestmentValue>1000.00</r:totalInvestmentValue>
                    <r:grossIncome>1000.00</r:grossIncome>
                    <r:deductibleExpenses>1000.00</r:deductibleExpenses>
                    <r:netLossIncome>1000.00</r:netLossIncome>
                    <r:netLossLandIncome>1000.00</r:netLossLandIncome>
                    <r:combinedLossIncome>1000.00</r:combinedLossIncome>
                    <r:formationLoss>1000.00</r:formationLoss>
                    <r:landLossBroughtForward>1000.00</r:landLossBroughtForward>
                    <r:landLossClaimed>1000.00</r:landLossClaimed>
                    <r:landLossCarryForward>1000.00</r:landLossCarryForward>
                    <r:totalIncome>1000.00</r:totalIncome>
                    <r:totalLoss>1000.00</r:totalLoss>
                    <r:incomeRetained>1000.00</r:incomeRetained>
                    <r:incomeExitedInvestors>1000.00</r:incomeExitedInvestors>
                    <r:investorExpenses>1000.00</r:investorExpenses>
                    <r:totalIncomeToAttribute>1000.00</r:totalIncomeToAttribute>
                    <r:totalLossToAttribute>1000.00</r:totalLossToAttribute>
                    <r:incomeAttributedZero>1000.00</r:incomeAttributedZero>
                    <r:incomeAttributedLow>1000.00</r:incomeAttributedLow>
                    <r:incomeAttributedMid>1000.00</r:incomeAttributedMid>
                    <r:incomeAttributedTop>1000.00</r:incomeAttributedTop>
                    <r:lossAttributedZero>1000.00</r:lossAttributedZero>
                    <r:lossAttributedLow>1000.00</r:lossAttributedLow>
                    <r:lossAttributedMid>1000.00</r:lossAttributedMid>
                    <r:lossAttributedTop>1000.00</r:lossAttributedTop>
                    <r:foreignTaxCredit>1000.00</r:foreignTaxCredit>
                    <r:otherTaxCredit>1000.00</r:otherTaxCredit>
                    <r:imputationCredit>1000.00</r:imputationCredit>
                    <r:residentWithholdingTax>1000.00</r:residentWithholdingTax>
                    <r:taxLiability>1000.00</r:taxLiability>
                    <r:taxPaymentExitedInvestors>1000.00</r:taxPaymentExitedInvestors>
                    <r:incomeAttributedNFI>1000.00</r:incomeAttributedNFI>
                    <r:taxPaidNFI>1000.00</r:taxPaidNFI>
            </rc:formFields>
        </rc:fileBody>
</r:fileRequest>
```

Field	Requirement	Description
submissionKey	Optional	This field is required on amendments and is used to determine the line items to update

Field	Requirement	Description
includeAprilToFeb	Optional	Special dispensation has been granted for monthly PIE filers to be exempt from filling in certain required return fields on their monthly returns between the months of April and February, provided they declared the entire year's value in these fields on their March return. The March return will process its validation rules based on an aggregate of figures for all the monthly returns across the entire year, not just the March return
totalInvestmentValue	Optional	Once a year—total value of the investment assets an MRP has at the end of the return period or from the statement of financial position
grossIncome	Optional	The gross income or loss of the MRP for the return period. Exclude any income or loss from a land class investment
deductibleExpenses	Optional	Expenditure incurred by the MRP during the return period, or allowable annual expenditure attributed to the period
netLossIncome	Optional	Net income or loss after deducting expenses
netLossLandIncome	Optional	If the MRP has an investment class that qualifies as a land class, the net income or loss should be recorded here. A land class loss can only be offset against land class income
combinedLossIncome	Optional	The combined income or loss amount for the different investment classes (if more than one) during the return period
formationLoss	Optional	The amount of the formation loss used
landLossBroughtForward	Optional	The land class loss carried forward to this return period
landLossClaimed	Optional	Where there is residual land income after deduction of any formation loss then land losses brought forward may be claimed

Field	Requirement	Description
landLossCarryForward	Optional	The land class loss amount to be carried forward to the next return period
totalIncome	Optional	Total taxable income of MRP for all classes for the return period
totalLoss	Optional	Total taxable loss of the MRP for all classes for the return period
incomeRetained	Optional	This is the income or loss the MRP attributes to itself, such as non-vested income or loss, reserves or hybrid benefit fund PIEs
incomeExitedInvestors	Optional	For quarterly MRPs, this is the income or loss attributed for an exit period to an investor(s)
investorExpenses	Optional	This is the adjustment for expenses less credits charged at the investor level. This could be a debit or credit. Show expenses as positive and credits as negative. If credits exceed expenses charged then enter amount as a negative
totalIncomeToAttribute	Optional	Income to attribute across the four PIRs. "Taxable income" less "Investor fees less credits for fees"
totalLossToAttribute	Optional	Loss to attribute across the four PIRs. "Taxable income" less "Investor fees less credits for fees"
incomeAttributedZero	Optional	The amount is a component of the "Total income to attribute"
incomeAttributedLow	Optional	The amount is a component of the "Total income to attribute"
incomeAttributedMid	Optional	The amount is a component of the "Total income to attribute"
incomeAttributedTop	Optional	The amount is a component of the "Total income to attribute"
lossAttributedZero	Optional	The amount is a component of the "Total loss to attribute"
lossAttributedLow	Optional	The amount is a component of the "Total loss to attribute"
lossAttributedMid	Optional	The amount is a component of the "Total loss to attribute"
lossAttributedTop	Optional	The amount is a component of the "Total loss to attribute"

Field	Requirement	Description
foreignTaxCredit	Optional	Totals used for non-zero-rated investor as part of arriving at "Tax payable or credit due"
otherTaxCredit	Optional	Totals used for non-zero-rated investor as part of arriving at "Tax payable or credit due". Include Māori authority credits
imputationCredit	Optional	Totals used for non-zero-rated investor as part of arriving at "Tax payable or credit due"
residentWithholdingTax	Optional	Totals used for non-zero-rated investor as part of arriving at "Tax payable or credit due"
taxLiability	Optional	Accumulation of all tax calculations for each investor for each investor class, including tax on income or loss retained
taxPaymentExitedInvestors	Optional	If an exited investor, in a quarterly MRP, has any units/interests left at the end of the exit period, the MRP will pay the value of the units/interests as tax. The investor is then allowed a credit in their income tax return for this payment made by the MRP
netTaxPayable	Optional	No need to supply a value. This value will automatically be calculated to taxLiability plus taxPaymentExitedInvestors. Show tax payable as positive and credit due as negative
incomeAttributedNFI	Optional	Total income of the PIE attributed to notified foreign investors
taxPaidNFI	Optional	Tax paid on NFI income. Tax calculated at the various PIRs for variable-rate PIEs on **incomeAttributedNFI**

3.2 RetrieveStatus

The retrieveStatus operation will allow the status of a given return to be queried. The request and response structures are the same for all investment income tax types.

<**retrieveFormInfoRequest**> structure:

```
<rc:retrieveFormInfoRequest
xmlns:cmn="urn:www.ird.govt.nz/GWS:types/Common.v2"
     xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
     xmlns:rc="urn:www.ird.govt.nz/GWS:types/ReturnCommon.v2"
     xsi:schemaLocation="urn:www.ird.govt.nz/GWS:types/ReturnPIEa.v1">
     <cmn:softwareProviderData>
          <cmn:softwareProvider>SoftwareProvider</cmn:softwareProvider>
          <cmn:softwarePlatform>SoftwarePlatform</cmn:softwarePlatform>
          <cmn:softwareRelease>v1</cmn:softwareRelease>
     </cmn:softwareProviderData>
     <cmn:identifier IdentifierValueType="ACCIRD">123456789</cmn:identifier>
     <cmn:accountType>PIE</cmn:accountType>
     <rc:periodEndDate>2019-03-31</rc:periodEndDate>
     <rc:majorFormType>PIE</rc:majorFormType>
     <rc:submissionKey>1425976960</rc:submissionKey>
</rc:retrieveFormInfoRequest>
```

Field	Requirement	Valid values
accountType	Required	PIE
periodEndDate	Required	The period in which a return exists or the period for which it is being submitted
majorFormType	Required	PIE
minorFormType	Optional	If supplied, will be used to filter to a single form type: • ANN (annual) • PRD (periodic)
submissionKey	Optional	Example: 1425976960

<**retrieveStatusResponse**> structure:

```
<rc:retrieveStatusResponse xmlns="urn:www.ird.govt.nz/GWS:types/ReturnCommon.v2">
     <statusMessage xmlns="urn:www.ird.govt.nz/GWS:types/Common.v2">
          <statusCode>0</statusCode>
          <errorMessage/>
     </statusMessage>
     <responseBody>
          <returnStatus>
               <status code="PRCD">Ontime-processed</status>
               <submissionKey>1425976960</submissionKey>
               <minorFormType>PRD</minorFormType>
          </returnStatus>
     </responseBody>
</rc:retrieveStatusResponse>
```

Field	Requirement	Valid values
submissionKey	Optional	Submission key, if it exists on the return. Example: 1425976960
minorFormType	Required	• ANN (annual) • PRD (periodic)

Status	Description
Default assessment	This status is displayed when the return is a default assessment
Expected	This status is displayed when the return has generated return expectation
Late-processing	This status is displayed when the return is received late and processing
Late-processed	This status is displayed when the return is processed late
Optional	This status is displayed when the return is not required to be filed, but the customer may choose to file anyway
Ontime-processing	This status is displayed when the return is received on time and processing
Ontime-processed	This status is displayed when the return is processed on time
Overdue	This status is displayed when the return is overdue
Submitted	This status is displayed when the return is submitted
Under review	This status is displayed when the return is included in audit

3.3   RetrieveReturn

The retrieveReturn operation allows for any previous submission for annual reconciliation, certificates or periodic return to be viewed.

<**retrieveFormInfoRequest**> structure:

```
<rc:retrieveFormInfoRequest xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
        xmlns:cmn="urn:www.ird.govt.nz/GWS:types/Common.v2"
        xmlns:rc="urn:www.ird.govt.nz/GWS:types/ReturnCommon.v2">
        <cmn:softwareProviderData>
                <cmn:softwareProvider>SoftwareProvider</cmn:softwareProvider>
                <cmn:softwarePlatform>SoftwarePlatform</cmn:softwarePlatform>
                <cmn:softwareRelease>v1</cmn:softwareRelease>
        </cmn:softwareProviderData>
        <cmn:identifier IdentifierValueType="ACCIRD">123452305</cmn:identifier>
        <cmn:accountType>PIE</cmn:accountType>
        <rc:periodEndDate>2019-04-30</rc:periodEndDate>
        <rc:majorFormType>PIE</rc:majorFormType>
        <rc:minorFormType>PRD</rc:minorFormType>
        <rc:submissionKey>1425976960</rc:submissionKey>
</rc:retrieveFormInfoRequest>
```

Field	Requirement	Valid values
accountType	Required	PIE
periodEndDate	Required	The period in which a return exists or the period for which it is being submitted
majorFormType	Required	PIE
minorFormType	Required	ANN, CER or PRD
submissionKey	Conditional	Example: 829927040 • ANN = Optional • CER = Required • PER = Optional

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<**retrieveReturnResponse**> structure for minorFormType ANN:

```xml
<rc:retrieveReturnResponse xmlns:cmn="urn:www.ird.govt.nz/GWS:types/Common.v2" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:r="urn:www.ird.govt.nz/GWS:types/ReturnPIEa.v1" xmlns:rc="urn:www.ird.govt.nz/GWS:types/ReturnCommon.v2"
xsi:schemaLocation="urn:www.ird.govt.nz/GWS:types/ReturnPIEa.v1 ReturnPIEa.v1.xsd">
     <cmn:statusMessage>
          <cmn:statusCode>0</cmn:statusCode>
          <cmn:errorMessage/>
     </cmn:statusMessage>
     <rc:responseBody xsi:type="r:RetrieveReturnResponseBodyType">
          <rc:standardFields>
          </rc:standardFields>
          <r:formFields>
               <r:submissionKey>1162669696</r:submissionKey>
               <r:totalCertificates>1</r:totalCertificates>
                <r:totalIncomeLoss>300.01</r:totalIncomeLoss>
                 <r:totalTaxCreditOnInvestorIncome>10.00</r:totalTaxCreditOnInvestorIncome>
                 <r:netTaxPaidOnInvestorIncome>100.00</r:netTaxPaidOnInvestorIncome>
                 <r:taxableIncomeLowMid>200.00</r:taxableIncomeLowMid>
                 <r:netTaxPaidOnInvestorIncomeLowMid>50.00</r:netTaxPaidOnInvestorIncomeLowMid>
                 <r:totalTaxCreditOnInvestorIncomeLowMid>15.00</r:totalTaxCreditOnInvestorIncomeLowMid>
<r:zeroExitedTaxableIncome>1.00</r:zeroExitedTaxableIncome>
                 <r:zeroRateTotalForeignTaxCredits>5.00</r:zeroRateTotalForeignTaxCredits>
                 <r:zeroRateTotalOtherTaxCredits>2.00</r:zeroRateTotalOtherTaxCredits>
                 <r:zeroRateTotalICTaxCredits>3.00</r:zeroRateTotalICTaxCredits>
                 <r:zeroRateTotalRWTTaxCredits>4.00</r:zeroRateTotalRWTTaxCredits>
                 <r:zeroRateTaxPaymentExitedInvestors>0.00</r:zeroRateTaxPaymentExitedInvestors>
          </r:formFields>
     </rc:responseBody>
</rc:retrieveReturnResponse>
```

<retrieveReturnResponse> structure for minorFormType CER:

```
<rc:retrieveReturnResponse xmlns:cmn="urn:www.ird.govt.nz/GWS:types/Common.v2"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:r="urn:www.ird.govt.nz/GWS:types/ReturnPIEc.v1"
xmlns:rc="urn:www.ird.govt.nz/GWS:types/ReturnCommon.v2"
xsi:schemaLocation="urn:www.ird.govt.nz/GWS:types/ReturnPIEc.v1 ReturnPIEc.v1.xsd">
    <cmn:statusMessage>
        <cmn:statusCode>0</cmn:statusCode>
        <cmn:errorMessage/>
    </cmn:statusMessage>
    <rc:responseBody xsi:type="r:RetrieveReturnResponseBodyType">
        <r:formFields>
            <r:submissionKey>888073856</r:submissionKey>
            <r:lineItems>
                <r:referenceId>05cc7107</r:referenceId>
                <r:issuerIRD>139125746</r:issuerIRD>
                <r:investorName>Doe, Jon</r:investorName>
                <r:investorIRD>132340307</r:investorIRD>
                <r:investorDOB>1981-09-13</r:investorDOB>
                <r:investorCertID>6c3079fb </r:investorCertID>
                <r:investorEmail>email@domain.com</r:investorEmail>
                <r:investorPhone>0221356587</r:investorPhone>
                <r:jointInvestor>true</r:jointInvestor>
                <r:certPeriodEndDate>2021-03-31</r:certPeriodEndDate>
                <r:contactAddress>123 Easy Street</r:contactAddress>
                <r:country>NZ</r:country>
                <r:homeCountryTaxFilerNumber>132-562-235</r:homeCountryTaxFilerNumber>
                <r:nfidtaCountry>NFIDTA</r:nfidtaCountry>
                <r:noTaxFileNumber>true</r:noTaxFileNumber>
                <r:accountHolders>
                        <rc:irdNumber>132340153</rc:irdNumber>
                        <rc:dateOfBirth>1981-09-13</rc:dateOfBirth>
                        <rc:name>Doe, Jane</rc:name>
                        <rc:address>123 Easy Street</rc:address>
                        <rc:phone>069409301</rc:phone>
                        <rc:email>email@domain.com<rc:email>
                        <r:country>NZ</r:country>
                </r:accountHolders>
                <r:incomeInformation>
                        <rc:incomeType>PIE</rc:incomeType>
                        <rc:grossAmount>300.01</rc:grossAmount>
```

```
                <rc:deductedAmount>100.00</rc:deductedAmount>
                <rc:rate>10.50</rc:rate>
                <r:rateChanged>false</r:rateChanged>
                <r:unitsAtYearEnd>2.00</r:unitsAtYearEnd>
                <r:totalTaxCredits>1.00</r:totalTaxCredits>
                <r:taxableIncomeLowMid>200.00</r:taxableIncomeLowMid>
                <r:netTaxPaidOnInvestorIncomeLowMid>50.00</r:netTaxPaidOnInvestorIncomeLowMid>
                <r:totalTaxCreditOnInvestorIncomeLowMid>15.00</r:totalTaxCreditOnInvestorIncomeLowMid>
                <r:zeroRateExitedTaxableIncome>1.00</r:zeroRateExitedTaxableIncome>
                <r:zeroRateTotalForeignTaxCredits>5.00</r:zeroRateTotalForeignTaxCredits>
                <r:zeroRateTotalOtherTaxCredits>2.00</r:zeroRateTotalOtherTaxCredits>
                <r:zeroRateTotalICTaxCredits>3.00</r:zeroRateTotalICTaxCredits>
                <r:zeroRateTotalRWTTaxCredits>4.00</r:zeroRateTotalRWTTaxCredits>
                <r:zeroRateTaxPaymentExitedInvestors>0.00</r:zeroRateTaxPaymentExitedInvestors>
            </r:incomeInformation>
        </r:lineItems>
</r:formFields>
</rc:responseBody>
</rc:retrieveReturnResponse>
```

<**retrieveReturnResponse**> structure for minorFormType PRD:

```
<rc:retrieveReturnResponse xmlns:cmn="urn:www.ird.govt.nz/GWS:types/Common.v2"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:r="urn:www.ird.govt.nz/GWS:types/ReturnPIEp.v1"
xmlns:rc="urn:www.ird.govt.nz/GWS:types/ReturnCommon.v2"
xsi:schemaLocation="urn:www.ird.govt.nz/GWS:types/ReturnPIEp.v1 ReturnPIEp.v1.xsd">
     <cmn:statusMessage>
          <cmn:statusCode>0</cmn:statusCode>
          <cmn:errorMessage/>
     </cmn:statusMessage>
     <rc:responseBody xsi:type="r:RetrieveReturnResponseBodyType">
          <rc:standardFields>
          </rc:standardFields>
          <r:formFields>
               <r:submissionKey>757722752</r:submissionKey>
               <r:includeAprilToFeb>false</r:includeAprilToFeb>
               <r:totalInvestmentValue> 525600000.01</r:totalInvestmentValue>
               <r:grossIncome>525600.02</r:grossIncome>
               <r:deductibleExpenses>525.03</r:deductibleExpenses>
               <r:netLossIncome>525600.02</r:netLossIncome>
               <r:netLossLandIncome>52.04</r:netLossLandIncome>
               <r:combinedLossIncome>525652.06</r:combinedLossIncome>
               <r:formationLoss>525.05</r:formationLoss>
               <r:landLossBroughtForward>25.06</r:landLossBroughtForward>
               <r:landLossClaimed>25.06</r:landLossClaimed>
               <r:landLossCarryForward>0.00</r:landLossCarryForward>
               <r:totalIncome>525101.97</r:totalIncome>
               <r:totalLoss>25.06</r:totalLoss>
               <r:incomeRetained>525101.97</r:incomeRetained>
               <r:incomeExitedInvestors>0.00</r:incomeExitedInvestors>
               <r:investorExpenses>254.03</r:investorExpenses>
               <r:totalIncomeToAttribute>525101.97</r:totalIncomeToAttribute>
               <r:totalLossToAttribute>763.06</r:totalLossToAttribute>
               <r:incomeAttributedZero>131275.51</r:incomeAttributedZero>
```

```
                    <r:incomeAttributedLow>131275.49</r:incomeAttributedLow>
                    <r:incomeAttributedMid>131275.48</r:incomeAttributedMid>
                    <r:incomeAttributedTop>131275.49</r:incomeAttributedTop>
                    <r:lossAttributedZero>190.77</r:lossAttributedZero>
                    <r:lossAttributedLow>190.71</r:lossAttributedLow>
                    <r:lossAttributedMid>190.72</r:lossAttributedMid>
                    <r:lossAttributedTop>190.86</r:lossAttributedTop>
                    <r:foreignTaxCredit>252.01</r:foreignTaxCredit>
                    <r:otherTaxCredit>252.03</r:otherTaxCredit>
                    <r:imputationCredit>252.04</r:imputationCredit>
                    <r:residentWithholdingTax>252.05</r:residentWithholdingTax>
                    <r:taxLiability>72470.70</r:taxLiability>
                    <r:taxPaymentExitedInvestors>7270.01</r:taxPaymentExitedInvestors>
                    <r:incomeAttributedNFI>0.00</r:incomeAttributedNFI>
                    <r:taxPaidNFI>0.00</r:taxPaidNFI>
            </r:formFields>
        </rc:responseBody>
</rc:retrieveReturnResponse>
```

4 Additional development resources

Current environment information for this service—including the end points for each environment, schemas and WSDLs—is available within the relevant Software Development Kit (SDK).

To access the SDK, do one of the following:

- Go to https://github.com/InlandRevenue and select this service
- Go to https://developerportal.ird.govt.nz and click the link to the SDK within the Gateway Service documentation (please register first).

4.1 Schemas

All schemas for the Return Service import a Common.v2.xsd which has some data types specific to Inland Revenue. This Common.v2.xsd will be used in other Gateway Services outside of the /Returns/ namespace so it must be kept up-to-date, without numerous redundant versions remaining.

The ReturnCommon.v2.xsd imports the Common.v2.xsd and creates data types to be used across all tax types and return types. ReturnCommon.v2.xsd also includes two request elements and two response elements. These requests are retrieveFormInfoRequest and retrieveFilingObligationsRequest, while the responses are retrieveFilingObligationsResponse and retrieveStatusResponse. The reason for adding root-level elements in the ReturnCommon.v2.xsd is due to the fact that these request and response structures will never change, regardless of the tax type. This allows Inland Revenue to keep a uniform request and response structure across all current and future tax types.

Importing from ReturnCommon.v2.xsd will be schemas that require more fine-grained detail. These will primarily define the request for the File operation, the response for RetrieveReturn and the response for Prepop.

See instructions at beginning of section 4 for where to find schemas for this service.

4.2   WSDLs

The Returns Gateway Service has one WSDL, which has a target namespace of
https://services.ird.govt.nz/GWS/Returns and can be found at
https://services.ird.govt.nz:4046/gateway/GWS/Returns/?singleWsdl

Note: The Production URL above will not work until you have onboarded with Inland
Revenue.

All WSDL messages follow this naming convention:

```
Return_<operation>_InputMessage or Return_<operation>_OutputMessage.

<wsdl:portType name="Return">
        <wsdl:operation name="File">
        <wsdl:operation name="Prepop">
        <wsdl:operation name="RetrieveStatus">
        <wsdl:operation name="RetrieveFilingObligations">
        <wsdl:operation name="RetrieveReturn">
<wsdl:service name="Return">
```

Portfolio Investment Entity (return submissions for ANN, CER and PRD) only supports
the following operations:

- File
- RetrieveStatus
- RetrieveReturn.

A development version of the WSDL is provided with this build pack. For easier WSDL
consumption, the <xs:any> structure has been replaced with a reference to the
corresponding element in the corresponding investment income schema. For example,
this will allow any tools that consume the WSDL to automatically pull in the data
structures from the XSD. To use this, ensure the WSDL provided by Inland Revenue is
in the same directory as Common.xsd and PIE schema (ie ReturnPIE.v1.xsd).

See beginning of section 4 for instructions on where to find WSDLs for this service.

5 Responses

The response message from the Gateway Services will always include a status code and status message. These values will describe the successes or failures of a web service call. Following the status message will be the responseBody, which will return the data for the given operation.

5.1 Generic gateway response codes

The following response codes are common to all Gateway Service calls. The operations on the Return Service all have framework security validation applied at the account level, as reflected in the code descriptions below:

Standard codes	Standard message	Description
-1	An unknown error has occurred	This error will be logged by the Gateway Services and evaluated the next business day
0		0 indicates a successful web service call. Note: 0 does not display a standard message.
1	Authentication failure	Authentication failure means the token provided is not a valid token
2	Missing authentication token(s)	No OAuth token in HTTP header
3	Unauthorised access	The logon making the call does not have access to make the request on behalf of the client
4	Unauthorised delegation	Access is not permitted for the requester to perform this operation for the submitted identifier. This code will be returned in any of these situations: • The submitted cmn:identifier has an invalid value. • The identifier type (IdentifierValueType attribute on cmn:identifier) supplied is invalid. • The AccountType supplied does not exist for that identifier. • All the values above are valid but the provided OAuth token does not have delegated access to that Customer or Account.

Standard codes	Standard message	Description
5	Unauthorised vendor	The vendor provided is not authorised to use these suite of services
7	Account type not supported	This code will be returned for queries on account types not supported in any Gateway Services web services (PIE is the only type supported here). For specific services some of the account types above may not be supported—please see the related documentation and the service-specific response codes below.
20	Unrecognised XML request	The XML submitted is not recognisable and no schema can be determined
21	XML request failed validation	The XML structure did not meet the definition laid out by the schemas published by Inland Revenue
22	Invalid payload IRD	Any IRD number submitted as a part of the payload body will have a modulus check done against it. Invalid IRD numbers that do not pass this check will get this error code.
(none)	(non xml)	In some scenarios where the request message does not have a well-formed XML structure, is not valid or does not adhere to the SOAP protocol formats, the framework will generate a parsing exception that is not wrapped in XML, nor has a response status code.
HTTP Status 429	(SOAP fault) UnAuthorised	In the event that Inland Revenue determines too many service requests are being sent, the service may respond with error HTTP 429 (Too many requests), please ensure that message retry attempts are spaced at least five seconds apart.
(none)	(SOAP fault) UnAuthorised	An unexpected technical fault has been detected. Depending on the context (eg if an online user is waiting), try the request again after at least five seconds. If the fault recurs then please contact GatewayServices@ird.govt.nz.

5.2 Generic returns response codes

The following response codes are common to all Returns Gateway Service calls:

Standard codes	Standard message	Description
100	Invalid request data	Could not extract data from XML payload
101	Unable to file return	An error has occurred while filing return. This may be due to invalid information in the specific return form fields.
102	ID/Account type not valid	The account type/ID submitted does not exist
103	No return found	No return exists on the selected filing period
104	Invalid filing period	The periodEndDate did not match a valid filing period for the account. Filing periods prior to 01/04/20 will receive this response code.
105	No filing obligations found	No valid filing obligations were found. Only used for services with filing obligations, not used for PIE.
106	Operation not available for major form type	The operation performed does not exist for the major form type submitted
107	Duplicate return	There is already a return for this period. An amendment to a return that has already been submitted must be submitted with isAmended as true.
109	Invalid Amend Reason	When amending a return there must be a valid amend reason
132	Reverse/replace can only be used for an amendment	Cannot reverse and replace a schedule without marking the payload as an amendment
140	Invalid minor form type	Invalid minor form type
140	Invalid minor form type	Invalid minor form type
144	Return being submitted	The return has been submitted and queued for processing. The return will be processed at night and should expect a day + 1 turn-around.
145	Return held for processing	The return is not visible because it is in a non-amendable error.
150	Credit transfer requests are not supported	Credit transfer requests are not supported for the form type

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5.3 Portfolio Investment Entity-specific response codes

The following response codes are specific to Portfolio Investment Entity Gateway Service calls:

Standard codes	Standard message	Description
984	Provided country code does not exist	The country code must be a value 2-digit ISO2A country code
986	No return found for supplied submission key on this period	No return found for supplied submission key on this period
987	AmendType must be provided for amend line items	AmendType must be provided for amend line items
993	Supplied Reference ID conflicts with another active record	The provided reference ID conflicts with another record's reference ID. Note that once provided, the reference ID may not be changed. This only applies to CER—not ANN or PRD.
994	Could not find associated line item for amendment operation	Could not find an associated line item for the amendment operation. Please verify the reference IDs provided. Note that line items cannot be amended once deleted.
997	Submissionkey must be provided on amendment	Submissionkey must be provided. Only required for CER amendments
998	Non-distinct reference IDs provided	If reference IDs are provided on line items, they must be unique
1001	Reverse/replace is not valid for this form type	Including Reverse/replace is not valid for this form type
1002	Certificates must exist on the return prior to submitting Annual Reconciliation	Certificates must exist on the return prior to submitting and processing the Annual Reconciliation
1003	Submissionkey must be provided on Certificates Retrieve Return	Submissionkey must be provided on Certificates Retrieve Return
1004	The provided IssuerIRD must match the account IRD number	The provided IssuerIRD must match the account IRD number
1005	The provided InvestorIRD is invalid.	The provided InvestorIRD on line item is invalid.
1006	The provided accountHolders irdNumber is invalid	The provided irdNumber on lineItem under accountHolders is invalid.
1007	The provided accountHolders country code does not exist	The country code must be a value 2-digit ISO2A country code.
1008	incomeInformation rate is invalid	incomeInformation rate must be 0, 10.5, 17.5, or 28.

Standard codes	Standard message	Description
1009	Joint account holders not present on certificate when jointInvestor boolean marked as true	Joint account holders are not present on certificate when jointInvestor boolean marked as true. Please mark jointInvestor as 'false' if joint account holders should be not be included on this certificate.
1010	Joint account holders present on certificate when jointInvestor boolean marked as false	Joint account holders present on certificate when jointInvestor boolean marked as false. Please mark jointInvestor as 'true' if joint account holders should be included on this certificate.
1011	Amendment not allowed for PIE return not originally submitted through Gateway Services	Amendment not allowed for Annual Reconciliation and Certificates on existing PIE Return with source that is not Gateway Services.
1012	Retrieve return not allowed for PIE return not originally submitted through Gateway Services	Retrieve return not allowed for Annual Reconciliation and Certificates on existing PIE Return with source that is not Gateway Services.

6   Glossary

Acronym/term	Definition
ACC, ACCID	Accident Compensation Corporation (and ID number)
ANN	Annual PIE reconciliation
API	Application Programming Interface—a set of functions and procedures that allow applications to access the data or features of another application, operating system or other service
Authentication	The process that verifies the identity of the party attempting to access Inland Revenue
Authorisation	The process of determining whether a party is entitled to perform the function or access a resource
End points	A term used to describe a web service that has been implemented
FIPS	Federal Information Processing Standard—a suite of IT standards from the US Federal Government
Gateway	Inland Revenue's web services gateway
GWS	Gateway Services—the brand name for the suite of web services that Inland Revenue is providing. The Return Service is a Gateway Service.
HTTP, HTTPS	Hyper Text Transmission Protocol (Secure)—the protocol by which web browsers and servers interact with each other. When implemented over TLS1.2 HTTP becomes HTTPS.
IAMS	Identity and Access Management—a logical component that performs authentication and authorisation. Physically it is a set of discrete hardware and software products, plug-ins and protocols. Usually implemented as separate External IAMS (XIAMS) and Internal IAMS.
IAS	Identity and Access
IP	Internet Protocol—the principal communication protocol in the Internet protocol suite for relaying datagrams across networks
IRD	Inland Revenue Department (ie IRD number)
MRP	Multi-Rate PIE
MSD	NZ Ministry of Social Development
NZBN	New Zealand Business Number
NZISM	NZ Information Security Manual—the security standards and best practices for Government agencies. Maintained by the NZ Government Communications Security Bureau (GCSB).
OAuth	An HTTPS based protocol for authorising access to a resource, currently at version 2
Payloads	This refers to the data contained within the messages that are exchanged when a web service is invoked. Messages consist of a header and a payload.

Acronym/term	Definition
PIP	Portfolio Investor Proxy
PRD	Periodic PIE return without reconciliation
Schemas	An XML schema defines the syntax of an XML document, in particular of a payload. The schema specifies what a valid payload must or can contain, as well as validating the payload.
SHA	Secure Hashing Algorithm. There is a family of them that provide different strengths. SHA-2 is currently favoured over SHA-1, which has been compromised.
SOAP	Simple Object Access Protocol—a set of standards for specifying web services. GWS uses SOAP version 1.2
SSL	Secure Sockets Layer certificates—used to establish an encrypted connection between a browser or user's computer and a service or website
START	Simplified Taxation and Revenue Technology—Inland Revenue's new core tax processing application. It is an implementation of the GenTax product from FAST Enterprises.
TLS1.2	Transport Layer Security version 1.2—the protocol that is observed between adjacent servers for encrypting the data that they exchange. Prior versions of TLS and all versions of SSL have been compromised and are superseded by TLS1.2.
URL	Universal Resource Locator—also known as a web address
WSDL	Web Service Definition Language—an XML definition of a web service interface
X.509 certificate	An international standard for encoding and describing a digital certificate. In isolation a public key is just a very large number, the X.509 certificate to which it is bound identifies whose key it is, who issued it, when it expires etc. When a counterparty's X.509 digital certificate is received, the recipient takes their public key out of it and store the key in their own keystore. The recipient can then use this key to encrypt and sign the messages that they exchange with this counterparty.
XIAMS	External IAMS—an instance of IAMS that authenticates and authorises access by external parties, for example customers, trading partners etc, as opposed to internal parties such as staff
XML	Extensible Mark-up Language—a language used to define a set of rules used for encoding documents in a format that can be read by humans and machines
XSD	XML Schema Definition—the current standard schema language for all XML data and documents

![Inland Revenue Te Tari Taake logo]

7 Change log

This table lists all changes that have been made to this build pack document since version 1.0 was released (most recent changes listed first).

Date of change	Document section	Description
14/06/2024	2.4.2, 2.4.3	Removed details of supported certificate and ciphers from this document and replaced with the link to latest Identity and Access services build pack for the most current details
21/06/21	2.4	Security section restructured – now contains sub-sections on information classification, transport layer security and certificates, ciphers, end points, and authentication and authorisation
		New information added to provide for Inland Revenue's support for TLS1.3, and deprecation of certain TLS1.2 ciphers
		Updated end point information on web service consumer identification for desktop connections (in table)
		Updated list of recommended certificate authorities
		Updated list of requirements for accepting public X.509 keys – now includes ECDSA
	1	Moved 'Mutual Transport Layer Security and certificates' section into section 2.4
		'Prerequisites' table removed and absorbed into section 2.4.2
	4	Renamed 'End points, schema and WSDLs' section to 'Additional development resources'
		Removed section with redundant reference to end points
	5.1	Added following response code: (none) (soap fault) UnAuthorised
03/05/21	5.2	Updated description for error code 144
	5.3	Removed error code 1013
	3.1.13	Added description to allow certificates after annual reconciliation
19/03/21	3.1.1.2	lineItems field updated: Number of accepted repeating elements now between 1 and 3,000 *(was previously between 1 and 5,000)*
26/08/20		Version 1 released