



Inland Revenue  
Te Tari Taake

Inland Revenue

## Build Pack: Transaction Data Service (TDS) Bulk File Feed

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## 1 Overview

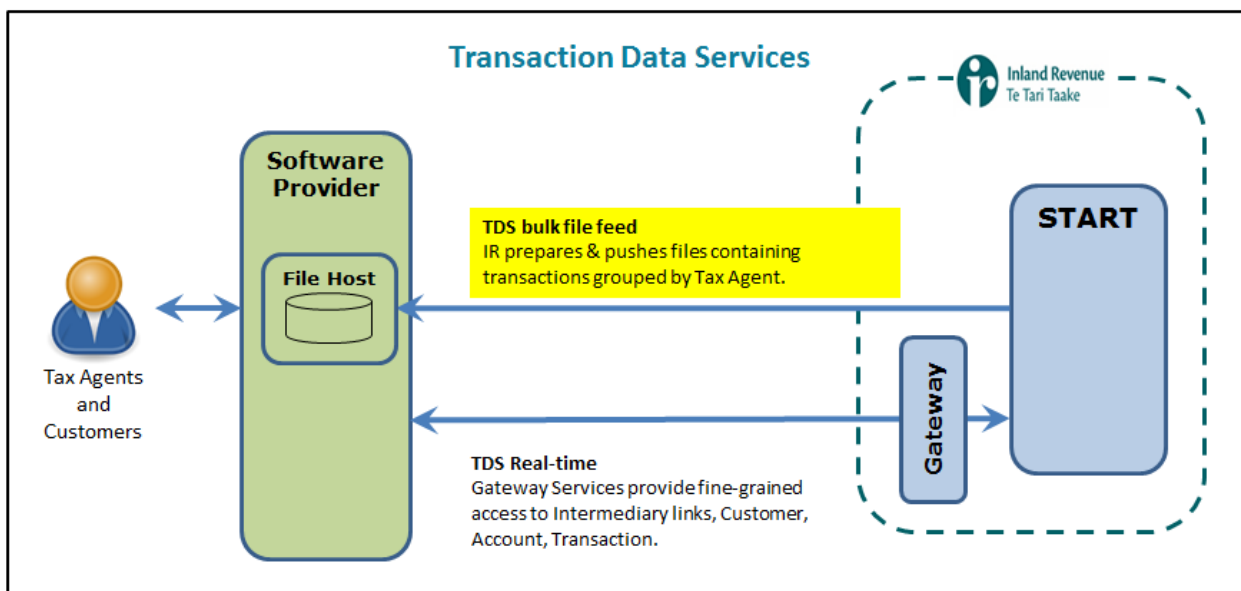
This document is provided to Software Providers to support the build and use of the Transactional Data Service (TDS) Bulk File Feed. It also describes the relationship with other build packs, architecture of the technical solution, schemas (file formats), and endpoints; it also provides sample file content.

This document is part of the suite of build packs that Software Providers need for implementing interfaces between their software and Inland Revenue TDS.

### 1.1 Solution overview

Inland Revenue (IR) has a suite of digital services available for consumption by our partners that support electronic business interactions with Inland Revenue.

Transactional Data Services (TDS) as a business service provides the two technical services shown in the figure below. This build pack focuses on the highlighted service:



**Figure 1: Transactional Data Services overview**

1. This build pack focuses on the *TDS Bulk File Feed* which is an overnight file feed that pushes transaction data to Tax Agents or Customers via the Software Provider software they utilise. It is designed to cater for the high volumes of transactional data.
2. The *TDS Real Time Technical Service* is a set of web services for querying individual customers/accounts. It is intended for occasional use when the latest information is required, or information is not available from the Bulk File Feed (e.g. a new customer). Please see the separate build packs mentioned below.

These services will only provide data for Account Types (tax types) in Inland Revenue's new system, START. See the TDS [Overview Build Pack](#) for details of which particular Account type data will be available.



## 1.2 Intended audience

This document is intended to be used by technical teams and development staff. The reader is assumed to have a reasonable 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 in Appendix A—Glossary

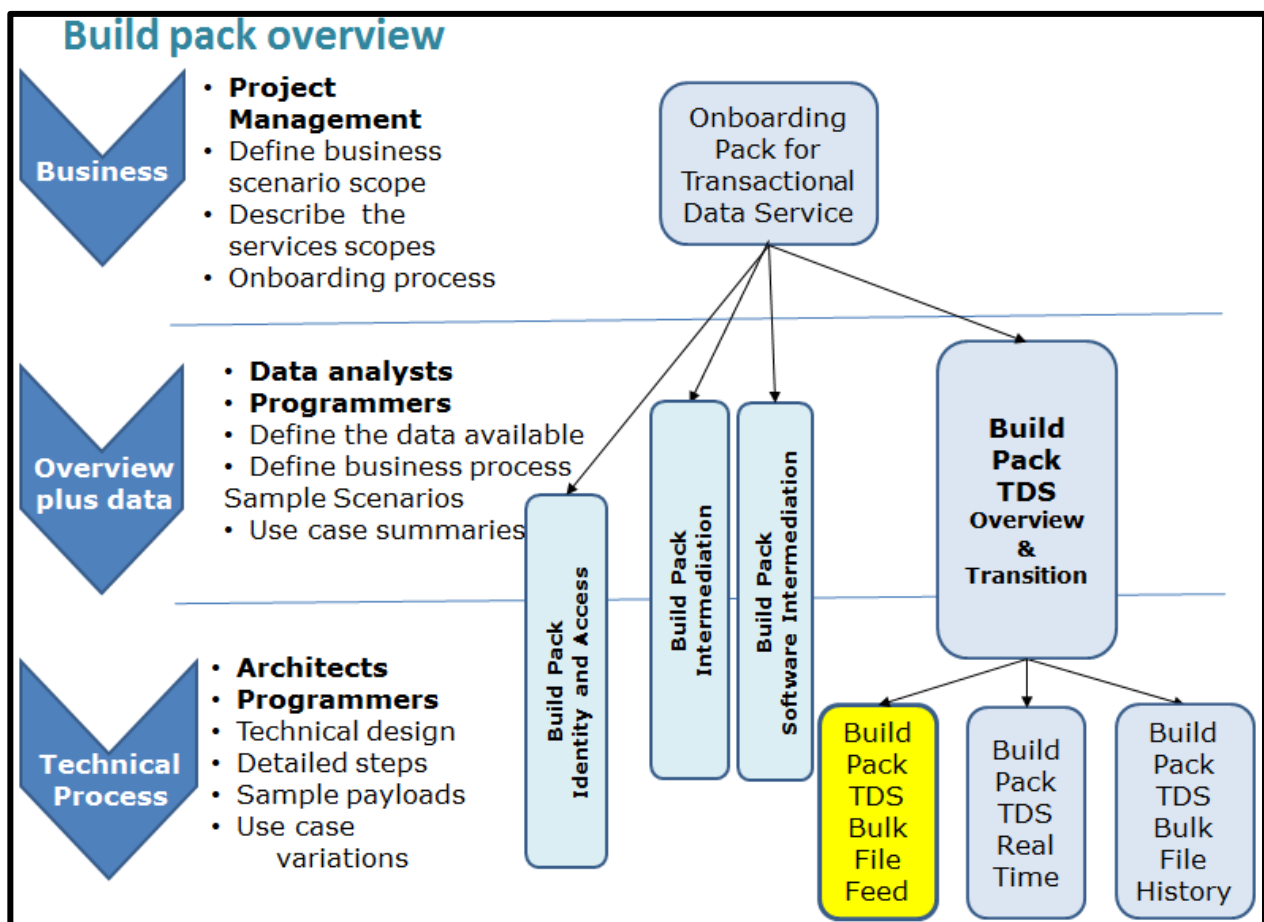
Content aimed at managerial staff or those with a purely business focus can be found in the TDS Overview build pack as mentioned below; this document covers only technical aspects.

## 1.3 Related documents

All Build Packs are available on the Inland Revenue GitHub website here:

<https://github.com/InlandRevenue/Gateway-Services/wiki>

The following diagram explains the relationships between the documents supporting the TDS solution:



**Figure 2: Onboarding and build pack structure for TDS**



Name	Description
<b>TDS – Onboarding Pack</b>	Provides the onboarding guide for consumers of the various TDS components. Gives details of prerequisites, setup requirements, testing, contact lists, etc. It is intended to get an organisation up and running using the TDS solution. This document will not be available at the link above; instead it will be sent to Software Providers when necessary. Preliminary onboarding information is included in the Overview and Transition document.
<a href="#"><u>TDS - Overview and Transition</u></a>	Describes the service components at a high level and provides an overview of the data available through TDS. Also contains information about how the component services that make up the TDS solution interact with each other.  Note: At this stage there is an Overview and Transition document to support users of the existing Tax Agent Web Services. Some later variations of that document will not include Transition information.
<b>TDS Bulk File Feed</b>	This document
<a href="#"><u>TDS Real Time Feed Build Pack</u></a>	Details the technical requirements and specifications, processes and sample payloads for the TDS Real Time Feed
<a href="#"><u>TDS Bulk File History Build Pack</u></a>	Details the technical requirements and specifications, processes and sample payloads for the TDS Bulk File History Service
<a href="#"><u>Identity and Access Build Pack</u></a>	Details the Authentication mechanisms used by Inland Revenue.
<a href="#"><u>Software Intermediation Build Pack</u></a>	Details the technical requirements and specifications for the linking of Tax Agent <b>Client Lists</b> /Customers to Software Providers to enable these links to be used by the Bulk File Feed and Bulk file History Service.
<a href="#"><u>Intermediation Build Pack</u></a>	Details the technical requirements and specifications querying the links between Tax Agents and Clients to enable these links to be used by the TDS Real Time queries.

**Table 1: Related documents**



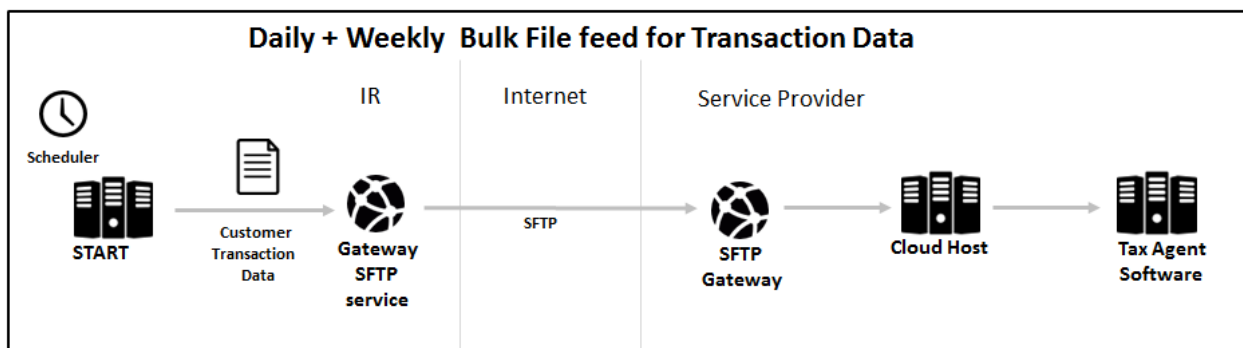
## 2 Solution design

### 2.1 Overview

The TDS Bulk File Feed is intended to be used by Software Providers where large quantities of data are required.

The TDS bulk file feed is based around a file transfer solution, where Inland Revenue will send information to the Software Provider on a daily basis at the evening of each business day. At the end of each START business day batch cycle Inland Revenue will connect to an SFTP server hosted by the service provider in order to transfer files containing the data.

In parallel an independent second weekly cycle will also provide the same information on Sunday evenings.



**Figure 3: Daily and Weekly Bulk file feeds**

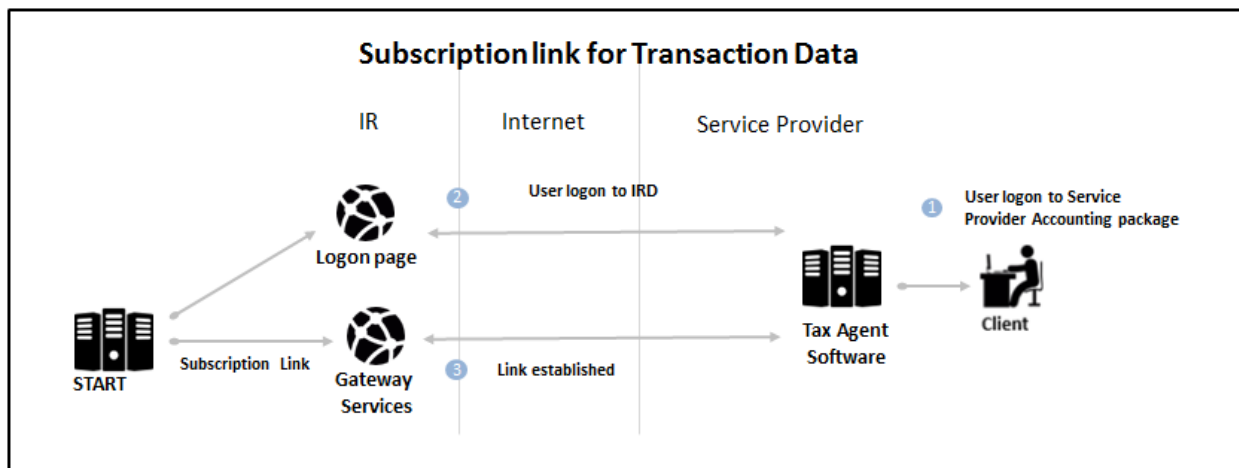
Daily and weekly files are sent from START via a gateway SFTP service to the Software Provider SFTP gateway in a central cloud location from where it can be made available to their software applications and users.

Each subscribing Software Provider will receive a number of zipped files containing information relating to Tax Agents that use their software product. The service also supports sending of Customer information related to corporate customers.

To determine which Customer information is sent to which Software Provider, a link needs to be established at Inland Revenue between the Tax Agent **Client List** or Customer and the Software Provider – this link is maintained via the Software Intermediation Service. This is a new web service that is being made available to support the TDS Bulk File Feed.

Please see the [TDS Overview Build Pack](#) for the full process and context. More details about the Software Intermediation Service and the Tax Agent to client linking are available in the [Software Intermediation Build Pack](#) and the [Intermediation Build Pack](#).

For the purposes of this document, it is assumed that these links are in place and the business context is understood.



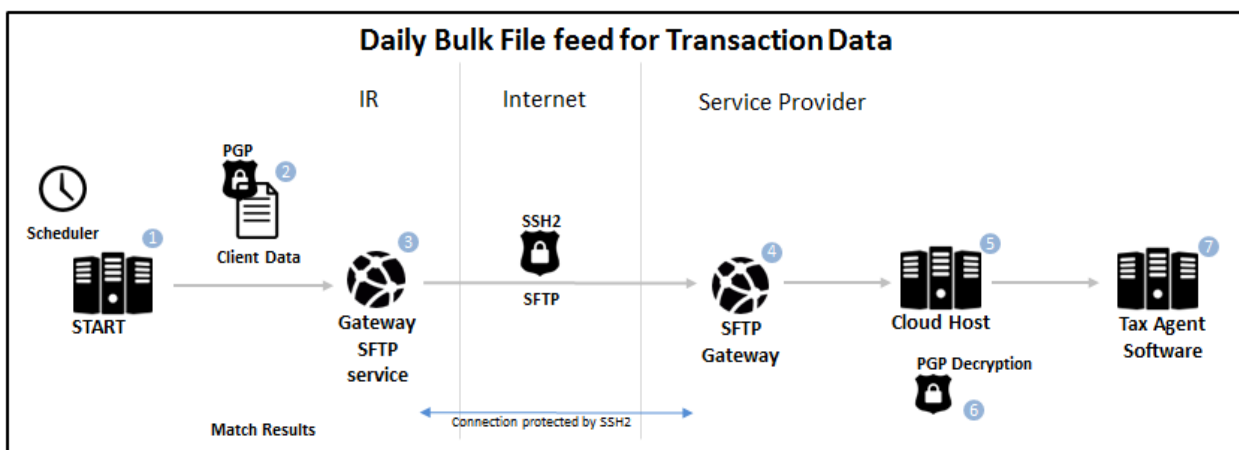
**Figure 4: Subscription link for Transaction Data**

The diagram above depicts the following steps:

1. The Tax Agent or other user logs into their Software Provider software application
2. The software will guide the user through a process of requesting daily bulk file updates (See Use case PUC210 Link Service Provider in the [TDS Overview Build Pack](#).)
3. Their myIR logon is used by the software to establish a subscription link between the Software Provider and user (Tax Agent **Client List** or direct Customer using their Software Provider software application)

## 2.2 Transfer mechanisms

### 2.2.1 Connectivity for bulk file feed



**Figure 5: Daily feed - connectivity and security**

The numbers above show the sequence in the path the bulk update files travel as described in the rest of this document.

Software Providers or parties planning to use the bulk file feed host an SFTP server that Inland Revenue will upload files to daily. SFTP 3.0 and SSH version 2.0 must be used. Details around this are exchanged during the onboarding phase described in the Onboarding Section of the [TDS Overview Build Pack](#).





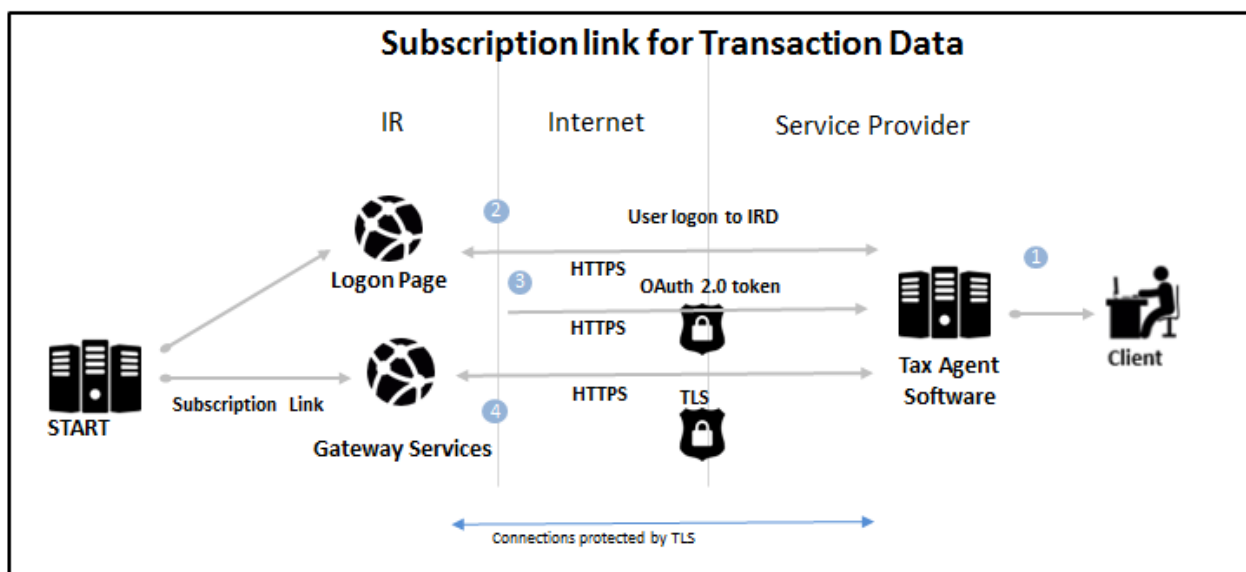
Inland Revenue will provide its public key from a key pair to be set up for access to the Software Provider SFTP site. The exact keys and their nature will be agreed during the onboarding phase. SFTP keys should be NZISM compliant and therefore ECDSA keys. Where a Software Provider cannot support this yet, RSA 2048 keys can be used. Inland Revenue expects to phase out non-EC keys around 2020.

PGP (as per RFC 4880) is used for payload encryption and signing—this is required due to the sensitivity of Customer data being shared and especially considering the large volumes involved. Inland Revenue thereby ensures that once a file is transferred to an endpoint only an authorised party can interpret it. As per PGP convention the **receiver** (Software Provider) **public** key is used by the sender (Inland Revenue) for encryption, but the **sender** (Inland Revenue) **private** key is used for signing. These PGP keys need to be 2048 bit RSA.

The PGP encryption will use Advanced Encryption Standard (AES) with a 256-bit key and the PGP hashing will be done with Secure Hash Algorithm (SHA) SHA-256. See section “**Error! Reference source not found. Error! Reference source not found.**” for operational considerations.

### 2.2.2 Connectivity for subscription

The following diagram explains the connectivity sequence protocols and security around setting up the subscription link for receiving Transaction Data:



**Figure 6: Subscription link for Bulk File Feed – connectivity and security**

The numbers above refers to the following sequence of events:

1. Tax Agent or Customer uses their Software Provider software application
2. The user is presented with a browser showing a myIR logon the user needs to complete
3. Based on the myIR logon an OAuth token is returned to the Software Provider software
4. That token and the Software Provider's connection to Inland Revenue are used to call the Software Intermediation Service to link the Tax Agent **Client List** or Customer to the Software Provider so that any transaction data updates for the Tax Agent **Client List** or Customer are sent to that Software Provider going forward.



## 2.3 File structure

The files sent via SFTP are zipped files as described below.

### 2.3.1 Multiple ZIP files

Each daily set of information will be sent as one or more ZIP files containing customer information.

The daily increment cycle and weekly increment cycle are independent but very similar. The structural description and zip file logic and control files described below applies to both, with only filenames and timing differing. There will therefore be two types of sets of files - a set for a day and a set for a week.

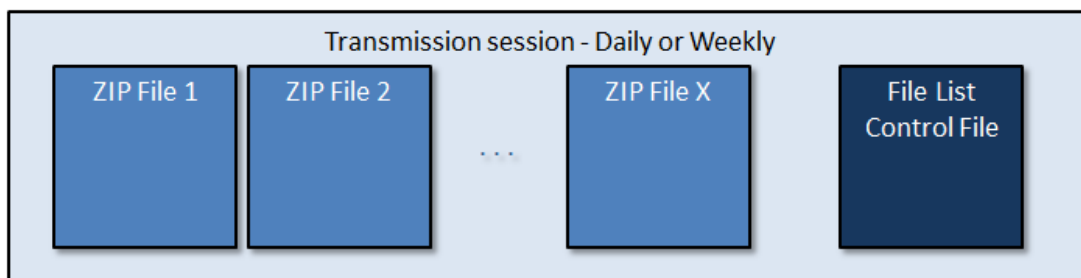
A control file will be sent containing a list of all ZIP files to be sent and the files inside each of them. The individual zip files and control files are separately and potentially concurrently transferred and no sequence can be assumed, please see section "2.6 Transfer of files – processing" on processing these files.

The control file serves various purposes:

- It needs to be used to know when the zip files received are equal to the intended list in the control file.
- Some Software Providers might use it to validate that all intended files in the zip files are present, other Software Providers might just rely on the PGP signing to ensure that.

The size of each ZIP file will be limited to 100 million transactions to optimise file transmission performance including retry overhead in case of failure. It is possible for Tax Agent **Client Lists** to be spread across multiple files.

Zip files are individually PGP signed and encrypted, allowing verification that content was received and unmodified.



**Figure 7: Zip Files plus Control file**

For every occasion data is sent, whether daily as part of the daily cycle, or weekly, as part of the weekly cycle, there will be a control file listing:

- The zip file(s)
- For each zip file a list of files inside it and how many transactions and periods are included



### 2.3.2 ZIP file structure and control file content

Each ZIP file will contain Tax Agent files and/or Customer files. The last zip file in a set will also contain a Software Intermediation link listing file. This file lists all the Tax Agent **Client Lists** with a Software Intermediary link to the Software Provider.

Each Zip file will be PGP signed using the Inland Revenue key and PGP encrypted using the Software Providers Public PGP key.

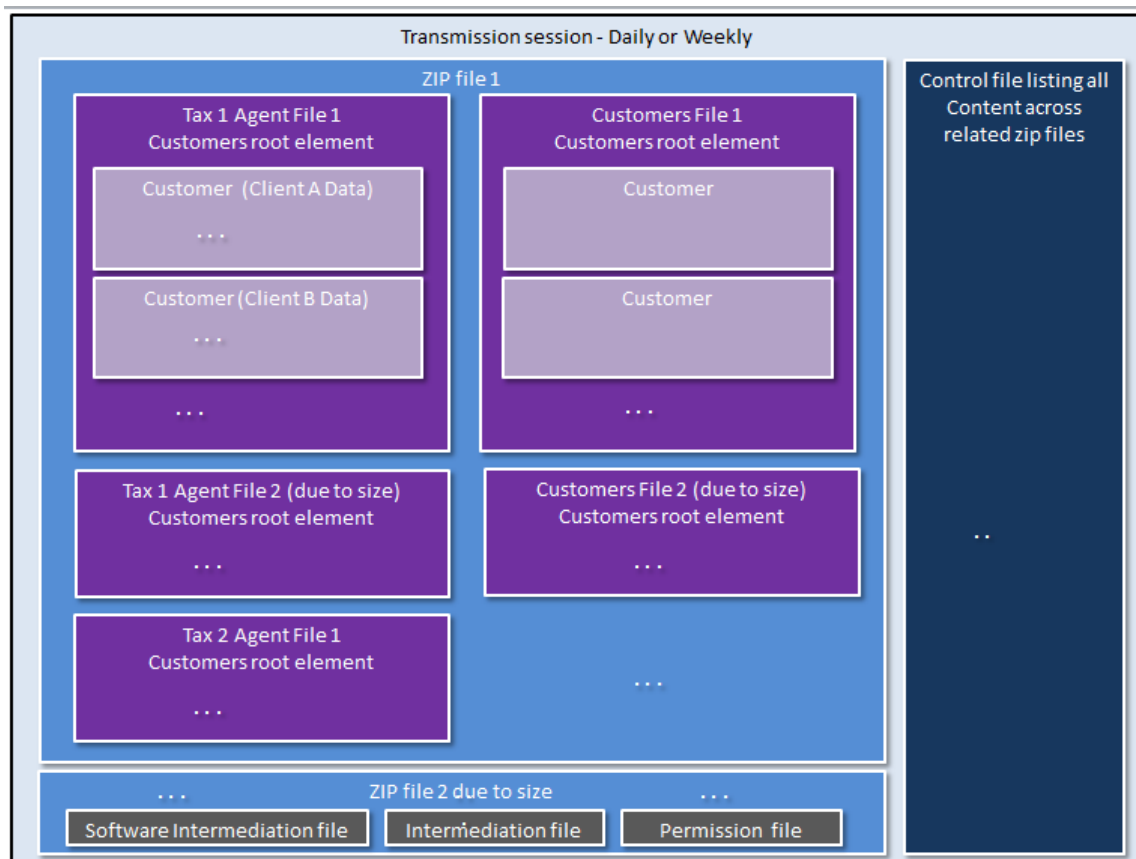
There will initially be one Tax Agent file with the data for all the clients linked to the given Tax Agent. To optimise performance (of encryption processing) the files with Tax Agent information will be split across more than one file when they go beyond 100,000 transaction level elements.

All Customer data linked to a Software Provider directly, not via a Tax Agent **Client List**, will be put into one Customer file for that Software Provider. That file will have a root Customers element representing the list of all Customers directly linked to the Software Provider. This file will be split into multiple files whenever it exceeds 100,000 transaction level elements.

All the above will initially go into one zip file, but be split across multiple zip files whenever the total size exceeds 100 million (100,000,000) transactions.

In such a scenario the data for a period of a specific Customer (or Tax Agent Client) might be split across multiple files but will not be split across multiple zip files.








Along with each set of ZIP files a control file will also be present that will contain a list of zip files and the files within the ZIP file(s). This control file will also reflect the number of transactions and periods contained in each file.



**Figure 8: Zip files and their structure and summary control file**



Sample content for a file set in the daily cycle:

 DAILY_PROVIDER_1500011035_0_201803111812129963_NZD.zip  DAILY_PROVIDER_1500011035_1_201803111812161003_NZD_CONTROL.xml
<p>Content of zip file:</p> <div>  DAILY_AGENT_IRD_123085299_0_201803111812158203_NZD.xml   DAILY_AGENT_IRD_123105028_0_201803111812156163_NZD.xml   DAILY_CUSTOMER_0_201803111812131163_NZD.xml   DAILY_PROVIDER_1500011035_0_201803111812129963_NZD_INTERMEDIATION.xml   DAILY_PROVIDER_1500011035_0_201803111812129963_NZD_SOFTWARE_INTERMEDIATION.xml </div>
<p>See following sections for samples of file content</p>
<p>Content of control file:</p> <pre> &lt;?xml version="1.0"?&gt; - &lt;FileTransfers TotalPeriodCount="133" TotalTransactionCount="2780" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema"&gt;   - &lt;FileTransfer PeriodCount="133" TransactionCount="2780"     FileName="DAILY_PROVIDER_1500011035_0_201803111812129963_NZD.zip"&gt;     &lt;ChildFile PeriodCount="22" TransactionCount="2" FileName="DAILY_CUSTOMER_0_201803111812131163_NZD.xml"/&gt;     &lt;ChildFile PeriodCount="78" TransactionCount="2750"       FileName="DAILY_AGENT_IRD_123105028_0_201803111812156163_NZD.xml"/&gt;     &lt;ChildFile PeriodCount="33" TransactionCount="28"       FileName="DAILY_AGENT_IRD_123085299_0_201803111812158203_NZD.xml"/&gt;     &lt;ChildFile PeriodCount="0" TransactionCount="0"       FileName="DAILY_PROVIDER_1500011035_0_201803111812129963_NZD_SOFTWARE_INTERMEDIATION.xml"/&gt;     &lt;ChildFile PeriodCount="0" TransactionCount="0"       FileName="DAILY_PROVIDER_1500011035_0_201803111812129963_NZD_INTERMEDIATION.xml"/&gt;     &lt;ChildFile PeriodCount="0" TransactionCount="0"       FileName="DAILY_PROVIDER_1500011035_0_201803111812129963_NZD_INTERMEDIATION.xml"/&gt;   &lt;/FileTransfer&gt; &lt;/FileTransfers&gt; </pre>

### Sample 1: File set in daily cycle for a software provider

#### 2.3.3 File structure and content and variations

Where the Software Provider linked user is not a Tax Agent or intermediary but a direct Customer, there will be a single file containing all this data across all Customers. This file will have a name along the line of DAILY\_CUSTOMER...xml or WEEKLY\_CUSTOMER...xml, filenames are covered in detail in a later section. In this document going forward this is referred to as a Customer file or a Customer XML file or direct Customer file (since these customers are not linked via Tax Agents). There will be a single such Customer file, up to the size of 100,000 transaction level elements, where after it will be split into multiple files with an incremental counter.

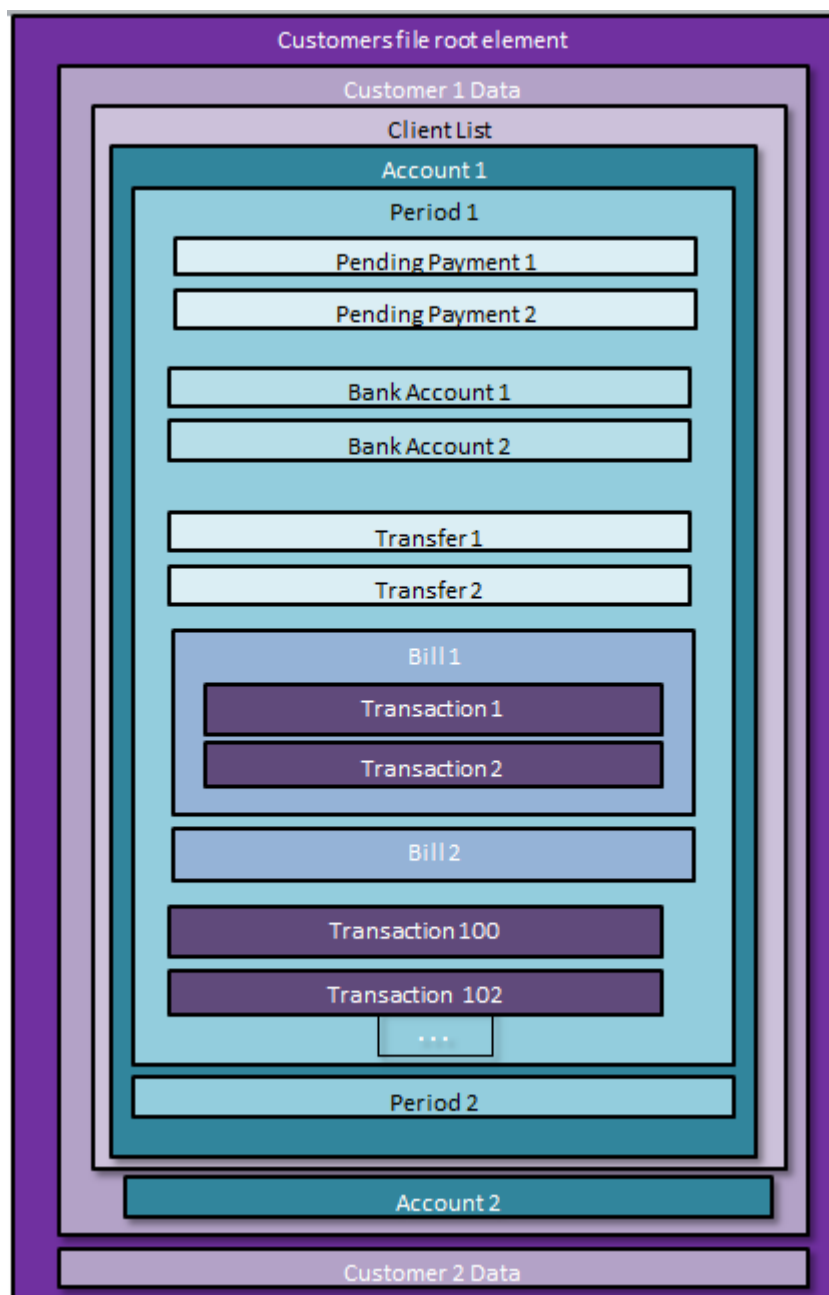
Where the Software Provider linked user is a Tax Agent or other intermediary, the file(s) provided for that Tax Agent **Client List** will contain data for one or more Clients of that Tax Agent **Client List**/intermediary. This file will have a name along the line of DAILY\_AGENT...xml or WEEKLY\_AGENT...xml, filenames are covered in detail in a later section. In this document going forward this is referred to as an Agent file or an Agent XML file. There will be one file per Tax



Agent **Client List**, up to the size of 100,000 transaction level elements, where after it will be split into multiple files.

A Tax Agent **Client List** file will only exist in the daily set if there are changes (new transactions or new links) otherwise it will be omitted (rare in production). Only currently linked agents or customer accounts will be included.

Within both file types – Tax Agent **Client List** or direct Customers, there is a root element called Customers and then for each Customer (Client or direct Customer) the data is structured as follows:



**Figure 9: File content**

Inside the customer section will be subsections for accounts (tax types). Data inside accounts will be grouped by period.



For the weekly files:

- a) All Customers linked to the Tax Agent **Client List** will be included in the Tax Agent file. All Customers linked directly to the Software Provider will be included in the Customer file.
- b) Inside each Customer element will be one or more ClientList elements. For the Customer.xml file this will be a single entity with no ID – a dummy list. For the Agent.xml file these will represent the client lists of that agency with their IRD numbers.
- c) All Accounts linked for that Tax Agent **Client List** will be included. All Accounts that exist for a directly linked Customer will be included. In both cases it will contain the data for current links at the time the file is generated, as reflected in the retrieve date.
- d) All periods in START for each of these Accounts will be included. (See [TDS Overview Build Pack](#) for more on the data available in START.) A period element will always have a short summary ("FilingPeriod", "Balance" and max "Activity" date attributes). This allows one to see whether the summary matches with data kept locally. (See [TDS Overview Build Pack](#) for details of the data available through TDS.)

Daily files contain the same structure and data but will contain only new sections or new Transactions. Customers, Client Lists, Accounts, and Periods with no new Transactions or new sections will all be completely omitted. The period summaries when included in the daily files will always be more extensive than the short period summaries in the weekly file. (See [TDS Overview Build Pack](#) for details of the data available in period summaries.)

For the daily files:

- 1) Customers linked to the Tax Agent **Client List** will be included in the Tax Agent **Client List** file only if they contain Accounts to be included. Customers linked directly to the Software Provider will be included in the Customer file only if they contain Accounts to be included. In both cases it will contain the data for current links at the time the file is generated, as reflected in the retrieve date.
- 2) Accounts will only be included if they contain periods to be included.
- 3) A period element will only be included if there are new transactions to report (which might be all transactions for a new link or initial file). The period summaries when included in the daily files will always be more extensive than the short period summaries in the weekly file.

In some cases the period element will contain billing groups and transactions:

- a) If there were new transactions since the last file it will be included. Most transactions will be inside the respective billing group. Credit transactions will be after all the billing groups
- b) If the account was recently linked to the agent, since the last bulk file feed, all transaction data for periods in START for that account will be included. In addition a History File will be included (see [History Bulk File Feed Build Pack](#))
- c) If the Software Provider subscribed for the data for the Tax Agent **Client List** in the last day and has not received a file yet this will be a full file: All transactions for periods in START for all linked accounts and clients for the Tax Agent **Client List** will be included. In addition a History File will be included (see [History Bulk File Feed Build Pack](#))
- d) Software Providers can request ad hoc manually generated files to compensate for system failures. This is requested via agreed support channels or Account Management. If this request has no start date the file will contain full sections.

To summarise: The daily increment cycle and weekly increment cycle are independent but very similar. The structural description and zip file logic and control files described elsewhere in this section apply to both, with only differences being:

	Daily cycle file	Weekly cycle files
Filenames	DAILY_...	WEEKLY_...





	Daily cycle file	Weekly cycle files
File creation	In cases where a daily differential file has no new transactions to report the file won't be created at all nor mentioned in the control file as omitted.	Files will always be created for every party linked to service provider.
Empty period summaries	No empty period summaries, only included after initial file if there are new transactions	All periods always have a summary present including in differential files
Transactions included	Apart from initial file, files will only contain new transactions since last daily cycle file	Apart from initial file, files will only contain new transactions since last weekly cycle file
Period summary detail level	Extensive – around 16 attributes	Basic – around 4 attributes
Timing	Weekdays that are business days (excluding public holidays)	Sundays (regardless of public holidays)
	There might be an additional set if there was a request for some manual files.	

**Table 3: Differences between files for daily cycle and weekly cycle**

As a result of not reflecting linked parties with unmodified data at all ambiguity might be created as to whether the agent or their clients are still linked. This ambiguity is removed by the addition of the software intermediation link listing file and intermediation link listing file that reflect current links at time of file generation. (These files also serve the purpose of making it easier for the service provider to identify linked parties that are no longer relevant and that they want to unlink from) These files will only appear in the last zip file for a file set. They will also be listed in the control file.

The filenames of all these files will indicate when the batch run generated the file – at what time did this file set provide all known transactions and intermediation links.

### 2.3.4 Overview of sample file extracts

Some samples are shown here to illustrate various points above, please refer to the sample file sets on GitHub for more detailed examples. These samples are often shortened, and refer to the full samples. Below is a short summary of the types of content illustrated by specific samples

Sample	Cycle: Daily / Weekly	XML file: Customer / Agent	Initial / Differential	Contains: Bank Accounts	Contains: Pending Payments	Contains: Transfers
<b>1</b> <a href="#">2.3.5</a>	Daily	Agent	Initial	Y		
<b>2</b> <a href="#">2.3.6</a>	Daily	Customer	Initial		Y	
<b>3</b> <a href="#">2.3.7</a>	Daily	Agent	Initial			Y
<b>4</b> <a href="#">2.3.8</a>	Daily	Agent	Differential			
<b>5</b> <a href="#">2.3.9</a>	Weekly	Agent	Initial	Y		Y



<b>6</b> <b>2.3.10</b>	Weekly	Customer	Differential	Y
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**Table 4: Overview of sample file extracts**

### 2.3.5 Sample file extract 1

An initial file of the daily type/cycle, illustrating the Agent.XML format and Bank Accounts

```
<?xml version="1.0"?>
<Customers xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" RetrievedDate="2018-03-
11T18:10:12.363">
  <Customer ID="123068629" IDType="IRD">
    <ClientList ListID="123105028" ListIDType="IRD">
      <Account Type="AIL" FilingFrequency="AILMO" ID="123-068-629-AIL002"
Commence="2017-04-01" Cease="9999-12-31" Balance="0.00" BalanceTotalForecasted="0.00"
MaxActivity="2017-09-15T08:48:18">
        <Period Balance="0.00" CreditForecasted="0.00" Credit="0.00"
OtherForecasted="0.00" Other="0.00" InterestForecasted="0.00" Interest="0.00"
Penalty="0.00" BalanceTotalForecasted="0.00" Tax="0.00" End="2017-04-30" Begin="2017-
04-01" FilingFrequency="AILMO" FilingPeriod="2017-04-30" PenaltyForecasted="0.00"
Activity="9999-12-31T00:00:00" />
        <Period Balance="0.00" CreditForecasted="0.00" Credit="0.00"
OtherForecasted="0.00" Other="0.00" InterestForecasted="0.00" Interest="0.00"
Penalty="0.00" BalanceTotalForecasted="0.00" Tax="0.00" End="2017-05-31" Begin="2017-
05-01" FilingFrequency="AILMO" FilingPeriod="2017-05-31" PenaltyForecasted="0.00"
Activity="9999-12-31T00:00:00" />
        <Period Balance="0.00" CreditForecasted="0.00" Credit="0.00"
OtherForecasted="0.00" Other="0.00" InterestForecasted="0.00" Interest="0.00"
Penalty="0.00" BalanceTotalForecasted="0.00" Tax="0.00" End="2017-06-30" Begin="2017-
06-01" FilingFrequency="AILMO" FilingPeriod="2017-06-30" PenaltyForecasted="0.00"
Activity="9999-12-31T00:00:00" />
        <Period Balance="0.00" CreditForecasted="0.00" Credit="0.00"
OtherForecasted="0.00" Other="0.00" InterestForecasted="0.00" Interest="0.00"
Penalty="0.00" BalanceTotalForecasted="0.00" Tax="0.00" End="2017-07-31" Begin="2017-
07-01" FilingFrequency="AILMO" FilingPeriod="2017-07-31" PenaltyForecasted="0.00"
Activity="9999-12-31T00:00:00" />
        <Period Balance="0.00" CreditForecasted="0.00" Credit="-200.00"
OtherForecasted="0.00" Other="0.00" InterestForecasted="0.00" Interest="0.00"
Penalty="0.00" BalanceTotalForecasted="0.00" Tax="200.00" End="2017-08-31"
Begin="2017-08-01" FilingFrequency="AILMO" FilingPeriod="2017-08-31"
PenaltyForecasted="0.00" Activity="2017-09-15T08:48:18">
          <Bill BillID="582555648" BillIDForDisplay="1" Due="2017-09-20" Tax="200.00"
Penalty="0.00" PenaltyForecasted="0.00" Interest="0.00" InterestForecasted="0.00"
Other="0.00" OtherForecasted="0.00" Credit="-200.00" CreditForecasted="0.00"
Balance="0.00" BalanceTotalForecasted="0.00">
            <Tx Amt="200.00" TransID="1821848064" Type="RTNORI" Post="2017-09-
14T07:37:01.783" Effect="2017-09-01" LinkID="0" />
          </Bill>
          <Tx Amt="-200.00" TransID="826161152" Type="PYMRTN" Post="2017-09-
15T08:48:17.983" Effect="2017-09-13" LinkID="0" />
        </Period>
        <Period Balance="0.00" CreditForecasted="0.00" Credit="0.00"
OtherForecasted="0.00" Other="0.00" InterestForecasted="0.00" Interest="0.00"
Penalty="0.00" BalanceTotalForecasted="0.00" Tax="0.00" End="2017-09-30" Begin="2017-
```





```

09-01" FilingFrequency="A1LM0" FilingPeriod="2017-09-30" PenaltyForecasted="0.00"
Activity="9999-12-31T00:00:00" />
  </Account>
  </ClientList>
  </Customer>
  <Customer ID="123041028" IDType="IRD">
    <ClientList ListID="123105028" ListIDType="IRD">
      <Account Type="DWT" FilingFrequency="DWTMO" ID="123-041-028-DWT003"
Commence="2017-04-01" Cease="9999-12-31" Balance="-149996.80"
BalanceTotalForecasted="-149996.80" MaxActivity="2017-12-22T08:28:39.167">
        <Period Balance="0.00" CreditForecasted="0.00" Credit="0.00"
OtherForecasted="0.00" Other="0.00" InterestForecasted="0.00" Interest="0.00"
Penalty="0.00" BalanceTotalForecasted="0.00" Tax="0.00" End="2017-04-30" Begin="2017-
04-01" FilingFrequency="DWTMO" FilingPeriod="2017-04-30" PenaltyForecasted="0.00"
Activity="9999-12-31T00:00:00" />
        <Period Balance="0.00" CreditForecasted="0.00" Credit="0.00"
OtherForecasted="0.00" Other="0.00" InterestForecasted="0.00" Interest="0.00"
Penalty="0.00" BalanceTotalForecasted="0.00" Tax="0.00" End="2017-05-31" Begin="2017-
05-01" FilingFrequency="DWTMO" FilingPeriod="2017-05-31" PenaltyForecasted="0.00"
Activity="9999-12-31T00:00:00" />
        <Period Balance="-149996.80" CreditForecasted="0.00" Credit="-150000.00"
OtherForecasted="0.00" Other="3.20" InterestForecasted="0.00" Interest="0.00"
Penalty="0.00" BalanceTotalForecasted="-149996.80" Tax="0.00" End="2017-06-30"
Begin="2017-06-01" FilingFrequency="DWTMO" FilingPeriod="2017-06-30"
PenaltyForecasted="0.00" Activity="2017-12-22T08:28:39.167">
          <BankAccounts>
            <BankAccount>
              <nzBankStandard xmlns="urn:www.ird.govt.nz/GWS:types/Common.v1">
                <bank>03</bank>
                <branch>0049</branch>
                <account>00001100</account>
                <suffix>0027</suffix>
              </nzBankStandard>
              <transactionID>1604470784</transactionID>
            </BankAccount>
            <BankAccount>
              <nzBankStandard xmlns="urn:www.ird.govt.nz/GWS:types/Common.v1">
                <bank>03</bank>
                <branch>0049</branch>
                <account>00001100</account>
                <suffix>0027</suffix>
              </nzBankStandard>
              <transactionID>2141341696</transactionID>
            </BankAccount>
            <BankAccount>
              <nzBankStandard xmlns="urn:www.ird.govt.nz/GWS:types/Common.v1">
                <bank>B0</bank>
                <branch>US3N</branch>
                <account>12345678</account>
                <suffix>6789</suffix>
              </nzBankStandard>
              <transactionID>1406289920</transactionID>
            </BankAccount>
            <BankAccount>
              <nzBankStandard xmlns="urn:www.ird.govt.nz/GWS:types/Common.v1">
                <bank>12</bank>
                <branch>6789</branch>
                <account>1234</account>

```



```

    <suffix>1234</suffix>
  </nzBankStandard>
  <transactionID>869419008</transactionID>
</BankAccount>
</BankAccounts>
<Bill BillID="513763328" BillIDForDisplay="1" Due="9999-12-31" Tax="0.00"
Penalty="0.00" PenaltyForecasted="0.00" Interest="0.00" InterestForecasted="0.00"
Other="3.20" OtherForecasted="0.00" Credit="-3.20" CreditForecasted="0.00"
Balance="0.00" BalanceTotalForecasted="0.00">
  <Tx Amt="0.25" TransID="530728960" Type="DSBCHQ" Post="2017-10-
16T16:03:02.813" Effect="2017-10-16" LinkID="1872906240" />
  <Tx Amt="0.75" TransID="1604470784" Type="DSBDIR" Post="2017-10-
16T16:04:49.293" Effect="2017-10-16" LinkID="1872906240" />
  <Tx Amt="0.66" TransID="1067599872" Type="DSBCHQ" Post="2017-10-
16T16:51:28.277" Effect="2017-10-16" LinkID="1872906240" />
  <Tx Amt="0.34" TransID="2141341696" Type="DSBDIR" Post="2017-10-
16T16:53:21.867" Effect="2017-10-16" LinkID="1872906240" />
  <Tx Amt="0.32" TransID="332548096" Type="DSBIBD" Post="2017-12-
22T08:02:56.547" Effect="2017-12-22" LinkID="1872906240" />
  <Tx Amt="0.32" TransID="1406289920" Type="DSBTTR" Post="2017-12-
22T08:20:50.277" Effect="2017-12-22" LinkID="1872906240" />
  <Tx Amt="0.56" TransID="869419008" Type="DSBIAC" Post="2017-12-
22T08:28:39.13" Effect="2017-12-22" LinkID="1872906240" />
</Bill>
  <Tx Amt="-150000.00" TransID="1872906240" Type="PYMACC" Post="2017-10-
16T16:02:15.743" Effect="2017-10-16" LinkID="0" />
</Period>
  <Period Balance="0.00" CreditForecasted="0.00" Credit="0.00"
OtherForecasted="0.00" Other="0.00" InterestForecasted="0.00" Interest="0.00"
Penalty="0.00" BalanceTotalForecasted="0.00" Tax="0.00" End="2017-07-31" Begin="2017-
07-01" FilingFrequency="DWTMO" FilingPeriod="2017-07-31" PenaltyForecasted="0.00"
Activity="9999-12-31T00:00:00" />
  <Period Balance="0.00" CreditForecasted="0.00" Credit="0.00"
OtherForecasted="0.00" Other="0.00" InterestForecasted="0.00" Interest="0.00"
Penalty="0.00" BalanceTotalForecasted="0.00" Tax="0.00" End="2017-08-31" Begin="2017-
08-01" FilingFrequency="DWTMO" FilingPeriod="2017-08-31" PenaltyForecasted="0.00"
Activity="9999-12-31T00:00:00" />
</Account>
</ClientList>
</Customer>
...
</Customers>

```

### Sample 2: File extract 1- Initial daily Agent.XML with Bank Accounts

Please note above

- Agent XML files have the same structure as Customer.XML files but with actual clients lists with their own IDs
- Initial daily files will include empty periods. (Differentials daily files will not include periods with no new transactions - since the last differential/initial file, nor their Accounts or Client lists or Customers).
- Period summaries in daily files(whether initial or differential) are always long format(many attributes).
- Some NZ bank accounts are illustrated above, there are other bank account types not illustrated, please see the schema and TDS Overview build pack.
- Pending payments and transfers are not illustrated, see the next two samples
- Most transactions are grouped inside bills, some are not



- See "Daily - Initial Full Extract\DAI\Y\_PROVIDER\_1500011034\_0\_201803111812171033\_NZD\DAI\Y\_AGENT\_IRD\_123105028\_0\_201803111812194993\_NZD.xml" for the full sample

### 2.3.6 Sample file extract 2

An initial file of the daily type/cycle, illustrating the Customer.XML format and pending payments

```
<?xml version="1.0"?>
<Customers xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" RetrievedDate="2018-03-
11T18:10:12.363">
  <Customer ID="123041507" IDType="IRD">
    <ClientList ListID="" ListIDType="">
      <Account Type="GST" FilingFrequency="GST2M1" ID="123-041-507-GST002"
Commence="2017-10-31" Cease="9999-12-31" Balance="0.00" BalanceTotalForecasted="0.00"
MaxActivity="1900-01-01T00:00:00">
        <Period Balance="0.00" CreditForecasted="0.00" Credit="0.00"
OtherForecasted="0.00" Other="0.00" InterestForecasted="0.00" Interest="0.00"
Penalty="0.00" BalanceTotalForecasted="0.00" Tax="0.00" End="9999-12-31" Begin="9999-
12-31" FilingFrequency="" FilingPeriod="9999-12-31" PenaltyForecasted="0.00"
Activity="1900-01-01T00:00:00" />
      </Account>
    </ClientList>
  </Customer>
  ...
  <Customer ID="123088883" IDType="IRD">
    <ClientList ListID="" ListIDType="">
      <Account Type="IPS" FilingFrequency="IPSMO" ID="123-088-883-IPS007"
Commence="2017-04-01" Cease="9999-12-31" Balance="0.00" BalanceTotalForecasted="0.00"
MaxActivity="1900-01-01T00:00:00">
        <Period Balance="0.00" CreditForecasted="0.00" Credit="0.00"
OtherForecasted="0.00" Other="0.00" InterestForecasted="0.00" Interest="0.00"
Penalty="0.00" BalanceTotalForecasted="0.00" Tax="0.00" End="2017-04-30" Begin="2017-
04-01" FilingFrequency="IPSMO" FilingPeriod="2017-04-30" PenaltyForecasted="0.00"
Activity="9999-12-31T00:00:00" />
        <Period Balance="0.00" CreditForecasted="0.00" Credit="0.00"
OtherForecasted="0.00" Other="0.00" InterestForecasted="0.00" Interest="0.00"
Penalty="0.00" BalanceTotalForecasted="0.00" Tax="0.00" End="2017-05-31" Begin="2017-
05-01" FilingFrequency="IPSMO" FilingPeriod="2017-05-31" PenaltyForecasted="0.00"
Activity="9999-12-31T00:00:00" />
        <Period Balance="0.00" CreditForecasted="0.00" Credit="0.00"
OtherForecasted="0.00" Other="0.00" InterestForecasted="0.00" Interest="0.00"
Penalty="0.00" BalanceTotalForecasted="0.00" Tax="0.00" End="2017-06-30" Begin="2017-
06-01" FilingFrequency="IPSMO" FilingPeriod="2017-06-30" PenaltyForecasted="0.00"
Activity="9999-12-31T00:00:00" />
        <Period Balance="0.00" CreditForecasted="0.00" Credit="0.00"
OtherForecasted="0.00" Other="0.00" InterestForecasted="0.00" Interest="0.00"
Penalty="0.00" BalanceTotalForecasted="0.00" Tax="0.00" End="2017-07-31" Begin="2017-
07-01" FilingFrequency="IPSMO" FilingPeriod="2017-07-31" PenaltyForecasted="0.00"
Activity="9999-12-31T00:00:00" />
        <Period Balance="0.00" CreditForecasted="0.00" Credit="0.00"
OtherForecasted="0.00" Other="0.00" InterestForecasted="0.00" Interest="0.00"
Penalty="0.00" BalanceTotalForecasted="0.00" Tax="0.00" End="2017-08-31" Begin="2017-
```



```
08-01" FilingFrequency="IPSM0" FilingPeriod="2017-08-31" PenaltyForecasted="0.00"
Activity="9999-12-31T00:00:00">
  <PendingPayments>
    <Payment PaymentID="941543424" Amt="1000.00" Pending="2017-09-15" />
  </PendingPayments>
</Period>
<Period Balance="0.00" CreditForecasted="0.00" Credit="0.00"
OtherForecasted="0.00" Other="0.00" InterestForecasted="0.00" Interest="0.00"
Penalty="0.00" BalanceTotalForecasted="0.00" Tax="0.00" End="2017-09-30" Begin="2017-
09-01" FilingFrequency="IPSM0" FilingPeriod="2017-09-30" PenaltyForecasted="0.00"
Activity="9999-12-31T00:00:00" />
</Account>
</ClientList>
</Customer>
</Customers>
```

### Sample 3: File extract 2 - Initial Daily Customer.XML with Pending Payments

Please note above

- Customer XML files have the same structure as Agent.XML files but with dummy (empty ID) client lists
- Pending Payments are illustrated here
- Transactions and bills are not illustrated here, see the previous sample.
- See "Daily - Initial Full Extract\DAILY\_PROVIDER\_1500011034\_0\_201803111812171033\_NZD\DAILY\_AGENT\_IRD\_123105028\_0\_201803111812194993\_NZD.xml" for the full sample.

### 2.3.7 Sample file extract 3

An initial file of the daily type/cycle, illustrating the Agent.XML format and Transfers

```
<?xml version="1.0"?>
<Customers xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" RetrievedDate="2018-03-
11T18:10:12.363">
  <Customer ID="501782255" IDType="IRD">
    <ClientList ListID="123105028" ListIDType="IRD">
      <Account Type="GST" FilingFrequency="GSTM0" ID="501-782-255-GST002"
Commence="2015-02-01" Cease="9999-12-31" Balance="196380.12"
BalanceTotalForecasted="196380.12" MaxActivity="2017-12-21T08:37:35.12">
        <Period Balance="63252.09" CreditForecasted="0.00" Credit="-9596.66"
OtherForecasted="0.00" Other="44347.83" InterestForecasted="0.00" Interest="9668.98"
Penalty="18831.94" BalanceTotalForecasted="63252.09" Tax="0.00" End="2015-06-30"
Begin="2015-06-15" FilingFrequency="GSTM0" FilingPeriod="2015-06-30"
PenaltyForecasted="0.00" Activity="2017-12-21T08:35:55.607">
          <Transfers>
            <Transfer TransID="13194112" OtherAccountID="48076408"
OtherAccountType="NCP" OtherPeriod="2010-11-30" />
            <Transfer TransID="21582720" OtherAccountID="48076408"
OtherAccountType="NCP" OtherPeriod="2011-02-28" />
            <Transfer TransID="29971328" OtherAccountID="48076408"
OtherAccountType="NCP" OtherPeriod="2010-12-31" />
          ...
        </Transfers>
        <Bill BillID="623062144" BillIDForDisplay="2" Due="9999-12-31" Tax="0.00"
Penalty="4895.91" PenaltyForecasted="0.00" Interest="186.63" InterestForecasted="0.00"
Other="0.00" OtherForecasted="0.00" Credit="0.00" CreditForecasted="0.00"
Balance="5082.54" BalanceTotalForecasted="5082.54">
```



```

<Tx Amt="44347.83" TransID="1222844576" Type="AUDTXD" Post="2017-05-
25T11:39:40.24" Effect="2015-07-01" LinkID="0" />
<Tx Amt="4434.78" TransID="685973664" Type="PNLSHR" Post="2017-05-
25T11:39:40.41" Effect="2017-05-25" LinkID="0" />
...
</Bill>
<Bill BillID="752806144" BillIDForDisplay="1" Due="9999-12-31" Tax="0.00"
Penalty="13936.03" PenaltyForecasted="0.00" Interest="9482.35"
InterestForecasted="0.00" Other="44347.83" OtherForecasted="0.00" Credit="-9596.66"
CreditForecasted="0.00" Balance="58169.55" BalanceTotalForecasted="58169.55">
...
<Tx Amt="190.40" TransID="1044992896" Type="CNVXFO" Post="2017-02-
04T00:08:04.033" Effect="2015-07-01" LinkID="0" />
<Tx Amt="190.40" TransID="2118734720" Type="CNVXFO" Post="2017-02-
04T00:08:04.22" Effect="2015-07-01" LinkID="0" />
<Tx Amt="190.40" TransID="21582720" Type="CNVXFO" Post="2017-02-
04T00:08:04.41" Effect="2015-07-01" LinkID="0" />
<Tx Amt="190.40" TransID="1095324544" Type="CNVXFO" Post="2017-02-
04T00:08:04.58" Effect="2015-07-01" LinkID="0" />
<Tx Amt="9.75" TransID="558453632" Type="CNVXFO" Post="2017-02-
04T00:08:04.767" Effect="2015-07-01" LinkID="0" />
...
<Tx Amt="15.00" TransID="1598641024" Type="CNVXFO" Post="2017-02-
04T00:08:14.673" Effect="2015-07-01" LinkID="0" />
<Tx Amt="19.00" TransID="1061770112" Type="CNVXFO" Post="2017-02-
04T00:08:14.813" Effect="2015-07-01" LinkID="0" />
<Tx Amt="19.00" TransID="2135511936" Type="CNVXFO" Post="2017-02-
04T00:08:14.957" Effect="2015-07-01" LinkID="0" />
<Tx Amt="19.00" TransID="13194112" Type="CNVXFO" Post="2017-02-
04T00:08:15.097" Effect="2015-07-01" LinkID="0" />
<Tx Amt="19.00" TransID="1086935936" Type="CNVXFO" Post="2017-02-
04T00:08:15.237" Effect="2015-07-01" LinkID="0" />
<Tx Amt="19.00" TransID="550065024" Type="CNVXFO" Post="2017-02-
04T00:08:15.377" Effect="2015-07-01" LinkID="0" />
<Tx Amt="19.00" TransID="1623806848" Type="CNVXFO" Post="2017-02-
04T00:08:15.517" Effect="2015-07-01" LinkID="0" />
...
<Tx Amt="50.00" TransID="1053381504" Type="CNVXFO" Post="2017-02-
04T00:08:24.643" Effect="2015-07-01" LinkID="0" />
<Tx Amt="50.00" TransID="2127123328" Type="CNVXFO" Post="2017-02-
04T00:08:24.753" Effect="2015-07-01" LinkID="0" />
<Tx Amt="268.00" TransID="29971328" Type="CNVXFO" Post="2017-02-
04T00:08:24.863" Effect="2015-07-01" LinkID="0" />
<Tx Amt="50.00" TransID="1103713152" Type="CNVXFO" Post="2017-02-
04T00:08:24.97" Effect="2015-07-01" LinkID="0" />
<Tx Amt="268.00" TransID="566842240" Type="CNVXFO" Post="2017-02-
04T00:08:25.097" Effect="2015-07-01" LinkID="0" />
<Tx Amt="489.00" TransID="1640584064" Type="CNVXFO" Post="2017-02-
04T00:08:25.22" Effect="2015-07-01" LinkID="0" />
...
</Bill>
<Tx Amt="-44347.83" TransID="1133073280" Type="CNVTXC" Post="2017-02-
04T00:07:50.33" Effect="2015-07-01" LinkID="0" />
<Tx Amt="44347.83" TransID="974123296" Type="REVTXD" Post="2017-05-
04T10:03:12.147" Effect="2015-07-01" LinkID="1133073280" />
<Tx Amt="-44347.83" TransID="101708064" Type="RTNCRD" Post="2017-05-
04T10:03:12.287" Effect="2015-07-01" LinkID="0" />

```



```

<Tx Amt="-8347.83" TransID="702408864" Type="XFRIN" Post="2017-05-
25T19:11:42.577" Effect="2016-01-01" LinkID="0" />
<Tx Amt="-1069.57" TransID="433973408" Type="XFRIN" Post="2017-05-
25T19:11:42.61" Effect="2016-02-01" LinkID="0" />
<Tx Amt="-18.38" TransID="98429088" Type="XFRIN" Post="2017-05-
25T19:12:03.827" Effect="2017-02-03" LinkID="0" />
<Tx Amt="-160.88" TransID="635300000" Type="XFRIN" Post="2017-05-
25T19:12:03.873" Effect="2017-02-03" LinkID="0" />
</Period>
<Period Balance="0.00" CreditForecasted="0.00" Credit="0.00"
OtherForecasted="0.00" Other="0.00" InterestForecasted="0.00" Interest="0.00"
Penalty="0.00" BalanceTotalForecasted="0.00" Tax="0.00" End="2015-07-31" Begin="2015-
07-01" FilingFrequency="GSTM0" FilingPeriod="2015-07-31" PenaltyForecasted="0.00"
Activity="2017-02-04T00:07:50.643">
<Bill BillID="1826547968" BillIDForDisplay="1" Due="9999-12-31" Tax="0.00"
Penalty="0.00" PenaltyForecasted="0.00" Interest="0.00" InterestForecasted="0.00"
Other="0.00" OtherForecasted="0.00" Credit="0.00" CreditForecasted="0.00"
Balance="0.00" BalanceTotalForecasted="0.00">
<Tx Amt="0.00" TransID="1669944192" Type="CNVTXD" Post="2017-02-
04T00:07:50.61" Effect="2015-08-01" LinkID="0" />
</Bill>
</Period>
<Period Balance="0.00" CreditForecasted="0.00" Credit="0.00"
OtherForecasted="0.00" Other="3762.39" InterestForecasted="0.00" Interest="0.00"
Penalty="0.00" BalanceTotalForecasted="0.00" Tax="-3762.39" End="2015-08-31"
Begin="2015-08-01" FilingFrequency="GSTM0" FilingPeriod="2015-08-31"
PenaltyForecasted="0.00" Activity="2017-02-04T00:07:55.11">
<Bill BillID="484370688" BillIDForDisplay="1" Due="9999-12-31" Tax="0.00"
Penalty="0.00" PenaltyForecasted="0.00" Interest="0.00" InterestForecasted="0.00"
Other="3762.39" OtherForecasted="0.00" Credit="-3762.39" CreditForecasted="0.00"
Balance="0.00" BalanceTotalForecasted="0.00">
<Tx Amt="0.00" TransID="1401508736" Type="CNVTXD" Post="2017-02-
04T00:07:50.847" Effect="2015-09-01" LinkID="0" />
<Tx Amt="3762.39" TransID="675894144" Type="CNVDSB" Post="2017-02-
04T00:07:55.08" Effect="2015-09-07" LinkID="0" />
</Bill>
<Tx Amt="-3762.39" TransID="327766912" Type="CNVTXC" Post="2017-02-
04T00:07:50.813" Effect="2015-09-01" LinkID="0" />
</Period>
<Period Balance="0.00" CreditForecasted="0.00" Credit="0.00"
OtherForecasted="0.00" Other="1826.74" InterestForecasted="0.00" Interest="-0.65"
Penalty="0.00" BalanceTotalForecasted="0.00" Tax="-1826.09" End="2015-09-30"
Begin="2015-09-01" FilingFrequency="GSTM0" FilingPeriod="2015-09-30"
PenaltyForecasted="0.00" Activity="2017-02-04T00:07:54.597">
<Bill BillID="1558112512" BillIDForDisplay="1" Due="9999-12-31" Tax="0.00"
Penalty="0.00" PenaltyForecasted="0.00" Interest="0.00" InterestForecasted="0.00"
Other="1826.74" OtherForecasted="0.00" Credit="-1826.74" CreditForecasted="0.00"
Balance="0.00" BalanceTotalForecasted="0.00">
<Tx Amt="0.00" TransID="1938379648" Type="CNVTXD" Post="2017-02-
04T00:07:51.097" Effect="2015-10-01" LinkID="0" />
<Tx Amt="1826.74" TransID="1883853696" Type="CNVDSB" Post="2017-02-
04T00:07:54.563" Effect="2015-11-02" LinkID="0" />
</Bill>
<Tx Amt="-1826.09" TransID="864637824" Type="CNVTXC" Post="2017-02-
04T00:07:51.063" Effect="2015-10-01" LinkID="0" />
<Tx Amt="-0.65" TransID="193549184" Type="CNVINC" Post="2017-02-
04T00:07:51.16" Effect="2015-11-02" LinkID="0" />
</Period>

```





```

    <Period Balance="0.00" CreditForecasted="0.00" Credit="0.00"
    OtherForecasted="0.00" Other="8676.49" InterestForecasted="0.00" Interest="-28.66"
    Penalty="0.00" BalanceTotalForecasted="0.00" Tax="-8647.83" End="2015-10-31"
    Begin="2015-10-01" FilingFrequency="GSTM0" FilingPeriod="2015-10-31"
    PenaltyForecasted="0.00" Activity="2017-02-04T00:07:54.753">
      <Bill BillID="1021241600" BillIDForDisplay="1" Due="9999-12-31" Tax="0.00"
      Penalty="0.00" PenaltyForecasted="0.00" Interest="0.00" InterestForecasted="0.00"
      Other="8676.49" OtherForecasted="0.00" Credit="-8676.49" CreditForecasted="0.00"
      Balance="0.00" BalanceTotalForecasted="0.00">
        <Tx Amt="0.00" TransID="730420096" Type="CNVTXD" Post="2017-02-
        04T00:07:51.36" Effect="2015-11-01" LinkID="0" />
        <Tx Amt="8676.49" TransID="139023232" Type="CNVDSB" Post="2017-02-
        04T00:07:54.72" Effect="2016-01-13" LinkID="0" />
      </Bill>
      <Tx Amt="-8647.83" TransID="1267291008" Type="CNVTXC" Post="2017-02-
      04T00:07:51.33" Effect="2015-11-01" LinkID="0" />
      <Tx Amt="-28.66" TransID="1804161920" Type="CNVINC" Post="2017-02-
      04T00:07:51.41" Effect="2016-01-13" LinkID="0" />
    </Period>
    ...
  </Account>
</ClientList>
</Customer>
</Customers>

```

#### Sample 4: File extract 3 - Initial daily Agent.XML with Transfers

Please note above

- Transfers will be included for any period they exist if that period is included. The same goes for Pending Payments and Bank Accounts but is not illustrated here.
- For the full sample please see "Daily - Initial Full Extract\DAAILY\_PROVIDER\_1500011035\_0\_201803111812129963\_NZD\DAAILY\_AGENT\_IRD\_123105028\_0\_201803111812156163\_NZD.xml"

### 2.3.8 Sample file extract 4

A differential file of the daily type/cycle, illustrating the Agent.XML format

```

<?xml version="1.0"?>
<Customers xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" RetrievedDate="2018-03-
11T18:16:44.473">
  <Customer ID="501782255" IDType="IRD">
    <ClientList ListID="123105028" ListIDType="IRD">
      <Account Type="GST" FilingFrequency="GSTM0" ID="501-782-255-GST002"
      Commence="2015-02-01" Cease="9999-12-31" Balance="196411.10"
      BalanceTotalForecasted="196411.10" MaxActivity="2018-03-11T18:16:25.467">
        <Period Balance="280.98" CreditForecasted="0.00" Credit="0.00"
        OtherForecasted="0.00" Other="0.00" InterestForecasted="0.00" Interest="6.13"
        Penalty="274.85" BalanceTotalForecasted="280.98" Tax="0.00" End="2017-08-31"
        Begin="2017-08-01" FilingFrequency="GSTM0" FilingPeriod="2017-08-31"
        PenaltyForecasted="0.00" Activity="2018-03-11T18:16:25.467">
          <Bill BillID="1763553920" BillIDForDisplay="1" Due="9999-12-31" Tax="0.00"
          Penalty="262.60" PenaltyForecasted="0.00" Interest="6.13" InterestForecasted="0.00"
          Other="0.00" OtherForecasted="0.00" Credit="0.00" CreditForecasted="0.00"
          Balance="268.73" BalanceTotalForecasted="268.73">

```



```

    <Tx Amt="12.60" TransID="1144145920" Type="PNLLTP" Post="2018-03-
11T18:16:24.5" Effect="2017-12-20" LinkID="0" />
    <Tx Amt="6.13" TransID="607275008" Type="INTSTD" Post="2018-03-
11T18:16:25.003" Effect="2018-03-11" LinkID="0" />
  </Bill>
  <Bill BillID="1904691200" BillIDForDisplay="2" Due="2018-03-11" Tax="0.00"
Penalty="12.25" PenaltyForecasted="0.00" Interest="0.00" InterestForecasted="0.00"
Other="0.00" OtherForecasted="0.00" Credit="0.00" CreditForecasted="0.00"
Balance="12.25" BalanceTotalForecasted="12.25">
    <Tx Amt="12.25" TransID="70404096" Type="PNLWSD" Post="2018-03-
11T18:16:21" Effect="2018-03-11" LinkID="0" />
  </Bill>
</Period>
</Account>
</ClientList>
</Customer>
</Customers>
  
```

### Sample 5: File extract 4 - Differential Daily Agent.XML

Please note above

- In the daily file cycle, after initial files, differential daily files will only contain
  - For new Transactions, the new Transactions and their Periods, Accounts, Client lists and Customers
  - For newly linked parties – whether newly linked to agent in client list, or whether newly linked to software provider through software intermediation - full data similar to initial files, in other words, initial files for that subset.
  - if neither of these exist the corresponding agent file will not be created
- Period summaries in daily files are always long format.
- Transfers and Bank Accounts are not illustrated here but look the same as in Initial files
- Periods and their content are only included in weekly differential files if there are new transactions
- Sample file at "Daily - Differential  
Change\DAILY\_PROVIDER\_1500011034\_0\_201803111816531163\_NZD\DAILY\_AGENT\_IRD\_123105028\_0\_201803111816531773\_NZD.xml"

### 2.3.9 Sample file extract 5

An initial file of the weekly type/cycle, illustrating the Agent.XML format and Bank Accounts and Transfers

```

<?xml version="1.0"?>
<Customers xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" RetrievedDate="2018-03-
11T18:14:05.307">
  <Customer ID="123068629" IDType="IRD">
    <ClientList ListID="123105028" ListIDType="IRD">
      <Account Type="AIL" FilingFrequency="AILMO" ID="123-068-629-AIL002"
Commence="2017-04-01" Cease="9999-12-31" Balance="0.00" BalanceTotalForecasted="0.00"
MaxActivity="2017-09-15T08:48:18">
        <Period Balance="0.00" BalanceTotalForecasted="0.00" FilingPeriod="2017-04-30"
Activity="9999-12-31T00:00:00" />
        <Period Balance="0.00" BalanceTotalForecasted="0.00" FilingPeriod="2017-05-31"
Activity="9999-12-31T00:00:00" />
        <Period Balance="0.00" BalanceTotalForecasted="0.00" FilingPeriod="2017-06-30"
Activity="9999-12-31T00:00:00" />
      </Account>
    </ClientList>
  </Customer>
</Customers>
  
```





```

    <Period Balance="0.00" BalanceTotalForecasted="0.00" FilingPeriod="2017-07-31"
    Activity="9999-12-31T00:00:00" />
    <Period Balance="0.00" BalanceTotalForecasted="0.00" FilingPeriod="2017-08-31"
    Activity="2017-09-15T08:48:18">
      <Bill BillID="582555648" BillIDForDisplay="1" Due="2017-09-20" Tax="200.00"
      Penalty="0.00" PenaltyForecasted="0.00" Interest="0.00" InterestForecasted="0.00"
      Other="0.00" OtherForecasted="0.00" Credit="-200.00" CreditForecasted="0.00"
      Balance="0.00" BalanceTotalForecasted="0.00">
        <Tx Amt="200.00" TransID="1821848064" Type="RTNORI" Post="2017-09-
        14T07:37:01.783" Effect="2017-09-01" LinkID="0" />
      </Bill>
      <Tx Amt="-200.00" TransID="826161152" Type="PYMRTN" Post="2017-09-
      15T08:48:17.983" Effect="2017-09-13" LinkID="0" />
    </Period>
    <Period Balance="0.00" BalanceTotalForecasted="0.00" FilingPeriod="2017-09-30"
    Activity="9999-12-31T00:00:00" />
  </Account>
</ClientList>
</Customer>
...
  <Customer ID="123041028" IDType="IRD">
    <ClientList ListID="123105028" ListIDType="IRD">
      <Account Type="DWT" FilingFrequency="DWTMO" ID="123-041-028-DWT003"
      Commence="2017-04-01" Cease="9999-12-31" Balance="-149996.80"
      BalanceTotalForecasted="-149996.80" MaxActivity="2017-12-22T08:28:39.167">
        <Period Balance="0.00" BalanceTotalForecasted="0.00" FilingPeriod="2017-04-30"
        Activity="9999-12-31T00:00:00" />
        <Period Balance="0.00" BalanceTotalForecasted="0.00" FilingPeriod="2017-05-31"
        Activity="9999-12-31T00:00:00" />
        <Period Balance="-149996.80" BalanceTotalForecasted="-149996.80"
        FilingPeriod="2017-06-30" Activity="2017-12-22T08:28:39.167">
          <BankAccounts>
            <BankAccount>
              <nzBankStandard xmlns="urn:www.ird.govt.nz/GWS:types/Common.v1">
                <bank>03</bank>
                <branch>0049</branch>
                <account>00001100</account>
                <suffix>0027</suffix>
              </nzBankStandard>
              <transactionID>1604470784</transactionID>
            </BankAccount>
            <BankAccount>
              <nzBankStandard xmlns="urn:www.ird.govt.nz/GWS:types/Common.v1">
                <bank>03</bank>
                <branch>0049</branch>
                <account>00001100</account>
                <suffix>0027</suffix>
              </nzBankStandard>
              <transactionID>2141341696</transactionID>
            </BankAccount>
            <BankAccount>
              <nzBankStandard xmlns="urn:www.ird.govt.nz/GWS:types/Common.v1">
                <bank>B0</bank>
                <branch>US3N</branch>
                <account>12345678</account>
                <suffix>6789</suffix>
              </nzBankStandard>
              <transactionID>1406289920</transactionID>
            </BankAccount>
          </BankAccounts>
        </Period>
      </Account>
    </ClientList>
  </Customer>

```



```

    </BankAccount>
    <BankAccount>
      <nzBankStandard xmlns="urn:www.ird.govt.nz/GWS:types/Common.v1">
        <bank>12</bank>
        <branch>6789</branch>
        <account>1234</account>
        <suffix>1234</suffix>
      </nzBankStandard>
      <transactionID>869419008</transactionID>
    </BankAccount>
  </BankAccounts>
  <Bill BillID="513763328" BillIDForDisplay="1" Due="9999-12-31" Tax="0.00"
  Penalty="0.00" PenaltyForecasted="0.00" Interest="0.00" InterestForecasted="0.00"
  Other="3.20" OtherForecasted="0.00" Credit="-3.20" CreditForecasted="0.00"
  Balance="0.00" BalanceTotalForecasted="0.00">
    <Tx Amt="0.25" TransID="530728960" Type="DSBCHQ" Post="2017-10-
    16T16:03:02.813" Effect="2017-10-16" LinkID="1872906240" />
    <Tx Amt="0.75" TransID="1604470784" Type="DSBDIR" Post="2017-10-
    16T16:04:49.293" Effect="2017-10-16" LinkID="1872906240" />
    <Tx Amt="0.66" TransID="1067599872" Type="DSBCHQ" Post="2017-10-
    16T16:51:28.277" Effect="2017-10-16" LinkID="1872906240" />
    <Tx Amt="0.34" TransID="2141341696" Type="DSBDIR" Post="2017-10-
    16T16:53:21.867" Effect="2017-10-16" LinkID="1872906240" />
    <Tx Amt="0.32" TransID="332548096" Type="DSBIBD" Post="2017-12-
    22T08:02:56.547" Effect="2017-12-22" LinkID="1872906240" />
    <Tx Amt="0.32" TransID="1406289920" Type="DSBTTR" Post="2017-12-
    22T08:20:50.277" Effect="2017-12-22" LinkID="1872906240" />
    <Tx Amt="0.56" TransID="869419008" Type="DSBIAC" Post="2017-12-
    22T08:28:39.13" Effect="2017-12-22" LinkID="1872906240" />
  </Bill>
  <Tx Amt="-150000.00" TransID="1872906240" Type="PYMACC" Post="2017-10-
  16T16:02:15.743" Effect="2017-10-16" LinkID="0" />
</Period>
<Period Balance="0.00" BalanceTotalForecasted="0.00" FilingPeriod="2017-07-31"
Activity="9999-12-31T00:00:00" />
<Period Balance="0.00" BalanceTotalForecasted="0.00" FilingPeriod="2017-08-31"
Activity="9999-12-31T00:00:00" />
</Account>
</ClientList>
</Customer>
...
<Customer ID="501782255" IDType="IRD">
  <ClientList ListID="123105028" ListIDType="IRD">
    <Account Type="GST" FilingFrequency="GSTM0" ID="501-782-255-GST002"
    Commence="2015-02-01" Cease="9999-12-31" Balance="196380.12"
    BalanceTotalForecasted="196380.12" MaxActivity="2017-12-21T08:37:35.12">
    ...

    <Period Balance="0.00" BalanceTotalForecasted="0.00" FilingPeriod="2015-12-31"
    Activity="2017-05-25T19:12:03.86">
      <Transfers>
        <Transfer TransID="1172170912" OtherAccountID="501782255"
        OtherAccountType="GST" OtherPeriod="2015-06-30" />
        <Transfer TransID="1239279776" OtherAccountID="501782255"
        OtherAccountType="GST" OtherPeriod="2015-06-30" />
      </Transfers>
      <Bill BillID="48163072" BillIDForDisplay="1" Due="9999-12-31" Tax="0.00"
      Penalty="0.00" PenaltyForecasted="0.00" Interest="0.00" InterestForecasted="0.00"

```



```

Other="0.00" OtherForecasted="0.00" Credit="0.00" CreditForecasted="0.00"
Balance="0.00" BalanceTotalForecasted="0.00">
  <Tx Amt="0.00" TransID="2072597376" Type="CNVTXD" Post="2017-02-
04T00:07:51.83" Effect="2016-01-01" LinkID="0" />
  </Bill>
  <Tx Amt="-8347.83" TransID="998855552" Type="CNVTXC" Post="2017-02-
04T00:07:51.8" Effect="2016-01-01" LinkID="0" />
  <Tx Amt="-160.88" TransID="126440320" Type="CNVINC" Post="2017-02-
04T00:07:51.893" Effect="2017-02-03" LinkID="0" />
  <Tx Amt="-0.37" TransID="1866978112" Type="INTCRD" Post="2017-02-
04T19:55:55.267" Effect="2017-02-04" LinkID="0" />
  ...
  <Tx Amt="-38.66" TransID="1373497504" Type="INTCRD" Post="2017-05-
25T19:11:19.64" Effect="2017-05-25" LinkID="0" />
  <Tx Amt="38.42" TransID="836626592" Type="REVIND" Post="2017-05-
25T19:11:19.67" Effect="2017-05-24" LinkID="1831501984" />
  <Tx Amt="8347.83" TransID="1239279776" Type="XFROUT" Post="2017-05-
25T19:11:42.547" Effect="2016-01-01" LinkID="998855552" />
  <Tx Amt="38.66" TransID="1507715232" Type="REVIND" Post="2017-05-
25T19:11:42.67" Effect="2017-05-25" LinkID="1373497504" />
  <Tx Amt="160.88" TransID="1172170912" Type="XFROUT" Post="2017-05-
25T19:12:03.843" Effect="2017-02-03" LinkID="126440320" />
  </Period>
  <Period Balance="0.00" BalanceTotalForecasted="0.00" FilingPeriod="2016-01-31"
Activity="2017-05-25T19:12:03.78">
  ...
  </Period>
</Account>
</ClientList>
</Customer>
</Customers>

```

### Sample 6: File extract 5- Initial weekly Agent.XML with Bank Accounts and Transfers

Please note above:

- The general structure for weekly files are the same as for daily files
- The only fundamental structural different of weekly files from daily files is that Period summaries in weekly files are **shorter** than in daily files (only 4 attributes), this is the same for their initial or differential versions.
- One type of Bank Account and Transfers are illustrated here, look the same as in daily files.
- Pending Payments are not illustrated here but look the same as in Daily files
- Full sample at "Weekly - Initial Full  
Extract\WEEKLY\_PROVIDER\_1500011034\_0\_201803111814444453\_NZD\WEEKLY\_AGEN  
T\_IRD\_123105028\_0\_201803111814469953\_NZD.xml"

#### 2.3.10 Sample file extract 6

A differential file of the weekly type/cycle, illustrating the Customer.XML format and Pending Payments:

```

<?xml version="1.0"?>
<Customers xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" RetrievedDate="2018-03-
11T18:16:44.473">
  <Customer ID="123041507" IDType="IRD">
    <ClientList ListID="" ListIDType="">

```



```

    <Account Type="GST" FilingFrequency="GST2M1" ID="123-041-507-GST002"
Commence="2017-10-31" Cease="9999-12-31" Balance="0.00" BalanceTotalForecasted="0.00"
MaxActivity="1900-01-01T00:00:00">
      <Period Balance="0.00" BalanceTotalForecasted="0.00" FilingPeriod="9999-12-31"
Activity="1900-01-01T00:00:00" />
    </Account>
  </ClientList>
</Customer>
<Customer ID="123068629" IDType="IRD">
  <ClientList ListID="" ListIDType="">
    <Account Type="AIL" FilingFrequency="AILMO" ID="123-068-629-AIL002"
Commence="2017-04-01" Cease="9999-12-31" Balance="0.00" BalanceTotalForecasted="0.00"
MaxActivity="2017-09-15T08:48:18">
      <Period Balance="0.00" BalanceTotalForecasted="0.00" FilingPeriod="2017-04-30"
Activity="9999-12-31T00:00:00" />
      <Period Balance="0.00" BalanceTotalForecasted="0.00" FilingPeriod="2017-05-31"
Activity="9999-12-31T00:00:00" />
      <Period Balance="0.00" BalanceTotalForecasted="0.00" FilingPeriod="2017-06-30"
Activity="9999-12-31T00:00:00" />
      <Period Balance="0.00" BalanceTotalForecasted="0.00" FilingPeriod="2017-07-31"
Activity="9999-12-31T00:00:00" />
      <Period Balance="0.00" BalanceTotalForecasted="0.00" FilingPeriod="2017-08-31"
Activity="2017-09-15T08:48:18" />
      <Period Balance="0.00" BalanceTotalForecasted="0.00" FilingPeriod="2017-09-30"
Activity="9999-12-31T00:00:00" />
    </Account>
  </ClientList>
</Customer>
<Customer ID="123085299" IDType="IRD">
  <ClientList ListID="" ListIDType="">
    <Account Type="DWT" FilingFrequency="DWTMO" ID="123-085-299-DWT006"
Commence="2017-01-01" Cease="9999-12-31" Balance="0.00" BalanceTotalForecasted="0.00"
MaxActivity="1900-01-01T00:00:00">
      <Period Balance="0.00" BalanceTotalForecasted="0.00" FilingPeriod="2017-01-31"
Activity="9999-12-31T00:00:00" />
      <Period Balance="0.00" BalanceTotalForecasted="0.00" FilingPeriod="2017-02-28"
Activity="9999-12-31T00:00:00" />
      <Period Balance="0.00" BalanceTotalForecasted="0.00" FilingPeriod="2017-03-31"
Activity="9999-12-31T00:00:00" />
      <Period Balance="0.00" BalanceTotalForecasted="0.00" FilingPeriod="2017-04-30"
Activity="9999-12-31T00:00:00" />
      <Period Balance="0.00" BalanceTotalForecasted="0.00" FilingPeriod="2017-05-31"
Activity="9999-12-31T00:00:00" />
      <Period Balance="0.00" BalanceTotalForecasted="0.00" FilingPeriod="2017-06-30"
Activity="9999-12-31T00:00:00" />
      <Period Balance="0.00" BalanceTotalForecasted="0.00" FilingPeriod="2017-07-31"
Activity="9999-12-31T00:00:00" />
      <Period Balance="0.00" BalanceTotalForecasted="0.00" FilingPeriod="2017-08-31"
Activity="9999-12-31T00:00:00" />
      <Period Balance="0.00" BalanceTotalForecasted="0.00" FilingPeriod="2017-09-30"
Activity="9999-12-31T00:00:00" />
    </Account>
  </ClientList>
</Customer>
<Customer ID="123088883" IDType="IRD">
  <ClientList ListID="" ListIDType="">

```



```

    <Account Type="IPS" FilingFrequency="IPSM0" ID="123-088-883-IPS007"
Commence="2017-04-01" Cease="9999-12-31" Balance="0.00" BalanceTotalForecasted="0.00"
MaxActivity="1900-01-01T00:00:00">
      <Period Balance="0.00" BalanceTotalForecasted="0.00" FilingPeriod="2017-04-30"
Activity="9999-12-31T00:00:00" />
      <Period Balance="0.00" BalanceTotalForecasted="0.00" FilingPeriod="2017-05-31"
Activity="9999-12-31T00:00:00" />
      <Period Balance="0.00" BalanceTotalForecasted="0.00" FilingPeriod="2017-06-30"
Activity="9999-12-31T00:00:00" />
      <Period Balance="0.00" BalanceTotalForecasted="0.00" FilingPeriod="2017-07-31"
Activity="9999-12-31T00:00:00" />
      <Period Balance="0.00" BalanceTotalForecasted="0.00" FilingPeriod="2017-08-31"
Activity="9999-12-31T00:00:00">
        <PendingPayments>
          <Payment PaymentID="941543424" Amt="1000.00" Pending="2017-09-15" />
        </PendingPayments>
      </Period>
      <Period Balance="0.00" BalanceTotalForecasted="0.00" FilingPeriod="2017-09-30"
Activity="9999-12-31T00:00:00" />
    </Account>
  </ClientList>
</Customer>
</Customers>

```

### Sample 7: File extract 6: differential weekly Customer.XML with pending payments

Please note above

- The structure of differential weekly files is the same as for initial weekly files. This structure is the same as for daily files with the exception that period summaries are shorter:
- Period summaries in weekly files are shorter than in daily files with only 4 attributes (due to the next point)
- Period summaries in weekly files are always provided, even if there are no new transactions – this is different from daily files where they are only provided if they contain new transactions.
- Pending Payments are illustrated here and are always included if they exist
- Bank Accounts and Transfers, not illustrated here, are only included in weekly differential files if there are new transactions (due to the above point)
- Full sample file is at "Weekly - Differential Change\WEEKLY\_PROVIDER\_1500011035\_0\_201803111817085683\_NZD\WEEKLY\_CUSTOMER\_0\_201803111817086463\_NZD.xml"

## 2.4 Content of Software Intermediation link file

The last zip file will also contain the Software intermediation link file.

This file summarises:

- Which Tax Agent **Client List**s are linked to this Software Provider at the time the file was generated, reflected in the timestamp in the filename.
- Which Customers Accounts are linked directly to this Software Provider

Sample file:

DAILY\_PROVIDER\_1500011035\_0\_201803111812129963\_NZD\_SOFTWARE\_INTERMEDIATION.xml



```
<?xml version="1.0"?>
- <SoftwareIntermediationSummary RetrievedDate="2018-03-11T18:10:12.363"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <CustomerLink AccountType="GST" IDType="IRD" ID="123041507"/>
  <CustomerLink AccountType="AIL" IDType="IRD" ID="123068629"/>
  <CustomerLink AccountType="DWT" IDType="IRD" ID="123085299"/>
  <CustomerLink AccountType="IPS" IDType="IRD" ID="123088883"/>
  <AgentLink IDType="IRD" ID="123085299"/>
  <AgentLink IDType="IRD" ID="123105028"/>
</SoftwareIntermediationSummary>
```

### Sample 8: Software Intermediation file

## 2.5 Content of Intermediation link file

The last zip file will also contain the intermediation link file.

This file summarises:

- Which Customer Accounts are linked to each of the Client **Lists linked** to the Software Provider at the time of the timestamp reflected in the filename.

Samples file:

DAILY\_PROVIDER\_1500011035\_0\_201803111812129963\_NZD\_INTERMEDIATION.xml

```
<?xml version="1.0"?>
- <IntermediationSummary RetrievedDate="2018-03-11T18:10:12.363"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  - <AgencyLinks IDType="IRD" ID="123085299">
    - <ClientList IDType="IRD" ID="123085299">
      <Link IDType="IRD" ID="123041028" AccountType="AIP"/>
      <Link IDType="IRD" ID="123074475" AccountType="FBT"/>
      <Link IDType="IRD" ID="123088883" AccountType="NRT"/>
      <Link IDType="IRD" ID="123090365" AccountType="RLT"/>
      <Link IDType="IRD" ID="123092139" AccountType="GST"/>
    </ClientList>
    - <ClientList IDType="IRD" ID="123085302">
      <Link IDType="IRD" ID="123051157" AccountType="RLT"/>
    </ClientList>
  </AgencyLinks>
  - <AgencyLinks IDType="IRD" ID="123105028">
    - <ClientList IDType="IRD" ID="123105028">
      <Link IDType="IRD" ID="123024052" AccountType="IPS"/>
      <Link IDType="IRD" ID="123025148" AccountType="GST"/>
      <Link IDType="IRD" ID="123041028" AccountType="DWT"/>
      <Link IDType="IRD" ID="123051106" AccountType="FBT"/>
      <Link IDType="IRD" ID="123065883" AccountType="GMD"/>
      <Link IDType="IRD" ID="123068629" AccountType="AIL"/>
      <Link IDType="IRD" ID="123088522" AccountType="GST"/>
      <Link IDType="IRD" ID="123088883" AccountType="DWT"/>
      <Link IDType="IRD" ID="501782255" AccountType="GST"/>
    </ClientList>
  </AgencyLinks>
</IntermediationSummary>
```





---

## Sample 9: Intermediation file

### 2.6 Transfer of files – processing

On a daily basis the following is expected to happen on the site of the Software Provider SFTP endpoint/server.

1. Receive control file to help calculate processing
2. Receive one or multiple zip files from Inland Revenue
3. Validate file list in the control file matches the list of zip files received, if not, escalate to Inland Revenue support.
4. Process each zip file:
  - a. Decrypt zip file using agreed PGP key
  - b. Verify zip file signature using agreed PGP key – if signature does not match then request Inland Revenue to resend
  - c. For each file in the zip
    - i. Process content of the file
    - ii. Make content available to relevant data stores for users

### 2.7 Verifying there are no gaps between files

Max-activity timestamps on period summaries are a way to see that a period has changed since the last processed file.

Balances are similar but there are cases where there could be new transactions but no balance change, so Inland Revenue includes the max activity date in period summaries.

The primary purpose is to build trust that there are no gaps in transactions provided.

This mechanism will help highlight, together with balances changing, if an update file has been skipped – the max-activity timestamp would be different from what was stored previously but there would be no new transactions.

The intention with the max-activity timestamp on a period is to store it and compare the stored value against the next file processed the following day.

If daily files are always processed then for any period where there is a new max-activity timestamp there will also be new transactions.

If the next file is processed and the max-activity timestamp has changed since the previously processed file, but there are no new transactions, it implies there is an update file in between that was not processed.

Max-activity timestamps on period summaries are NOT a way to validate the timestamp of the last transaction in the period.

### 2.8 File naming conventions

#### 2.8.1 Name of control file listing zip files

This pattern is almost the same as for the individual zip files which is defined next below.

Format:

<frequency>\_PROVIDER\_<software\_platform\_id>\_<filesequence>\_<timestamp>\_<environment>\_CONTROL.xml



For example: DAILY\_PROVIDER\_1500011034\_1\_201710100921548813\_NZD\_CONTROL.xml

Part	Format	Possible values
<b>&lt;Frequency&gt;</b>	See list:	DAILY WEEKLY MANUAL
<b>PROVIDER</b>	Constant	PROVIDER
<b>&lt;software_platform_id&gt;</b>	ID allocated to Software Platform by Inland Revenue during the onboarding process	Numeric 10 digit, should remain constant for a given Software Provider
<b>&lt;file sequence&gt;</b>	Next number after zip file count – last number in sequence	1 2 3 ...
<b>&lt;timestamp&gt;</b>	Time file was created yyyyMMddHHmmssffff	e.g. 201710100921548813
<b>&lt;environment&gt;</b>	Inland Revenue environment	Three letters Production: PRD  Partner testing: XZS XZT  Internal IRD testing: NZT, NZD

**Table 5 : Naming of Control File**

### 2.8.2 ZIP files names

This pattern is almost the same as the pattern for the control files - which is defined above.

Format:

<Frequency>\_PROVIDER\_<software\_platform\_id>\_<file sequence>\_<timestamp>\_<environment>.zip

For example: DAILY\_PROVIDER\_1500011034\_0\_201710100921548813\_NZD.zip

Part	Format	Possible values
<b>&lt;Frequency&gt;</b>	See list:	DAILY WEEKLY MANUAL
<b>PROVIDER</b>	Constant	PROVIDER
<b>&lt;software_platform_id&gt;</b>	ID allocated to Software Platform by Inland Revenue during the onboarding process	Numeric 10 digit, should remain constant for a given Software Provider
<b>&lt;file sequence&gt;</b>	Start with 0 for first zipfile of day and increments if there are more than one	0 1 2 ...
<b>&lt;timestamp&gt;</b>	Time file was created yyyyMMddHHmmssffff	e.g. 201710100921548813





Part	Format	Possible values
<b>&lt;environment&gt;</b>	Inland Revenue environment	Three letters Production: PRD  Partner testing: XZS XZT  Internal IRD testing: NZT, NZD

**Table 6 : Naming of Zip files**

The following file types are embedded in the zip files:

### 2.8.2.1 Tax agent files

Format:

<Frequency>\_AGENT\_<tax\_agent\_id>\_<file sequence>\_<timestamp>\_<environment>.xml

For example: DAILY\_AGENT\_IRD\_000000000\_0\_201710111532239353\_NZD.xml

Part	Format	Possible values
<b>&lt;Frequency&gt;</b>	See list:	DAILY WEEKLY MANUAL
<b>AGENT</b>	Constant denoting this file is sent for all the Customers data linked to a Tax Agent or other Intermediary	AGENT
<b>&lt;tax_agent_id&gt;</b>	ID allocated to Tax Agent by Inland Revenue	Numeric 9 digit IRD Number of Agent
<b>&lt;file sequence&gt;</b>	Start with 0 for first zipfile of day and increments if there are more than one	0 1 2 ...
<b>&lt;timestamp&gt;</b>	Time file was created <u>yyyyMMddHHmmssffff</u>	e.g. <u>201710100921548813</u>
<b>&lt;environment&gt;</b>	Inland Revenue environment	Three letters Production: PRD  Partner testing: XZS XZT  Internal IRD testing: NZT NZD – Inland Revenue Production

**Table 7 : Naming of Tax Agent files**

### 2.8.2.2 Customer file



Format:

<Frequency>\_CUSTOMER\_<file sequence>\_<timestamp>\_<environment>.xml

For example: DAILY\_CUSTOMER\_000000000\_0\_201710111532239353\_NZD.xml

Part	Format	Possible values
<Frequency>	See list:	DAILY WEEKLY MANUAL
CUSTOMER	Constant denoting this file is sent for all the Customers data linked to the Software Provider	CUSTOMER
<file sequence>	Start with 0 for first zipfile of day and increments if there are more than one	0 1 2 ...
<timestamp>	Time file was created <u>yyyyMMddHHmmssffff</u>	e.g. <u>201710100921548813</u>
<environment>	Inland Revenue environment	Three letters Production: PRD  Partner testing: XZS XZT  Internal IRD testing: NZT NZD

**Table 8 : Naming of Customer Files**

### 2.8.2.3 Software Intermediation file

This pattern is almost the same as the pattern for the control and zip files - which is defined above.

Format:

<Frequency>\_PROVIDER\_<software\_platform\_id>\_<filesequence>\_<timestamp>\_<environment>\_SOFTWARE\_INTERMEDIATION.xml

For example:

DAILY\_PROVIDER\_1500011034\_0\_201710100921548813\_NZD\_SOFTWARE\_INTERMEDIATION.xml

Part	Format	Possible values
<Frequency>	See list:	DAILY WEEKLY MANUAL
PROVIDER	Constant	PROVIDER
<software_platform_id>	ID allocated to Software Platform by Inland Revenue during the onboarding process	Numeric 10 digit, should remain constant for a given Software Provider



Part	Format	Possible values
<b>&lt;file sequence&gt;</b>	Start with 0 for first zipfile of day and increments if there are more than one	0 1 2 ...
<b>&lt;timestamp&gt;</b>	Time file was created <u>yyyyMMddHHmmssffff</u>	e.g. <u>201710100921548813</u>
<b>&lt;environment&gt;</b>	Inland Revenue environment	Three letters Production: PRD  Partner testing: XZS XZT  Internal IRD testing: NZT NZD
<b>SOFTWARE_INTERMEDIATION</b> Constant    SOFTWARE_INTERMEDIATION		

**Table 9 : Naming of Software Intermediation Files**

#### 2.8.2.4 Intermediation file

This pattern is almost the same as the pattern for the control and zip files - which is defined above.

Format:

<Frequency>\_PROVIDER\_<software\_platform\_id>\_<filesequence>\_<timestamp>\_<environment>\_INTERMEDIATION.xml

For example: DAILY\_PROVIDER\_1500011034\_0\_201710100921548813\_NZD\_INTERMEDIATION.xml

Part	Format	Possible values
<b>&lt;Frequency&gt;</b>	See list:	DAILY WEEKLY MANUAL
<b>PROVIDER</b>	Constant	PROVIDER
<b>&lt;software_platform_id&gt;</b>	ID allocated to Software Platform by Inland Revenue during the onboarding process	Numeric 10 digit, should remain constant for a given Software Provider
<b>&lt;file sequence&gt;</b>	Start with 0 for first zipfile of day and increments if there are more than one	0 1 2 ...
<b>&lt;timestamp&gt;</b>	Time file was created <u>yyyyMMddHHmmssffff</u>	e.g. <u>201710100921548813</u>



Part	Format	Possible values
<b>&lt;environment&gt;</b>	Inland Revenue environment	Three letters Production: PRD  Partner testing: XZS XZT  Internal IRD testing: NZT, NZD
<b>INTERMEDIATION</b>	Constant	INTERMEDIATION

**Table 10 : Naming of Intermediation Files**

## 2.9 Sample payloads, file sets and schemas

Please see the GitHub folder for latest schemas and samples.

<https://github.com/InlandRevenue/Gateway-Services/tree/master/Service%20-%20TDS%20-%20Transaction%20Data%20Services/TDS%20Bulk%20File%20Feed>

There are also folders for older versions till deployed.

This file has no incoming requests so request examples are not required.



---

## 3 Operational considerations

### 3.1 File transfer management

Please refer to section "2.6 Transfer of files – processing" above for an explanation of validating that file transfers are complete.

### 3.2 Disaster recovery and infrastructure failure

In some potential rare scenarios, like infrastructure failure, where a Software Provider platform fails to receive or process data, or loses data, support departments can discuss and agree to address through ad hoc manually generated files from Inland Revenue support. These files will be sent over the same SFTP channel when generated. Contact the support department over channels agreed during the onboarding process, or the account manager.

### 3.3 Certificate management

Inland Revenue prefers all keys exchanged to expire after two years, at most 5. This ensures older cryptography combinations are phased out due to rotation. Please see section "2.2.1" on expectations for service provider keys provided to Inland Revenue in [TDS Bulk File Feed Build Pack](#).



## 4 Onboarding

To onboard a Software Provider to consume the Bulk File Feed service, the following information is required. For further information see the Onboarding section of the [TDS Overview Build Pack](#).

### 4.1 Information required from Software Provider by Inland Revenue

- Destination SFTP server (that Inland Revenue will connect to in order to deliver files) details including:
  - SFTP server domain name (if available)
  - SFTP server IP Addresses (these addresses will be whitelisted by IR)
  - Destination directory details
- SSH keys for connecting to the SFTP server.
- PGP public certificate to enable payload encryption.

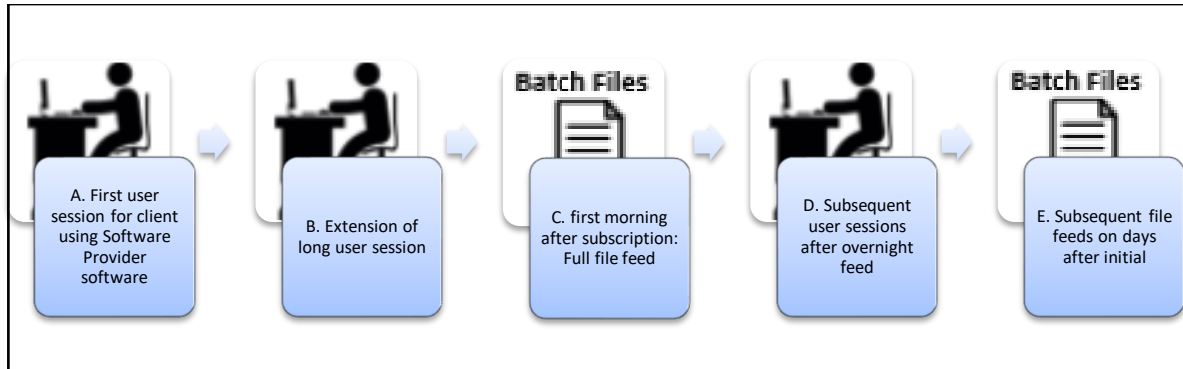
### 4.2 Inland Revenue information

- All Inland Revenue's SFTP connections will originate from the following IP addresses, the Service providers SFTP server(s) need(s) to allow requests from here:
  - Test Systems 222.153.203.33
  - Production 222.153.202.39
  - Production(DR) 222.153.202.33
- Test data information
  - See examples above and future build packs
  - During onboarding the test manager will communicate test slices and other test data aspects, probably partially through an agreed Partner Test Plan.
- The PGP public key to verify the signing done by Inland Revenue will be provided during onboarding.

## 5 Use cases and process

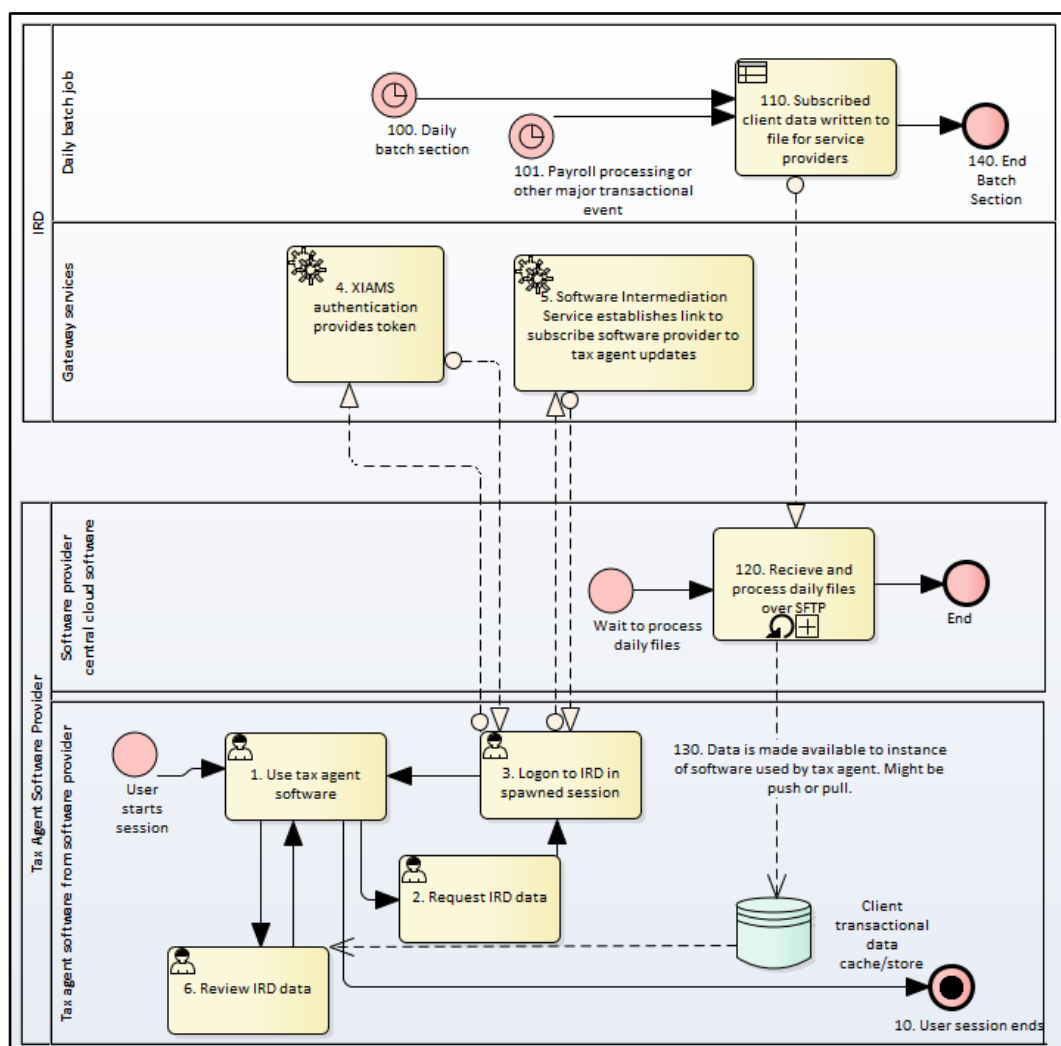
### 5.1 Process model

See the [TDS Overview Build Pack](#) for a more detailed explanation of the stages of TDS usage, summarised below.



**Figure 10: Overall process**

Below is the overall process model for using the Bulk File Feed:



**Figure 11: Process model for TDS Bulk File Feed**

**A. Software Provider and Inland Revenue setup SFTP path and exchange credentials during onboarding**

1. Prerequisite (not shown on process model). See the Onboarding section of the [TDS Overview Build Pack](#) for more information

**B. User session for agent or customer using Software Provider software**

1. User signs onto Tax Agent software from Software Provider
2. User decides to request access to some Inland Revenue tax data
3. Software Provider software lets user starts an Inland Revenue session by logging onto the Inland Revenue site
4. As part of this logon sequence an OAuth token is returned for use in further calls to the Gateway Services. See the [Identity and Access Build Pack](#) for more information
5. The Software Provider software then uses this token in a call to the Software Intermediation Gateway service to request a link between the Software Provider software and the user (whether Tax Agent **Client List** or direct Customer). This link subscribes the Software Provider to getting updates on transaction data for this user.
10. User might do other work in the Tax Agent software and eventually logs off and terminates session

**C. First morning after subscription: Full file feed**

100. During the Inland Revenue overnight processing runs where most updates are done, towards the end of the sequence a job kicks off to update subscribed Software Provider software with the bulk feed.
101. As a variation of this process, it might be kicked off after a large processing event like payment runs. Outside such events very little information change occurs to justify a file feed or real time call.
110. For each Tax Agent **Client List** or Customer that is subscribed to by Software Providers their data gets written to file and aggregated to send to the Software Providers. This would include history data provided once.
120. The Software Provider receives the files on the SFTP location registered for that purpose. The SFTP session uses exchanged keys to establish the underlying SSH connection. The Software Provider might wait for the last summary file to be sent to trigger processing of the content. The zipped content is unzipped and the individual files are decoded using the exchanged PGP keys.
130. The content of each file is made available to the respective client. This might involve any combination of central storage, remote push to remote servers or desktops, being made available for query by remote server or desktop software
140. The job section in the daily batch run terminates.

**D. Subsequent user sessions after overnight feed**

1. User signs onto Software Provider software
2. User can access tax data from store updated through overnight feed
3. If user needs to drill down into some data or needs to access changes to data since evening then real time Gateway Services can be called – see separate build pack for [TDS Real Time Feed](#).
10. User might do other work in the software and eventually logs off and terminates session

**E. Subsequent file feeds on days after initial**



## 5.2 Use case overview

As described in the [TDS Overview Build Pack](#) the transaction data services provide data into an overall business process that is controlled by the Software Provider software and its user. The use cases therein are diverse (and therefore neither exhaustive nor meant to represent every combination of process that the Customer or Software Provider may execute) and described in broad terms in the overview build pack– the business/organisational use cases denoted below as yellow or blue.

The corresponding technical steps inside them to integrate with Inland Revenue are defined as systems use cases with corresponding numbers SUC<nnn> below. The grey ones are covered in other [Build Packs](#) as identified in the Table below. Below this diagram is a table explaining this further.

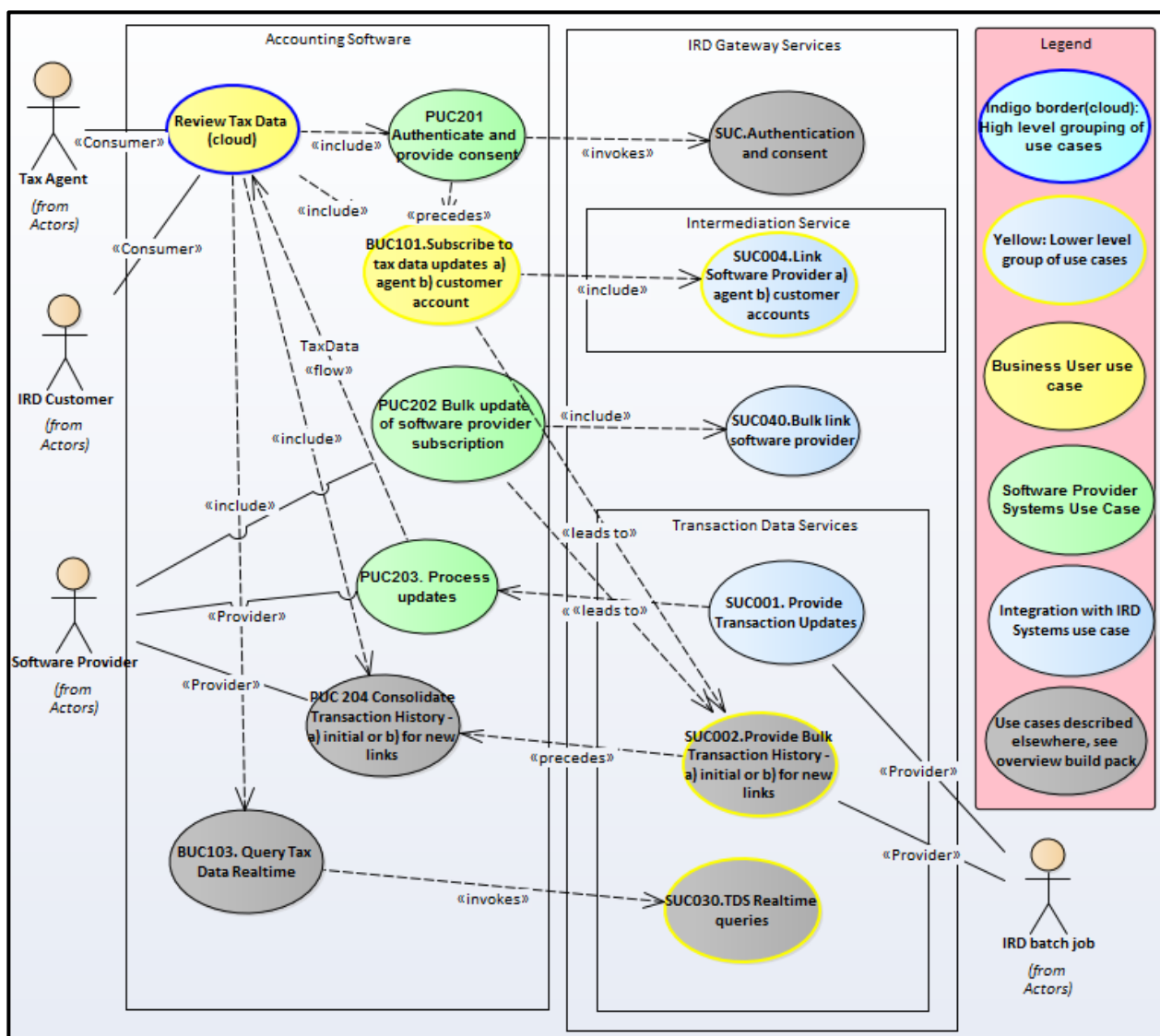


Figure 12: Use case overview



Use cases have been classified into the following types:

*(Note: High level use cases are broken down in the Build Pack concerned)*

Use case Group	Description	Colour	Use Case	Build Pack
<b>Tax Agent / Customer</b>	Use cases specific to the Customer / Agent point of view	Yellow	BUC101 Subscribe to tax data updates a) Agent b) Customer Account	TDS Overview BP
			BUC103 Query Tax Data real-time	TDS Overview BP
<b>Software Provider</b>	Some systems use cases on the Software Provider side are not user driven and broader than the integration with IR	Green	PUC201 Authentication and consent	TDS Overview BP
			PUC202 Bulk update of Software Provider subscription	TDS Overview BP
			PUC203 Process updates	TDS Overview BP
			PUC204 Consolidate Transaction History - a) initial or b) for new link	TDS Overview BP
<b>Systems use cases</b>	The corresponding technical steps inside the above use cases which are required to integrate with IR	Blue	SUC Authentication and Consent	Identity and Access BP
			SUC004 Link Software Provider a) Agent b) Customer Account	Software Intermediation BP
			SUC040 Bulk Link Software Provider to seed the Inland Revenue START system	TDS Overview BP, see PUC202
			SUC001 Provide Transaction Updates	This document
			SUC002 Provide Bulk Transaction History - a) initial or b) for new links	TDS Bulk File History Build Pack
			SUC030 TDS real-time queries	TDS Real-time Build Pack

**Table 12 : Use cases and their relevant documentation**

In the [TDS Overview Build Pack](#) sample process scenarios provide some organisational/business summary goal context.





### 5.3 Use Case SUC001 - Provide Transaction Updates

Use Case SUC001 Provide Transaction Updates	
<b>User/Actors</b>	Inland Revenue Transaction Data Services
<b>Secondary Actor</b>	Software Provider Software
<b>Description</b>	The use case goal is to retrieve data for all Tax Agent <b>Client Lists</b> /Customers linked to the Software Provider Software, format and package it as described in chapters above and send via SFTP to the Software Provider central location
<b>Inland Revenue systems</b>	START
<b>Pre-Conditions</b>	<p>Software Provider Software is onboarded and therefore authorised to communicate with TDS (See the TDS Onboarding Build Pack)</p> <p>A link / subscription has been established between the Software Provider and Tax Agent <b>Client List</b> and / or Customer Account identifying which entities' tax data to send to the Software Provider and how to group it. (See the TDS Overview Build Pack)</p>
<b>Triggers</b>	<p>Inland Revenue overnight batch processing runs for all business days at their evening. It completes financial updates and then</p> <ol style="list-style-type: none"> <li>1. executes the daily update cycle</li> <li>2. if there are manual updates and they are scheduled then those are also executed</li> </ol> <p>Inland Revenue weekly batch processing runs on Sunday evenings. It</p> <ol style="list-style-type: none"> <li>3. executes the weekly update cycle</li> </ol> <p>Each of the three above effectively repeats this use case</p>
<b>Constraints</b>	It is assumed that the Software Provider has explicit consent from the Tax Agent or Customer to receive their data through the Bulk File Feed
<b>Post-Conditions</b>	The updates have been received by the Software Provider Software and PUC203 can be completed by the Software Provider. (See TDS Overview Build Pack)
Use Case Scenarios	
1. Normal Flow	<p>Inland Revenue daily batch processing for Software Provider subscription generates PGP signed and encrypted ZIP files. These files are sent to the Software Provider at a Software Provider SFTP location. This subscription link will cause a file with an initial full data set and then daily updates to be added to any zip files the Software Provider is receiving from Inland Revenue daily.</p> <ol style="list-style-type: none"> <li>1. For each of Daily / Weekly / Manual cycle as applicable:</li> <li>2. Iterate through on-boarded Software Providers and their linked Customers as well as their linked Tax Agents and the clients linked to those Tax Agents:</li> <li>3. Data is formatted as described above in this document and in the TDS overview build pack</li> </ol>



### Use Case SUC001 Provide Transaction Updates

	<p>4. Data packaged in zip files as described above in this document</p> <p>5. File(s) sent to Software Provider Software central location via SFTP as described above in this document</p> <p>6. This system use case ends</p> <p>Software Provider use case PUC203 then completes at each Software Provider</p> <p>The steps after the SFTP transfer completes depend on the Software Provider Software. Once all the file content has been transferred the Software Provider will process the file content and makes it available to the software instances used by the users of the requesting organisation</p>
2. Exception Flows	<p>If Inland Revenue plans a maintenance outage and will not be able to do a daily batch run Software Providers will be notified through agreed communication channels established during onboarding</p> <p>If Inland Revenue is unable to connect to the Software Provider SFTP site the system will escalate for the Inland Revenue support team to contact the Software Provider and agree a plan to restore connectivity and reschedule transmission</p> <p>If SFTP transmission fails it escalate to the Inland Revenue support team to contact the Software Provider and agree a plan to troubleshoot and restore reliable connectivity and reschedule transmission</p> <p>If all files are sent but during PUC203 processing thereof the Software Provider finds there are issues like file corruption they will contact Inland Revenue support over channels agreed during the onboarding process to agree a plan for troubleshooting and rescheduling transmission or requesting new manual files.</p>
3. Alternatives	<p>When a bulk feed to a Software Provider is delayed there is a limited ability to compensate by users needing updates urgently requesting it via the real time feed. This needs to be negotiated and monitored by both the Software Provider and Inland Revenue support to not generate volumes that degrades the overall experience for Software Provider users or those connecting to Inland Revenue.</p>

**Table 13 : Use Case SUC001**



## 6 Appendix A—Glossary

Term	Meaning
<b>Authentication</b>	The process of verifying an identity claimed by or for a system entity. [RFC 2828]
<b>Authorisation</b>	A right or a permission that is granted to a system entity to access a system resource. [RFC 2828]
<b>Build Pack</b>	Details the technical requirements and specifications, processes and sample payloads for the specified activity
<b>Business Processing</b>	Processing by Inland Revenue systems in retrieving data and constructing the Payload (business information content) of a message.
<b>Business Service</b>	An integration interface (description) of the Solution which provides a set of business data and information in fulfilling the Service and is specified in this document. The Solution may offer more than one Business Service.
<b>Confidential Information</b>	Means, in relation to a party, any information (in any form whether written, electronic or otherwise): <ul style="list-style-type: none"> <li>(a) relating to the business or operations of that party or its suppliers or customers;</li> <li>(b) disclosed by that party to the other party on the express basis that such information is confidential; or</li> <li>(c) which might reasonably be expected by that party to be confidential in nature;</li> </ul>
<b>Customer</b>	A Customer is the party who is a tax payer or a participant in the social policy products that are operated by Inland Revenue. The Customer might be a person (an "individual") or a non-individual entity such as a company, trust, society etc. Practically all of the service interactions with Inland Revenue are about a Customer (e.g. their returns, accounts, entitlements etc.) even though these interactions might be undertaken by an Intermediary such as a tax agent on their behalf.
<b>Credentials</b>	Information used to authenticate identity, for instance an account username and password.
<b>Data integrity</b>	The property that data has not been changed, destroyed, or lost in an unauthorized or accidental manner. [RFC 2828]
<b>Digital certificate</b>	A certificate document in the form of a digital data object (a data object used by a computer) to which is appended a computed digital signature value that depends on the data object. [RFC 2828]
<b>ECDSA</b>	In cryptography, the Elliptic Curve Digital Signature Algorithm (ECDSA) offers a variant of the Digital Signature Algorithm (DSA) which uses elliptic curve cryptography.
<b>Encryption</b>	Cryptographic transformation of data (called "plaintext") into a form (called "cipher text") that conceals the data's original meaning to prevent it from being known or used. If the transformation is reversible, the corresponding reversal process is





Term	Meaning
	called “decryption”, which is a transformation that restores encrypted data to its original state. [RFC 2828]
<b>FIRST</b>	Inland Revenue’s old system which will still be in operation until 2021.
<b>GWS</b>	Gateway Services—the name for the suite of web services that Inland Revenue is providing.
<b>HTML</b>	Hypertext Markup Language.
<b>HTTP</b>	Hypertext Transfer Protocol is a networking protocol and is the foundation of data communication for the World Wide Web.
<b>HTTPS</b>	HTTP that uses SSL.
<b>IAS Build Pack</b>	Identity and Access Build Pack
<b>Intermediary</b>	A party who interacts with Inland Revenue on behalf of a Customer. Inland Revenue’s Customer is a Client of the Intermediary. There are several types of Intermediary including Tax Agents, PTSIs, PAYE Intermediaries etc.
<b>Intermediation Service</b>	The Intermediation Service is a new Gateway Service for creating and maintaining delegated access relationships between intermediaries and their clients. These relationships enable access by the intermediary to a resource (e.g. an account, correspondence etc.) that belongs to their client. There are several types of intermediaries such as Tax Agents, book keepers, PAYE Intermediaries.
<b>IP</b>	Internet Protocol—the principal communication protocol in the Internet protocol suite for relaying datagrams across networks.
<b>MSH</b>	Messaging Service Handler.
<b>Mutual authentication</b>	Mutual authentication refers to two parties authenticating each other at the same time, being a default mode of authentication in some protocols (e.g. SSH) and optional in other (TLS)
<b>myIR</b>	START’s authenticated customer-facing portal - myIR.
<b>NSP</b>	Inland Revenue’s New Services Platform—includes START, XIAMS, the Application Publishing Service and supporting infrastructure.
<b>NZISM</b>	NZ Information Security Manual—the security standards and best practices for Government agencies. Maintained by the NZ Government Communications Security Bureau (GCSB).
<b>Pattern</b>	A constraint on data type values that require the string literal used in the data type’s lexical space to match a specific pattern.
<b>Payload</b>	The business information content of the message and/or file(s) between Inland Revenue and a Business Partner.
<b>Schemas</b>	An XML schema defines the syntax of an XML document, in particular of a payload. The schema specifies what a valid payload (such as a GST return) must/can contain, as well as validating the payload.



Term	Meaning
<b>Service</b>	The exchange, as enabled by the Solution, of information, data and/or funds for the purpose of Clients' tax administration by Tax Agents.
<b>Software Provider Software</b>	<p>A Client Application is an operating instance of Software Provider Software that is deployed in one or more sites. A number of deployment patterns are possible:</p> <ol style="list-style-type: none"> <li>1. A single cloud based instance with multiple tenants and online users,</li> <li>2. An on premise instance (e.g. an organisation's payroll system)</li> <li>3. A desktop application with an online user.</li> </ol> <p>This is the computer software that contains interfaces to consume the services that Inland Revenue exposes. Software is developed and maintained by a Software Developer and subsequently deployed as one or more Client applications.</p>
<b>SFTP</b>	Secure File Transport Protocol. SFTP 3.0 is used.
<b>SOAP</b>	Simple Object Access Protocol (SOAP) is a protocol specification for exchanging structured information in the implementation of Web Services in computer networks.
<b>Software Developer</b>	The developer of a Tax Agent software package and its Gateway Channel integration capability which forms part of the Solution.
<b>Software Platform</b>	<p>Software Provider or accounting software set up as registered software to call Inland Revenue Gateway Services like TDS and to receive TDS bulk SFTP feeds.</p> <p>Previously referred to as Software Intermediary</p>
<b>Solution</b>	The technology components, systems and interface specifications constituting the Tax Agent Web Services capability which enables integration and communication across the Gateway channel between Inland Revenue and Tax Agents for the purpose of providing the Service.
<b>SSH</b>	Secure Shell (SSH) is a cryptographic network protocol for operating network services securely over an unsecured network. Version 2.0 is used.
<b>SSL</b>	Secure Sockets Layer (SSL) is a cryptographic protocol that provides security for communications over networks such as the Internet.
<b>START</b>	Simplified Taxation and Revenue Technology—Inland Revenue's new core tax processing application. It is an implementation of the GenTax product from FAST Enterprises.
<b>System</b>	The parts of the Solution operated by a single Business Partner; typically this term means the Business Partner's MSH.
<b>Tax Agent</b>	A tax agent who is formally registered as such with Inland Revenue.
<b>TDS</b>	Transaction Data Services



Term	Meaning
<b>TLS1.2</b>	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.
<b>URL</b>	Universal Resource Locator—also known as a ‘web address’.
<b>User</b>	The user referred to in this document is the user of the software provider accounting or tax package. This user needs delegated permissions on Customer tax accounts (potentially via a tax agency or other intermediary) in order to use TDS. The myIR logon used in eServices needs to be used in making Inland Revenue queries. This myIR logon must be granted permission there to access Customer Accounts.
<b>WSDL</b>	Web Services Description Language (WSDL) is an XML-based language that provides a model for describing Web Services.
<b>XIAMS</b>	External IAMS—an instance of IAMS that authenticates and authorises access by external parties, i.e. customers, trading partners etc. as opposed to internal parties such as staff.
<b>XML</b>	EXtensible Markup Language



## 7 Appendix B—Document history

Version	Date	Description
<b>09102018</b>	9/10/18	<p>Removed old sections 2.6 and 2.9.2.5 and updated diagram in section 2.3.3 to reflect Permissions file no longer required</p> <p>Updated various sections to reflect the Software Intermediation link is between the Software Platform and Tax Agency <b>Client List</b> (previously the link was to the Tax Agent or Tax Agency). Changes highlighted in yellow.</p>
<b>1.0</b>	12/04/2018	<p><b>P1,2</b> Removed duplicate versions and dates on title page and second page</p> <p><u>Added Samples Index</u></p> <p><u>Updated references and links to other Build packs</u></p> <p><u>Updated Table 1 and added Table 2</u></p> <p><u>Replaced Fig 3 – 6 - MyIR Portal removed</u></p> <p><b>2.1</b> Clarification of support ability to do ad hoc request for data file.</p> <p><b>2.2.1</b> Clarification of PGP key usage</p> <p>2.3.1 Clarification of Control file transfer</p> <p><b>2.3.2</b> XML files sample added</p> <p><b>2.3.3</b> Picture adjusted to show all Account elements are now within Client List elements</p> <p><b>2.3.4 – 2.3.10</b> Samples extended and put in context of sections describing structure in order to illustrate the text. Single set of files drilled down across sample sections in order to simplify reading.</p> <p>2.4 Updated Summary statement for Software Intermediation and added sample file</p> <p>2.5 Updated summary statement for Intermediation and added sample file</p> <p>2.6 Added Sample Permissions file</p> <p><b>2.10</b> removed embedded samples zip and schemas zip files and refers to GitHub3.</p> <p>Operational considerations section added</p> <p>4. Updated and added some information to Onboarding</p> <p>5.1 Figure 11 updated to reflect history for new links, removal of extended history, align terminology.</p> <p>Description for 120 updated to reflect that history data will also be provided.</p> <p>5.2 Updated Use case overview diagram to reflect removal of Ad hoc History file, and use case listing to reflect the changes in the diagram</p>



		Updated and added some elements into the Glossary
<b>0.8</b>	31/01/2018	<p>Small cosmetic changes – spelling and caps - no change to sense</p> <p>Removal of Appendix A – now included in Intermediation Build Pack</p> <p>Formatting changes</p> <p>Update for terminology such as Software Provider, distinction between Software Intermediation and Intermediation, Software Platform ID, Environments</p> <p>Update for Tables and Figures</p> <p>New Build Pack Overview diagram</p> <p>Update for Links to GitHub</p>
<b>0.5</b>	06/11/2017	Reworked draft for initial feedback
<b>0.2</b>	31/08/2017	Draft for initial feedback
<b>0.1</b>	15/08/2017	Internal only