

Inland Revenue

Build Pack: Transaction Data Services Overview and Transition

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Contact:

GatewayServices@ird.govt.nz



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1 Overview

Inland Revenue has a suite of digital services available for consumption by our partners that support efficient, electronic business interactions with Inland Revenue. Gateway Services is a suite of these that are mostly SOAP-based (Simple Object Access Protocol) web services and also include file transfer and API services. Transaction Data Services (TDS) is a business service described in this build pack that consists of various technical services, which in turn rely on parts of the Gateway Services suite.

This document is provided to Software Providers to support their use of Transaction Data Services (TDS). It

- provides a high level business overview of TDS to enable an understanding of the service being offered
- describes the data being made available through the services
- describes processes and use cases for the use of these services
- describes the onboarding process
- describes the permission model

In addition it provides information about transitioning from Tax Agent Web Services to Transaction Data Services. For current users of Tax Agent Web Services it includes some information about data conversion from FIRST to START; and how that data will appear in TDS to enable a reconciliation of data already held against data newly received.

This document is part of the suite of build packs that Software Providers need for implementing interfaces between their software and Inland Revenue TDS. It is to be read in conjunction with other TDS Build Packs for each available service. These contain the technical detail required to support the end-to-end use of Inland Revenue's various Transaction Data Services.

Other Gateway Services are available and have their own build pack documentation.

1.1 Solution Overview

Transaction Data Services (TDS) is a business service that consists of various technical services, which in turn rely on parts of the Gateway Services suite.

TDS provides Inland Revenue Customer financial transaction data for consumption by software packages. In turn these packages present that data to their users.

Financial transaction data includes amounts assessed and associated credits or debits. There is no data sent associated with the details of how an assessment has been calculated.

TDS will provide data for tax types in Inland Revenue's new system - START – only. Tax Agent Web Services will continue to provide data during the transition period for those tax types managed in Inland Revenue's existing system - FIRST.

The following diagram explains the layers of TDS and the actual services offered:

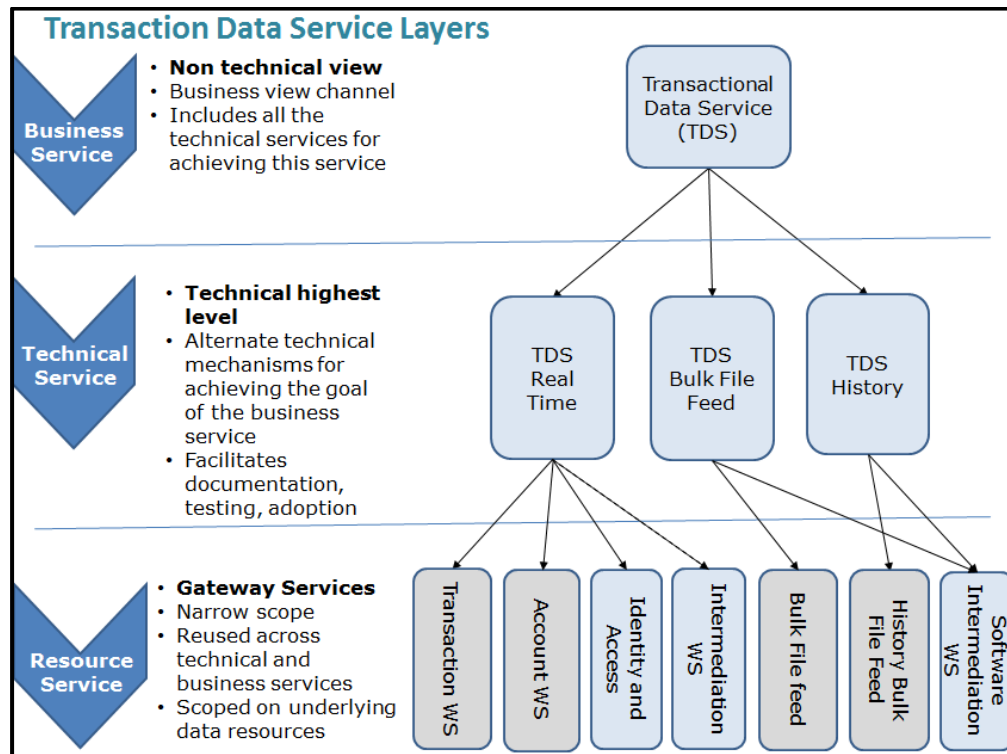


Figure 1. Transaction Data Services Layers

1.2 This solution

The following diagram outlines the sources and targets for Transaction data during the transition phase from Inland Revenue's FIRST system to the new START system and from Tax Agent Web Services to TDS:

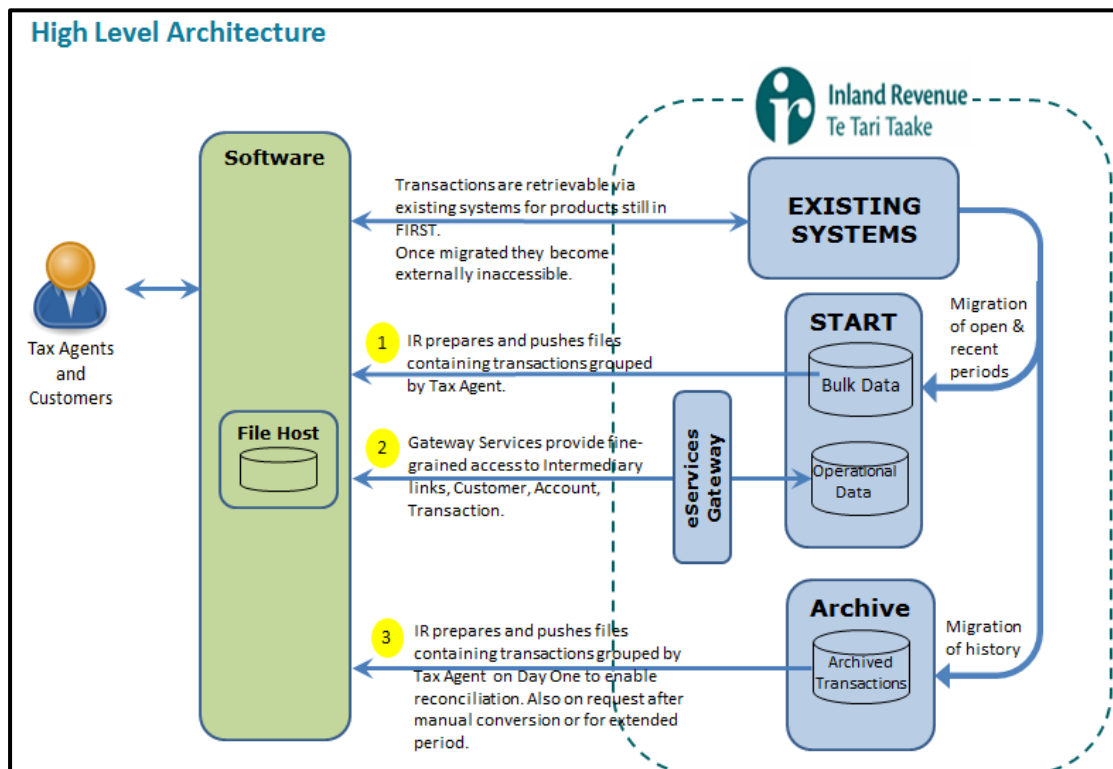


Figure 2. High Level Architecture

The service consists of the following three related business services shown above:

Technical Service	Description
1. Bulk File Feed of Transaction Data	<p>The Bulk File Feed is an overnight file feed that pushes new transaction data to Tax Agents or Customers via the Software Providers whose software they rely on.</p> <p>It caters for the high volumes of transaction data Inland Revenue makes visible to authorised parties.</p>
2. Real Time Feed of Transaction Data	<p>The Real Time Feed gives access to transaction data to Tax Agents or Customers via web services.</p> <p>It caters for real time queries that need additional information to the bulk file feed or need an urgent update related to a change event.</p> <p>It is not intended for use without the bulk file feed except by parties with small datasets to query.</p>
3. History Feed of Transaction Data	<p>The History Feed is primarily a one-off SFTP file providing seven years of history data for all Tax Agents and Customers included in the History Bulk File at Day One.</p> <p>It will also be produced for a Customer when a Tax Agent first links to them or when that Customer first links to the Software Provider through Software Intermediation.</p> <p>This data provides access to the original transaction history from the Inland Revenue FIRST system and allows for:</p> <ul style="list-style-type: none"> the update of any transactions not received through Tax Agent Web Services the reconciliation of converted transactions with previously held transactions. <p>The History transactions will contain the START Transaction ID to which the transaction has been converted. See Section 2.8.4 for examples.</p>

Table 1. Business Services in TDS

1.3 Intended Audience

The solution outlined in this document is for Software Providers who wish to provide access to Transaction Data Services through their software or currently provide access to Tax Agent Web Services through their software and wish to transition their Clients to TDS.



1.4 Fundamental concepts - interacting parties in TDS

This section gives an overview of the type of consumer system TDS is designed for, and the roles utilised in interactions with TDS.

For detail on the nature and structure of data exchanged please see Section 2 below.

Entity in interaction	Description
Customer	<p>TDS provides transaction data associated with Inland Revenue Customers.</p> <p>A Customer includes citizens and entities that have tax and/or social policy obligations and/or entitlements in New Zealand. This includes all Customers registered with Inland Revenue, either individuals or non-individuals.</p> <p>A Customer may interact with Inland Revenue:</p> <ul style="list-style-type: none"> • using their own software application • as a client of a Business Intermediary such as a Tax Agent • as a client of a Software Provider • or they may be a combination of the above <p>Customer data is grouped under Accounts where each Account has an account type – correlating with a tax type, eg GST, INC. In this documentation, unless otherwise stated, the term Customer does <u>not</u> refer to the consuming software. See the definition of System Customer Record below for the broader usage of the term Customer.</p> <p>The term Customer is also used as shorthand when referring to an individual user logging in that is associated to a Customer. Such a user has to have permissions delegated to look at the Customer data, as explained in the Delegation Section of this document.</p>
Gateway Services	<p>Software level or B2B integration between Inland Revenue and its new systems happens through the Inland Revenue Gateway Services (GWS). These are largely SOAP web services but also include other APIs and file transfers.</p> <p>In the case of TDS it includes file transfers to an SFTP host site set up by the Software Provider during onboarding.</p> <p>Some TDS related Gateway services are used more broadly than just by TDS and are not branded TDS.</p>
History	<p>Transaction data is inherently all historical. However, in the context of TDS History, this refers to data in the format used in Tax Agent Web Services which was previously available. This data may still be of value to some Software Providers that consume TDS.</p> <p>The same linking and permissions and SFTP file transfer logic that applies to the TDS Bulk File feed also generally applies to the TDS Bulk History Feed.</p>



Entity in interaction	Description
Intermediary	<p>An Intermediary is an individual or organisation that interacts with Inland Revenue on behalf of other individuals or organisations. Intermediaries are generally of a particular type such as:</p> <ul style="list-style-type: none"> • Payroll Intermediary • Personal Tax Summary Intermediary • Tax Agent – see below
Intermediation	<p>Intermediation is the process of linking an Intermediary with an individual or organisation to enable that Intermediary to act on behalf of for tax purposes.</p> <p>The Intermediation GWS will eventually provide features to enable this linking. Initially however, it will provide only a listing of links already in place. Currently only Tax Agent Links are supported.</p>
System Customer Record	<p>System Customer Records in Inland Revenue serve a broader purpose than the above definition of Customer. This includes:</p> <ul style="list-style-type: none"> • System Customer Records for potential Inland Revenue Customers – as defined above. There are circumstances where such System Customer Records exist within Inland Revenue systems and there are no tax or social policy obligations and/or entitlements (yet) and therefore potentially no IRD number allocated; however this is rare. • Software Providers/Platforms, for the purposes of TDS or other gateway services, will be created as System Customer Records and will then be allocated a Customer ID to use as the provider/platform ID (of type CST/Customer ID). There will be no filing obligations associated with this ID and therefore no IRD number.
myIR Logon - Inland Revenue Online Services Account	<p>Inland Revenue through myIR portal allows Inland Revenue Customers (tax entities) and Tax Agents (Tax Agencies) to delegate permissions to specific users through web logons. These same logon accounts are used to interact with TDS. Throughout this document these logon accounts will be referred to as myIR Logons.</p> <p>TDS, as part of the bulk file feed, publishes what these permissions are to the Software Providers so their platforms have the ability to align permissions or follow any other strategy with permissions that is transparent to their users and Inland Revenue – this is expected to vary. This is an interim solution to allow Software Providers to move to the position of managing these permissions within their software. The duration of the provision of this data by Inland Revenue has not yet been determined. For more information refer to Section 6 Delegation and permissions.</p> <p>In order to link a Software Platform to a Tax Agency's Client List or Customer Accounts a myIR Logon for a person with such delegated access is required.</p>



Entity in interaction	Description
Software Intermediation	<p>The Software Intermediation service provides the ability for Software Providers to link to their Customers and Tax Agency Client Lists in order to receive the bulk feed of their transaction data. The Software Intermediation service allows these links to be established, queried, or removed.</p> <p>There is a separate Intermediation service that deals with links between business intermediaries like tax agents and their client lists and customer accounts. The actual dataset resulting in bulk files from a Software Intermediation link will be impacted by those Intermediation links but the links themselves are maintained separately.</p>
Software Platform	<p>To interact with TDS the Software Provider needs to register a software platform with Inland Revenue through an onboarding process. This platform typically needs to consist of two aspects.</p> <ul style="list-style-type: none"> a) An SFTP site set up by the owner of the software to receive bulk file feeds. (A platform only used by a single Customer for their own small amount of data might not require this if they do not use the Bulk File.) b) The software that the end user uses to look at the data and that can do real time queries into TDS to update relationship links or look at small sets of data. <p>Information about the Software Platform needs to be accurately exchanged during the onboarding process. The Software Platform registration is covered in detail in Section 5 Onboarding.</p> <p>This Software Platform can have multiple versions as the software moves through various development phases.</p>
Software Provider	<p>Software Provider in the TDS context is a broad concept referring to any party who goes through the process of onboarding their software platform with Inland Revenue.</p> <p>Early TDS adopters are largely software vendors in the market but some have their own in house bespoke solutions or customise packages from other parties. The Software Provider adapts their software to call TDS, sets up an SFTP site for receiving bulk file data, and signs a partner test plan with Inland Revenue.</p> <p>See below for further information and refer to section 5 Onboarding, and the Partner Test Plan template for more information.</p>

Entity in interaction	Description
Tax Agent	<p>A Tax Agent is an individual or non-individual who has been formally registered with Inland Revenue as a Tax Agent.</p> <p>A Tax Agent will have access to Inland Revenue Customer data via Client Lists which are used to group the Customer Accounts linked to the Tax Agent.</p> <p>The term Tax Agent is also used as shorthand when referring to an individual user logging in that is associated to a Tax Agent.</p> <p>Such a user needs to have permissions delegated to look at the Tax Agent Client Lists, as explained in the Delegation Section of this document. The Tax Agent might have created client lists with only the Accounts for that user.</p> <p><i>Note: Customer level links (i.e. linking to all Accounts of a Customer at once) will no longer be used by Inland Revenue going forward in their new system START and will not be available in TDS.</i></p>
Transaction Data Services	<p>TDS allows Tax Agents and Customers access to Customer data through two access paths; one to access data via Tax Agent delegation, and another to access data in a more direct way without relying on Tax Agent linking (Direct Customer).</p> <p>TDS provides data primarily through a daily bulk file feed – TDS bulk feed service. The Bulk Feed service will only provide the data to a Software Platform that has been linked to the related Tax Agency Client List or Customer Accounts to enable access their transaction data.</p> <p>This linking is referred to as Software Intermediation.</p>

Table 2. Fundamental Concepts in TDS

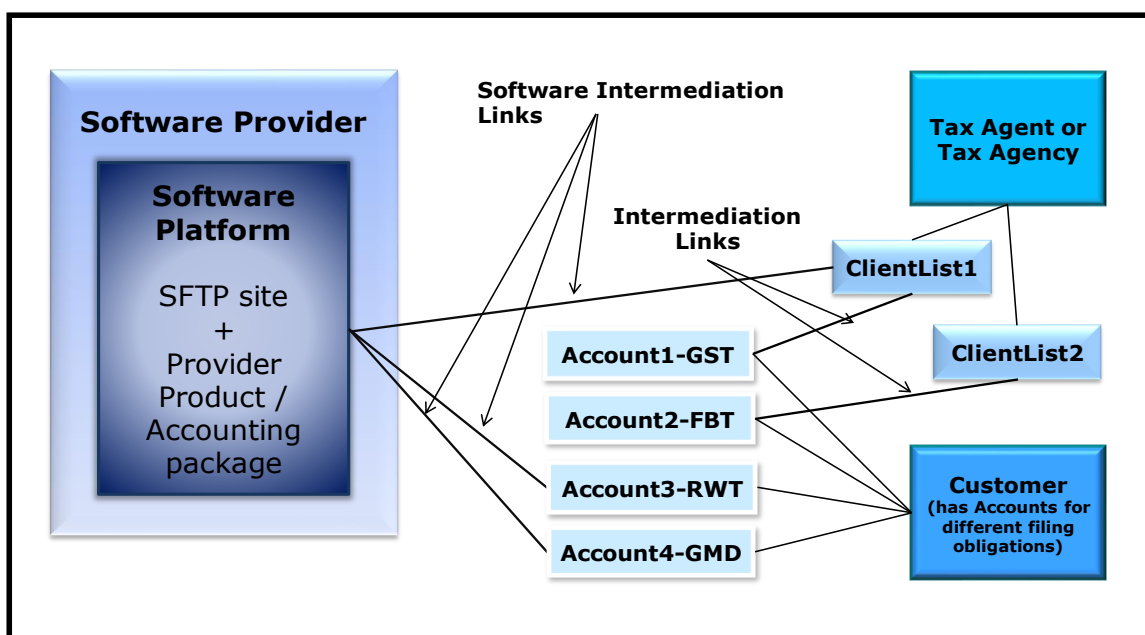


Figure 3. TDS key relationships



The Software Platform and its users together establish links to the parties for whom tax data is to be retrieved. There needs to be a path of links from the Software Platform to the relevant customer accounts to get transaction data for those Customer accounts. This can be done through two pathways that work slightly differently:

1. Within Inland Revenue, Tax agencies are already set up with links to their client lists. A software platform can be linked to a Tax Agency's Client List and will then get all the data for the customers' accounts for that Client List. The intention is that permissions are then applied in the software platform to select what is visible to specific individuals. Refer to section 6 Delegation and permissions in this document.
2. Customer data where the Customer itself or a delegate such as a bookkeeper is looking at the data at the Customer account level. Again permissions need to then be applied in a consistent manner inside the software platform as to which individuals have which level of access.

For either pathway the person/user establishing the link with the software platform needs to have delegated permission, through a myIR Logon, to do so by being set up as an owner or administrator for that party. Section 6 Delegation and permissions goes into more detail about the permissions to establish these relationships and Section 3.4.4 Use Case PUC202 Bulk Update of Software Provider Subscription and the [Software Intermediation Build Pack](#) go into more detail around establishing the links.

Parties consuming TDS through software onboarded with Inland Revenue are referred to as Software Providers in this document. This term is used in a broad generic sense: they might be software vendors or developers, an integrator customising software or owners of the software.

A Software Provider can have multiple Software Platforms and any such software platform that is registered and onboarded with Inland Revenue is referred to as a Software Platform and consists typically of both an SFTP site and an application to process and display the data to users.

Each software platform has at least one version and further versions may be added over time.

Please see the Section 5 Onboarding for more information.

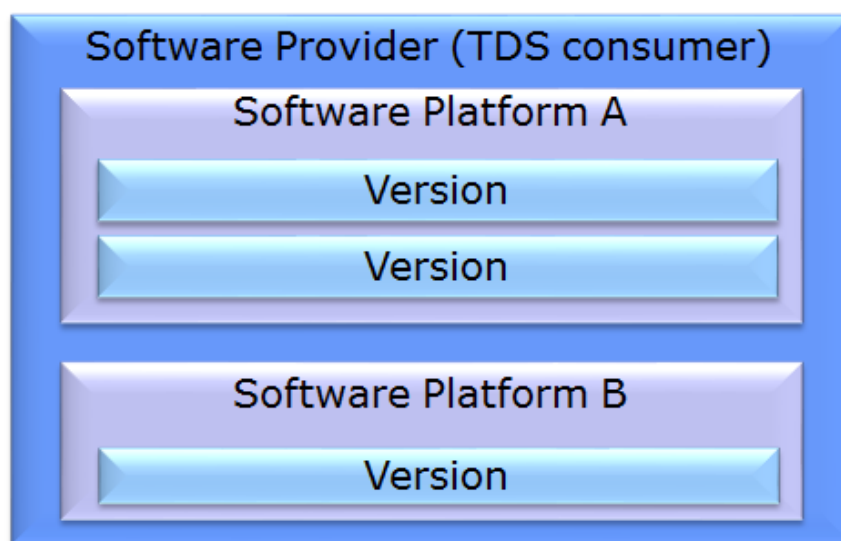


Figure 4. Software Platforms

1.5 Related Documents

The following diagram explains the relationships between the documents supporting the TDS solution: *Note : Build Packs are available on the website here:*

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

In the diagram below, this document describes the Business Service level – highlighted. Each of the blue blocks have separate build packs describing them in more detail. See Table 2 below for links to individual folders.

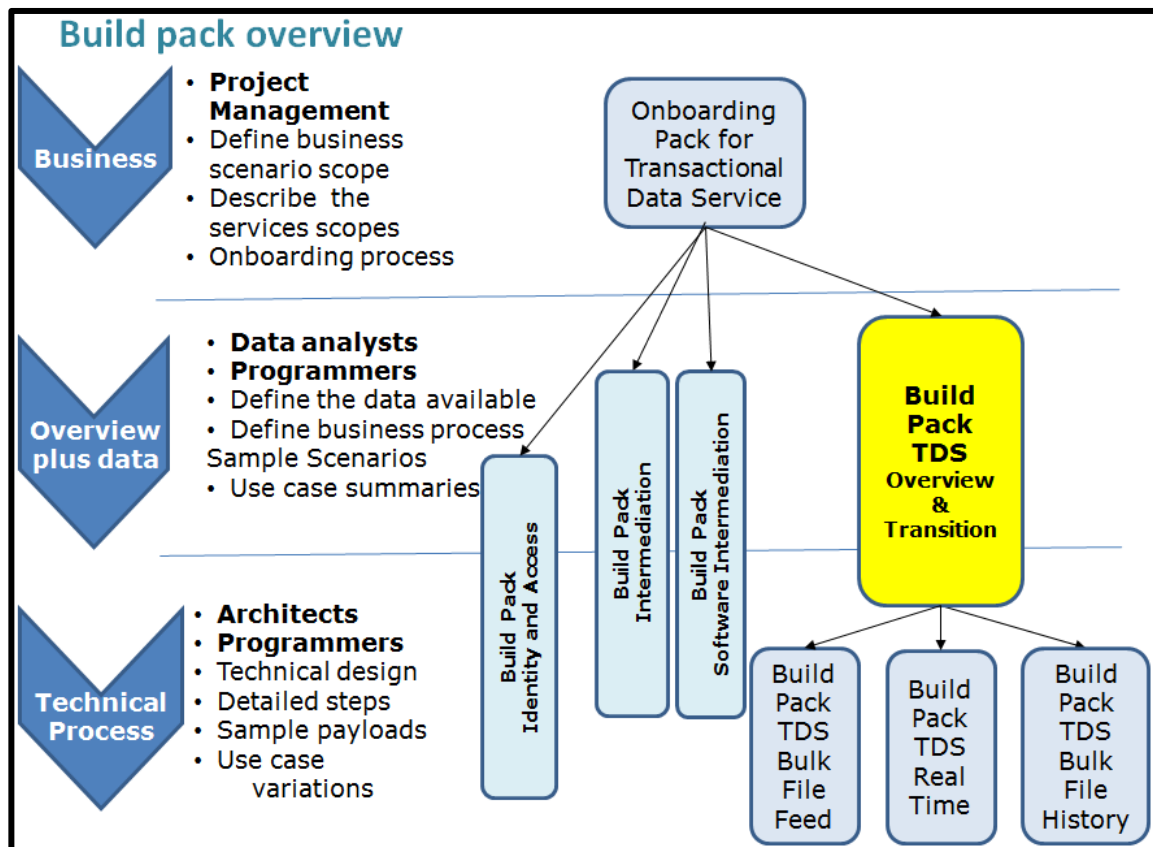


Figure 5. On-boarding and Build Pack Structure for TDS

Name	Description
TDS - Onboarding	See Section 5 Onboarding in this document as this is not yet a separate document. 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 is sent to Software Providers when necessary.
TDS – Overview and Transition	This document - 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.
TDS Bulk File Feed	Describes the technical requirements and specifications, processes and sample payloads for the TDS Bulk File Feed.



Name	Description
TDS Real Time Build Pack	Details the technical requirements and specifications, processes and sample payloads for the TDS Real Time Service.
TDS Bulk File History Build Pack	Details the technical requirements and specifications, processes and sample payloads for the TDS Bulk File History Service.
Identity and Access Build Pack	Details the Authentication and Authorisation mechanisms used by Inland Revenue for Gateway Services.
Software Intermediation Build Pack	Details the technical requirements and specifications for the linking of Tax Agent Client Lists/Customers to Software Providers to enable these links to be used by the Bulk File Feed and Bulk file History Service.
Intermediation Build Pack	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 3. Related Documents Descriptions

2 Data

2.1 Data Model

This section describes how the data in Inland Revenue's START system is structured. The diagram below provides a high level view of the model and the following table contains explanations.

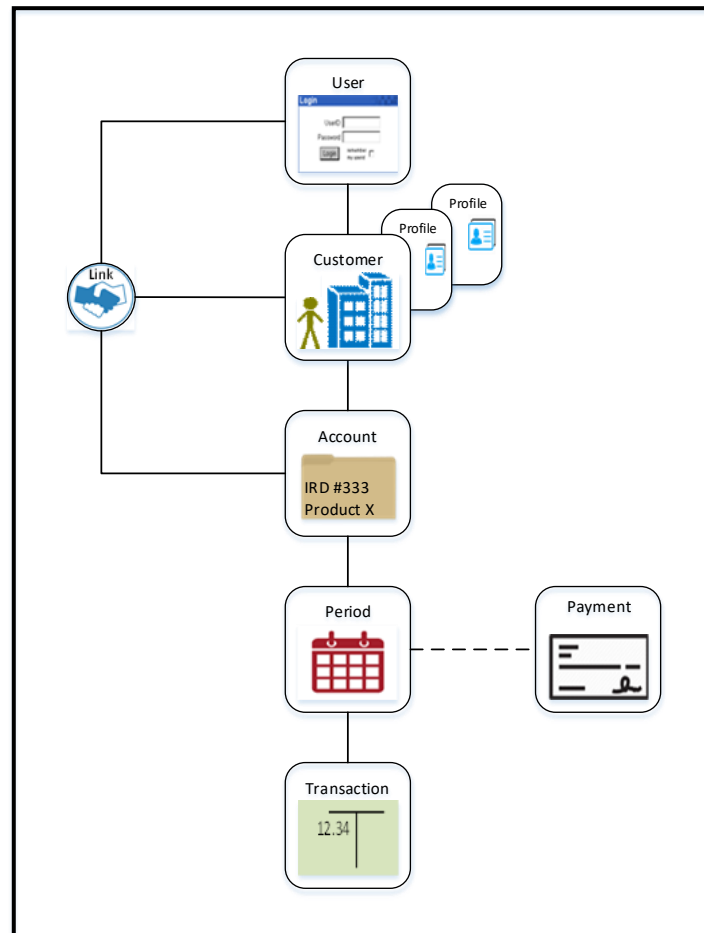


Figure 6. High Level representation of Data Model

Entity	Description
Customer	<p>See 1.4 – “Fundamental concepts - interacting parties in TDS” – In the context of providing Transaction data, Customer refers to an individual or entity with tax and/or social policy obligations and/or entitlements.</p> <p>A Customer record must exist in order for any of the other entities to be present.</p> <p>A Customer is a person or an organisation which:</p> <ul style="list-style-type: none"> • Has an IRD Number (or only a Customer Number if they have no filing obligations) • May have associated User Logons, but not necessarily • May have many Accounts, but not necessarily • May be linked to other Customers by a variety of types of relationships • May have many profiles



Entity	Description
Profile	<p>A Profile is a particular instance of a Customer, often a branch or location e.g. a large corporate could have a Head Office as the Customer and each branch can be a Profile. Each Profile can have separate IRD Numbers and Accounts (e.g. for GST and FBT) and they will only be able to view the data for their Accounts.</p> <p>A Tax Agent can be linked to an account type for a profile but not be linked to the Customer i.e. Customer A has INC, GST, FBT and Customer B (Subsidiary of Customer A) has GST and FBT accounts and the Tax Agent is linked to Customer B accounts only.</p>
User	<p>In Inland Revenue Systems this is an actual person who has a myIR Logon. It is owned by one Customer (or Agent) but can be Linked to Accounts belonging to other Customers.</p> <p>A User cannot exist without a System Customer record (which might not be a tax entity, please see the definition in System Customer Record in 1.4 – “Fundamental concepts - interacting parties in TDS”).</p> <p>In a software provider platform a user there might not necessarily have an Inland Revenue myIR login, the provider might have their own user and permission management.</p>
Account	<p>This is a ledger with an Account ID which is the IRD Number plus Account Type.</p> <p>Unlike FIRST a Customer might have many Accounts for a product/tax type – e.g. large corporate with many profiles. The old notion of multiple Locations is implemented as Profiles which are groupings of Accounts.</p> <p>Users can be linked to Accounts e.g. a Tax Agent linked to INC only for a Customer.</p>
Link	<p>Links allow Intermediaries to act on behalf of the Customer. The Intermediary must be “linked to” the Customer’s account(s).</p> <p>Delegating access associates Users with Customers, Profiles and Accounts, or with Tax Agent .</p>
Periods	<p>Transactions are partitioned by period. Different accounts have different periods e.g. INC has a 12 month period, GST can have 2 months, 6 months, etc.</p> <p>See Data Scenarios for an example of the data associated with a period.</p>
Transactions	<p>An individual activity recorded with a unique identifier on a specific day, relating to a specific Transaction Type with a specific Amount and Effective date.</p> <p>See Data Scenarios for an example of the data associated with a period.</p>



Entity	Description
Payments	<p>Payments can be Pending, Suspended, Locked or applied to a period. While pending or suspended (i.e. received but not yet created as a transaction in a period), payments do not appear as Transactions in the Accounts.</p> <p>Locked payments occur when a payment has been applied to a period where there is, as yet, no assessment. The payment is locked to ensure it cannot be applied against another outstanding amount. See Data Scenarios below for an example of the data associated with the above situations.</p>

Table 4. Data Entity Descriptions

2.2 Data Items available through TDS

The following data items will be available as transactions through TDS:

Attribute	Description	Data Type	Length
Account			
IRD Number	Standard IRD Number – always 8 or 9 digits i.e. 8 digits can be padded	String	8/9
Account Type	The type of Account – e.g. GST, INC	String	3
Profile Number	This allows for multiple 'locations' for one IRD Number ie subsidiary locations for one entity eg 001,002,003	String	3
Account ID	The Identifier of the Account IRD number, appended with account type and profile number	String	30
Filing Frequency	The filing frequency for the Account – See Appendix B Filing Frequency Codes	Char	8
Commence	Commencement Date of the Account	Date	8
Cease	Cessation Date of Account	Date	8
Balance	The Balance for the account in total	Currency	8
Forecasted Balance	The Balance for the Account including the forecasted amounts as explained below	Currency	8
MaxActivity	The last date/Time of Activity on Account	DateTime	8
Migration	The last date that data was converted into this Account. (Only included in History file)	DateTime	8



Attribute	Description	Data Type	Length
Period			
<i>* The Period Summary data in each weekly file where there has been no change</i>			
Period *	The filing period of the Account – usually the last day of the period	Date	8
Filing Frequency	The filing frequency for the Account/period – See Appendix B Filing Frequency Codes	Char	8
Period Begin	The first day of the period	Date	8
Period End	The last day of the period	Date	8
Filing Period	Same as Period End – last day of period	Date	8
Tax	The amount assessed	Currency	8
Penalty	The amount of Penalty applied	Currency	8
Penalty Forecasted	<p>In the Bulk File this is the amount of additional Penalty forecasted for the Period since the time of the last posted Penalty transaction, as at the date the file was created plus 1 day. This is to cater for an overnight file being created to show the amount which needs to be paid if it is paid the next day when the file data is available to Tax Agents and Customers.</p> <p>In the Real Time Query this is the additional amount of Penalty forecasted for the Period for the date of the request, since the time of the last posted Penalty transaction.</p>	Currency	8
Interest	The amount of interest applied	Currency	8
Interest forecasted	<p>In the Bulk File this is the amount of additional Interest forecasted for the Period since the time of the last posted Penalty transaction, as at the date the file was created plus 1 day. This is to cater for an overnight file being created to show the amount which needs to be paid if it is paid the next day when the file data is available to Tax Agents and Customers.</p> <p>In the Real Time Query this is the additional amount of Interest forecasted for the Period for the date of the request, since the time of the last posted Interest transaction.</p>	Currency	8



Attribute	Description	Data Type	Length
Other	Amounts other than penalty, interest, payments or credit transfers in that have been applied to this period e.g. remission, write off or credit transfer out	Currency	8
Other forecasted	<p>In the Bulk File this is the amount of additional Other forecasted for the Period since the time of the last posted Penalty transaction, as at the date the file was created plus 1 day. This is to cater for an overnight file being created to show the amount which needs to be paid if it is paid the next day when the file data is available to Tax Agents and Customers.</p> <p>In the Real Time Query this is the additional amount of Other forecasted for the Period for the date of the request, since the time of the last posted Other transaction.</p>	Currency	8
Credit	Payments or credit transfers in which have been made for this period	Currency	8
Credit forecasted	<p>In the Bulk File this is the amount of additional Credit forecasted for the Period since the time of the last posted Penalty transaction, as at the date the file was created plus 1 day. This is to cater for an overnight file being created to show the amount which needs to be paid if it is paid the next day when the file data is available to Tax Agents and Customers.</p> <p>In the Real Time Query this is the additional amount of Credit forecasted for the Period for the date of the request, since the time of the last posted Credit transaction.</p>	Currency	8
Balance *	The Balance for the period	Currency	8
Forecasted Balance	The Balance for the Period including the forecasted amounts	Currency	8
Max Period Activity *	This is the last date/time of activity on the account. To ascertain if there have been any further transactions since the last set of data, compare the current Activity date to the Activity date in the last set of data received for the same period	DateTime	8

Bank Account Transactions – for Direct Credits

Attribute	Description	Data Type	Length
Transaction ID	Transaction ID of the Refund which used this Bank Account	String	30
NZ Bank Standard - See Appendix E for other Bank Standards			
Bank Number	The Bank where the Account is held	Char	2
Branch Number	The branch number of the bank	String	4
Account Number	Number of the bank account	String	8
Account Number Suffix	Suffix to the bank account number	String	4
Pending Payment			
Payment ID	The unique identifier for the payment	String	30
Pending Amount	The amount of the payment	Currency	8
Pending Date	The date the payment was made pending	Date	8
Transfer			
Transaction ID	The unique identifier for the transaction in the current list of transactions	String	30
Transfer Account ID (Other Account ID)	The IRD Number for the Account to which the amount was applied or from which it was received.	String	8/9
Transfer Account Type (Other Account Type)	The Account Type for the Account to which the amount was applied or from which it was received.	String	3
Transfer Period	The period for that Account to which the amount has been applied – Period above	Date	8
Bill – Transactions are organised by Bill – each with a different due date			
Bill ID	The Bill Number internally	String	30
Bill ID for Display	The externally displayed Bill Number which is likely to be a single digit – starts as 1 and increases for each Bill within a Period	String	3
Bill Due Date	The due date for the Bill	Date	8
Tax	The amount assessed	Currency	8



Attribute	Description	Data Type	Length
Penalty	The amount of Penalty applied	Currency	8
Penalty Forecasted	<p>In the Bulk File this is the amount of additional Penalty forecasted for this Bill since the time of the last posted Penalty transaction, as at the date the file was created plus 1 day. This is to cater for an overnight file being created to show the amount which needs to be paid if it is paid the next day when the file data is available to Tax Agents and Customers.</p> <p>In the Real Time Query this is the additional amount of Penalty forecasted for the Bill for the date of the request, since the time of the last posted Penalty transaction.</p>	Currency	8
Interest	The amount of interest applied	Currency	8
Interest forecasted	<p>In the Bulk File this is the amount of additional Interest forecasted for this Bill since the time of the last posted Penalty transaction, as at the date the file was created plus 1 day. This is to cater for an overnight file being created to show the amount which needs to be paid if it is paid the next day when the file data is available to Tax Agents and Customers.</p> <p>In the Real Time Query this is the additional amount of Interest forecasted for the Bill for the date of the request, since the time of the last posted Interest transaction.</p>	Currency	8
Other	Amounts other than penalty, interest, payments or credit transfers in that have been applied to this period e.g. remission, write off or credit transfer out	Currency	8
Other Forecasted	<p>In the Bulk File this is the amount of additional Other forecasted for this Bill since the time of the last posted Penalty transaction, as at the date the file was created plus 1 day. This is to cater for an overnight file being created to show the amount which needs to be paid if it is paid the next day when the file data is available to Tax Agents and Customers.</p> <p>In the Real Time Query this is the additional amount of Other forecasted for the Bill for the date of the request, since</p>	Currency	8



Attribute	Description	Data Type	Length
	the time of the last posted Other transaction.		
Bill Credit	The amounts paid towards the Bill	Currency	8
Credit forecasted	<p>In the Bulk File this is the amount of additional Credit forecasted for this Bill since the time of the last posted Penalty transaction, as at the date the file was created plus 1 day. This is to cater for an overnight file being created to show the amount which needs to be paid if it is paid the next day when the file data is available to Tax Agents and Customers.</p> <p>In the Real Time Query this is the additional amount of Credit forecasted for the Bill for the date of the request, since the time of the last posted Credit transaction.</p>	Currency	8
Bill Balance	The Balance due on the Bill	Currency	8
Forecasted Balance	The Balance for the Bill including the forecasted amounts	Currency	8
Transaction - Organised by Bill Number			
Amount	The amount of the transaction	Currency	8
Transaction ID	The unique identifier for the transaction	String	30
Trans Type	The code for the Type of Transaction	String	12
Posted Date	The Posted Date for this transaction	DateTime	8
Effective Date	The Effective Date for this transaction	Date	8
Link ID	<p>The unique identifier for a linked transaction e.g. a transaction which has been reversed by this transaction.</p> <p>In the History File this is called newtxid as it represents the new transaction id to which the converted transactions have been aggregated.</p> <p>Note: In the History file in some cases (like old closed periods, or zero amounts, or superseded transactions) there will be no equivalent transactions created during migration and therefore no newTxID present here.</p>	String	30



Attribute	Description	Data Type	Length
Retrieve Date	<p>Each file in the Bulk File Feed will contain a Retrieve Date which is the date of the data it contains. The forecasted amounts will always forecast an additional day, ie being the Retrieve date + 1.</p> <p>In essence the Bulk Feed extraction process will always ensure the forecasted penalties and interest will be for the day for which the file is delivered.</p> <p>Each Real Time Request will also contain a Retrieve Date which will be the date of the request and forecasted amounts will be for that date.</p>		

Table 5. Data available through TDS

2.3 Additional Information Available

File Description	Details
Software Intermediation links File	<p>File included with each file set that includes both of:</p> <ul style="list-style-type: none"> Which Tax Agent Client Lists are linked to this Software Provider Platform Which Customer Accounts are linked directly to this Software Provider Platform
Intermediation Link File	<p>File included with each file set that includes:</p> <p>Which Customer accounts (accounts of clients of a Tax Agent) are linked to the Tax Agent (that are linked to the Software Provider through Software Intermediation links)</p>
Permissions File	<p>File included with each file set that includes both of:</p> <ul style="list-style-type: none"> The names of the myIR logons associated with linked Tax Agency Client Lists The names of the myIR logons that have visibility per linked Customer Account

Table 6. Additional data available through TDS

Notes:

- Not every field is available in every service. Check the [Build Pack](#) for each service to clarify the data provided with each feed.
- The data contained in the History File Bulk Feed and ad hoc request for History data is not explained in full in the data items table above. This is because some data items are very specific to the History Feed as they are related to the manner in which Tax Agent Web Services presented data. Please refer to Section 2 of the [History Bulk File Feed Build Pack](#) for full details.



2.4 Accounts

In START since April 2017

FIRST Tax Type	START Account Type	Description	Notes	Amount of data available
GST	GST	Goods and Services tax	Already in START and will be made visible in Transaction Services. GST will have only one return assessment transaction other than reassessments.	All periods ending 30-Apr-2014 and onwards and prior periods which were still open at the time of conversion
	GSD	GST on Goods sold in satisfaction of debt	GSD can have multiple assessment transactions from the same return type as each return can capture a separate transaction. Therefore a period can have multiple 'Return debit' transactions.	All periods ending 28-Feb-2017 and onwards

Being migrated to START or commencing in START as of April 2018

FIRST Tax Type	START Account Type	Description	Notes	Amount of data available
DWT	DWT	Dividend withholding tax	Only one return assessment transaction other than reassessments.	All periods ending 30-Apr-2015 and onwards and prior periods which were still open at the time of conversion
RWT	RWT	Resident Withholding Tax	Withholding tax, which can have an annual reconciliation assessment and other regular assessments which can occur in the same period. The normal periodic return will create a 'Return debit' or 'Return Credit' transaction. The annual reconciliation return will post 'Annual return debit' or 'Annual return credit'.	
NRT	NRT	Non Resident Withholding Tax		
IPS	IPS	RWT deductions on interest		
RLT	RLT	Resident Land Withholding Tax(RLWT)	Multiple assessment transactions from the same return type. This is because each return can capture a separate transaction. Therefore a period can have multiple 'Return debit' transactions.	



FIRST Tax Type	START Account Type	Description	Notes	Amount of data available
AIL	AIL	Approved issuer levy	Only one return assessment transaction other than reassessments.	All periods ending 30-Apr-2015 and onwards and prior periods which were still open at the time of conversion
FBT FBA FBI	FBT	Fringe Benefit Tax FBA – Annual FBI–Income Year	<p>Migrating as FBT and will have 3 assessment codes and the possibility of two assessments in one period.</p> <p>The normal quarterly return will have 'Return debit' or 'Return credit'.</p> <p>The annual return will have 'Annual return debit' or 'Annual return credit'</p> <p>The income year return will have 'Income year return debit' or 'Income year return credit'</p>	All periods ending 30-Apr-2015 and onwards and prior periods which were still open at the time of conversion
GMD	GMD	Gaming machine duty Problem Gambling Levy – PGL GST on PGL	Only one return assessment transaction other than reassessments.	All periods ending 30-Apr-2015 and onwards and prior periods which were still open at the time of conversion
PIE	PIE	Portfolio investment entity tax	Only one return assessment transaction other than reassessments.	
	MPO (also known as BPA)	Multi Payment Option	<p>A new Account Type, which is entered through myIR. A schedule is uploaded with the payment and an MPO Account is created for the record of the payment and the distribution.</p> <p>When credited to the individual accounts there will be an MPO Payment Type code and description associated with the transaction.</p>	No data will be migrated. This account will start from a point in time.

Being migrated to START or commencing in START as of April 2019

Note: The following Account Types will be available in TDS as of April 2019, however it is possible that the transactional design may be refined as we progress through testing.

FIRST Tax Type	START Account Type	Description	Notes	Amount of data available
INC ICA MAC	INC	Income Tax Imputation Credit Account Maori Authority Credit Account	ICA and MAC transactions will be in the INC account in START. This includes transactions for converted INC accounts	All periods ending 31-Mar-2015 and onwards and prior periods which were still open at the time of conversion
FAM	FAM	Working for Families Tax Credits	New Credit Entitlement transactions will appear in the FAM account; these are weekly or fortnightly and are refunded to the customer. The end of year square up assessment transaction includes FAM entitlements from both IR and MSD.	All periods ending 30-Apr-2015 and onwards and prior periods which were still open at the time of conversion
REB	REB	Tax credits – donations, childcare, housekeeper		All periods ending 30-Apr-2015 and onwards and prior periods which were still open at the time of conversion
	TPA	Tax Pooling	Payment and deposit offset transactions will be available in TDS.	The remaining credits existing at the time of conversion, will be converted over with their amounts and effective dates

Table 7. Accounts available in START

2.4.1 Transition Data Availability

In general, Tax Types in FIRST will become Account Types in START. However, in START some FIRST Tax Types have been amalgamated e.g. FBT, FBA and FBI. Examples of how these Accounts will appear in TDS are included in [Data Scenarios](#) below.

Current Accounts will become available through TDS as they are migrated to Inland Revenue's START system. Prior to inclusion in TDS, Tax Types remaining in FIRST will continue to be available through the Tax Agent Web Service.

Once the data is available through TDS it will no longer be available through the Tax Agent Web Service.



2.5 Business Rules and Interpretation of Transaction Data

With the transition to the new Inland Revenue system there are some particular conditions which will be managed in a different manner than the current system and which need to be taken into consideration.

Note that sections 2.5.2.4, and 2.5.10 through to 2.5.14 inclusive reflect the Release 3 design as at the time the sections were added to the document. However it is possible that changes to the design could be identified as being required as testing progresses.

2.5.1 Transfer Transactions

Technical constraints mean that destination/source information for Transfers between FIRST and START will not be available immediately through TDS. See Section 2.3 above for the Accounts for which full information will be available.

Where a transfer has occurred within START, TDS will provide IRD Number, Account, Period and Transaction ID. Where a transfer has occurred from START to FIRST or from FIRST to START, TDS will provide the same data but there may be a delay in providing the Period Data. Specifically, we will show FIRST to START transfers as soon as they are posted into a START account. A transfer will trigger a credit into the START period, which would be immediately reflected in the bulk feed that night. For transfers from START to FIRST there may be a delay of at least 24 hours and possibly 48 hours before the Period will be shown in the Bulk File or Real Time Feed.

See Appendix F for a list of Transaction Codes and Descriptions which may be used in transfers between FIRST and START.

2.5.2 Multiple Assessment Transactions

2.5.2.1 Audit Assessment for GST

For April 2017 to April 2018 GST audit assessments will have their own separate Assessment transaction. This means it will be possible to have an actual assessment and an audit assessment in the same return period. In FIRST the old assessment would reverse and a new assessment would be applied.

From April 2018 an Audit Assessment for all Accounts in START (including GST) will reverse and replace the existing assessment (unless it is an increased debit in which case the Audit Assessment will be for the difference between the original assessment and the audit assessment).

2.5.2.2 FBT Assessments

FBT, FBA and FBI Tax Types have been consolidated into one Account Type in START – FBT. There will be three assessment Transaction Type Codes with the possibility of two assessments in one period.

2.5.2.3 Withholding Tax

RWT, NRT and IPS Withholding Taxes can have an annual reconciliation assessment and other regular assessments that can occur in the same period. The normal periodic return will create a 'Return debit' or 'Return Credit' transaction. The annual reconciliation return will post 'Annual return debit' or 'Annual return credit'.

RLT (or Resident land Withholding Tax – RLWT) can have multiple assessment transactions from the same return type. This is because each return can capture a separate transaction. Therefore a period can have multiple 'Return debit' transactions.



2.5.2.4 Provisional Tax Assessments

At the time of conversion there will be a separate transaction for each instalment of provisional tax due for a return period including converted return periods; each will have its own Bill with a due date.

When the return is later posted to the customer's account another Bill is created to facilitate payment of any terminal tax to pay. Where there is no terminal tax to pay, that Bill will still be created but it will be for an amount of zero.

2.5.3 Bill

A bill is a series of transactions due on specific date, including the liability owing and any penalties and interest calculated. A period can be divided into a number of bill items to enable correct calculation of penalties for the due date of the bill. TDS will record against most transactions the bill to which it relates and will also provide Bill reconciliations for each Period.

The Bill number is a 30 digit string and in addition, for TDS a Bill ID for display is sent as well. The Bill ID for Display will be in the form 001, 002, 003 etc.

Transactions relating to a Bill will be listed together in all TDS files.

There are circumstances when a transaction does not have a Bill Number and these transactions will be listed after the Bill detail. Such circumstances are:

- Transfer in
- Payment
- Converted payments
- Converted transfers
- Converted credit interest
- Return credit assessment for GST for periods prior to 1 May 2018 (including prior to April 2017). After Release 2 in April 2018 (for all periods ending after 30 April 2018) these transactions will have a Bill Number. Prior transactions will remain without a Bill Number.

2.5.4 GST Credit Assessments

For GST Periods ending prior to 1 May 2018 where there is a credit assessment it will show as Credit rather than Assessment AND each credit (which is an assessment) will have a corresponding debit for \$0.00 recorded. For periods from Release 2 (April 2018) a credit assessment will show as an Assessment transaction in the Bill and there will be no Debit transaction for \$0.00 recorded. See Appendix C for Transaction Codes.

2.5.5 Pending payments

A payment may not be automatically applied to the period to which it relates until there is an assessment against which that payment can be recorded. This means payments are not always recorded as transactions until after the assessment transaction is processed. For the time from receipt to the assessment being recorded as a transaction the payment is classed as Pending. TDS will record any such payments in a period each time transactions are sent for that period.

2.5.6 Direct Credit Account

Direct Credit account is the Bank Account Number used for any direct credits for the Period. The Transaction ID for the refund will be included with the Bank Account details to which the refund was paid.



2.5.7 Rounding

Any penalty and interest calculation provided has been calculated using “bankers” or “Gaussian” rounding.

2.5.8 Transaction Items not sent in Tax Agent Web Services

In the Tax Agent Web Service when a return period is in Account Review or has an Account Halt in place no data is available. This will not apply in TDS. In addition where this data is present in FIRST at the time of conversion it could be converted into START and may require manual reconciliation when sent as part of TDS as it may not have been received before.

2.5.9 Filtering of Inactive Transactions

Previously some transactions were filtered as inactive in certain types of Tax Agent Web Service requests for data. In TDS, all posted transactions (i.e. everything START considers a transaction) will be sent through TDS. This includes all Reversals. Some of these transactions may require manual reconciliation.

2.5.10 New START Account Type for Tax Pooling

Tax Pooling transactions will be available in TDS under a new START account type “TPA”.

2.5.11 Tax Types no longer available from 1st April 2019

There are three historic tax types that are not being converted to START; QCT, WPN and WPE. Data for these tax types will not be available via TDS.

2.5.12 Late Filing Penalty

As of 1st April 2019, where a Late Filing Penalty is reassessed to a larger amount, the penalty transaction will be reversed and reposted as occurs currently. A new Bill with a new due date will be created for the *total* amount of the penalty.

2.5.13 Working for Families Tax Credits (WfFTC)

2.5.13.1 Weekly or Fortnightly Entitlements

At the time of conversion an entitlement credit transaction will appear in the FAM period with a corresponding disbursement transaction which will leave the account with a zero balance.

This includes converted years that have not had an end of year calculation.

2.5.13.2 End of Year Calculation

Any FAM credit that remains after offsetting the corresponding INC liability will be disbursed from the FAM account (and vice versa for any INC credit after offsetting any corresponding FAM liability).

2.5.14 Imputation Credit Account (ICA) and Maori Authority Credit Account (MAC)

From 1st April 2019 ICA and MAC transactions will be in the INC account in START. This includes transactions for converted INC accounts.

2.6 START Transaction Codes

A full list of START Transaction Codes is included in [Appendix C](#) of this document.

2.7 Data Integrity

Inland Revenue will be providing all transaction data through TDS for the Account Types identified above and will make every effort to ensure it is accurate, timely, consistent and



complete. Inland Revenue will be transparent about their activity with Customers and will ensure Software Providers, Tax Agents and Customers are provided with the most up to date and accurate data possible.

All TDS bulk data will be sent from a copy of Inland Revenue data made every evening. Therefore, any Bulk File data will be from close of business the previous day.

Despite best efforts, inconsistencies can arise from time to time between the data held by the Software Provider/Tax Agent/Customer and Inland Revenue's master data set. Detecting and resolving inconsistencies is critical to the integrity of TDS.

Several mechanisms exist to assist in doing this:

- To check that all data held by Inland Revenue for a period has been received by the Software Provider compare the Activity date in the current set of data for the period to the Activity date in the last set of data received for the same period. Note: The Period Summary also includes the Period Balance that is a secondary check. If a discrepancy has been detected a query should be made to the Real Time Feed for this Client, Account, Period to retrieve the latest data and reconcile.
- As a convenience, TDS Account Summaries includes the migration date for that tax type as an additional attribute in the History File. This date means the Tax Agent Web Service stopped operating for that Tax Type on that date, and TDS started. All data through the History Service will be for transactions before that date, all data from the TDS Bulk Feed and Real Time web services will have Process Dates after that date.
- For each Tax Agent Web Service transaction that was converted into START the corresponding new Transaction ID used in the new system and TDS Feeds will be provided in the Bulk History File as a nested new TXID element. These represent the same historical transaction in a different format but should be able to be reconciled. See Section 2.9.4 below for an example.
- For Real Time calls if Inland Revenue detects errors in the request, such as invalid IRD numbers; this will be reported back to the requestor. In this case the query should be retried using the correct data. The error codes are defined in the [Build Packs](#) for those services. If the Requestor does not receive any response to a request, it is RECOMMENDED that the request be re-tried.
- When business processing error conditions are detected by Inland Revenue e.g. error in SFTP of ZIP files, Inland Revenue will contact the parties concerned. If a file fails to send IR, will make contact. The available business condition status codes and the recommended action to be taken in each case are defined in the [Build Pack](#) for the Bulk File.
- In general if an anomaly is found please notify Inland Revenue through normal channels.

2.7.1 Channel Consistency

It is possible for a Client of an Intermediary to query their own tax information and come up with seemingly 'different' data. This can occur when there is a time gap between the night time generation of the Bulk File sent each day and the myIR query which may expose transactions not present at the time the Bulk File was generated. Activity in the intervening time period could provide inconsistency.

Note: The Transaction Types visible in myIR are a combination of multiple START Transaction Types and do not have the level of detail present in TDS Transaction Types. The aggregated Transaction Type Descriptions however, ensure although they are recognisable, eg

START Transaction Code	START Description	myIR Description
CNVTXC	Converted return credit	Assessment
CNVTXD	Converted return debit	Assessment
RTNANC	Annual return credit	Assessment



START Transaction Code	START Description	myIR Description
RTNAND	Annual return debit	Assessment
RTNCRD	Return credit	Assessment
RTNINC	Income year return credit	Assessment
RTNIND	Income year return debit	Assessment
RTNORI	Return debit	Assessment

Table 8. START and myIR Transaction Codes

2.8 Data Scenarios

The Data Scenarios for data in Transaction Data Services are listed below. The detail of how these Accounts will translate into data in Transaction Data Services is shown in the following spreadsheet.

Note that the Release 3 scenarios reflect the Release 3 design as at the time they were included in this document. However it is possible that changes to the design could be identified as being required as testing progresses.

- | | |
|--|--|
| <ul style="list-style-type: none"> • Late Payment Penalties • OUM Over Time • Reassessment • Default Assessment • Transfer • Writeoff • TPA • AIM with penalty and interest • REB | <ul style="list-style-type: none"> • Remission • Payment • FBT • GSD • RWT • DWT • Multiple prov tax assessments • FAM |
|--|--|



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Release 3
scenarios.xlsx

2.9 Data Conversion from Tax Agent Web Services to START

The conversion of Inland Revenue data can cause some differences between the Tax Agent Web Service and TDS data. Potentially significant differences are identified below. (Also, see Data Conversion Scenarios spreadsheet below for examples.)

2.9.1 Penalty transactions

The initial 1% late payment penalty, initial 4% late payment penalty and the monthly incremental late payment penalties have been combined into one 'converted penalty' transaction. This transaction will have a Transaction Type CNVPNL Converted penalty. Penalty remissions have been combined into one 'converted penalty remission' transaction. This transaction will have a Transaction Type CNVRPN Converted penalty remission. The Bulk History File will reflect this by identifying the START Transaction ID in which these amounts have been aggregated.

2.9.2 Increased debit reassessments

Where a period being converted contains more than one assessment and the later assessment is for an increased amount, the conversion of the increased assessment will not include a reversal of the first assessment and will include another assessment of the difference between the two



amounts. This allows for different due dates for each amount. The FIRST assessment and reassessment transaction will both have a START Transaction Type RTNORI Return debit. This will not be an automatic match for data previously retrieved through Tax Agent Web Service.

2.9.3 Unique transaction identifier

The sequential transaction numbering used in the Tax Agent Web Service has been replaced with a unique identifier in START that will not be sequential. Software Providers may have used this sequential numbering to check they are not missing any data from Inland Revenue. Inland Revenue cannot accommodate this within TDS.

TDS is offering a different mechanism for checking for missing transactions where each period summary will include the process date and time of the last transaction in the Account. The date/time can be checked against the last period summary to verify it has not changed. Period summary details will be provided in the weekly Bulk File Feed.

At the time of conversion any aggregated transactions will, in the History Transactions Service, contain the unique transaction ID of the START transaction in which they have been aggregated. This will allow Software Providers to support reconciliation between the Tax Agent Web Service data and TDS data.

2.9.4 Conversion Scenario

This spreadsheet below contains an example of data conversion from Tax Agent Web Service to START where there was an original assessment converted with Late Payment Penalties and UOMI and then further Late Payment Penalties and UOMI applied after conversion. There are notes in the spreadsheet explaining the transition from the current system through the [History Bulk File](#) and then to START. This includes a means of reconciling the data from the Tax Agent Web Service system with the START data. Tax Agent Web Service Transaction Types are used in the History File to enable this reconciliation. A full list of these Transaction Types is in Appendix D.

The History Bulk File will contain data as it would have appeared in the Tax Agent Web Service.



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3 Use cases

Transaction Data Services provides data for an overall business process that is controlled by the Software Provider software and the user of that software, rather than Inland Revenue.

This section introduces the overall typical sequence of events, then the use cases. The next section strings those together into sample processes and scenarios.

3.1 Overall typical sequence of events

A very simplified overall sequence of typical events is described below for the TDS Bulk Feed, History Bulk Feed and the Real Time Service.

3.1.1 High level typical bulk feed sequence

The overall sequence is described below:

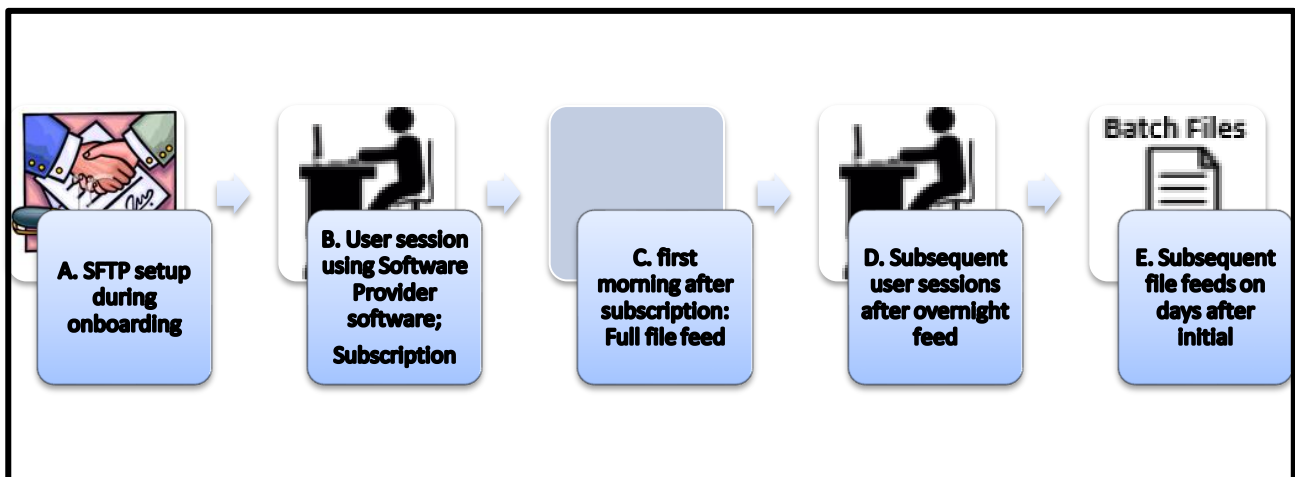


Figure 7. Sequence of Bulk File Feed

Versions of this diagram and the steps involved are used in explaining the sample scenarios in the sections below.

- **Stage A:** This is the initial onboarding of a Software Provider wishing to consume the TDS Bulk File Feed. For more on stage A refer to Onboarding in Section 5 of this document.
- **Stage B:** The User can access Inland Revenue via the TDS Real Time service. For regular daily updates on high volumes of Customer data a bulk file feed needs to be set up. For Inland Revenue to know which Customer information to send to a given Software Provider, a link is required between the Software Provider and a Tax Agency Client List or their direct Customers' Accounts. This link is created via the Software Intermediation Service initiated by the customer via the Software Provider software. Full details of the Software Intermediation service are provided in the [Software Intermediation Build Pack](#). Once linked, the next Bulk File will include details for this Client's Customers.
-
- **Stage C:** An initial file transfer occurs, containing a full set of Customer data – Both Converted and History.
- **Stage D:** When the user logs in to the software again, the content of the bulk files will be incorporated into what the user can see by the Software Provider software. They can still augment that with Real Time calls.



- **Stage E:** This is an incremental file, containing data that has changed since the previous file was provided. Again, the Software Provider software will incorporate that for the user to have access to on their next login.

There can be many variations to this process. For more detail in the case of a Tax Agent see sample process scenario 1 below – Section 4.2.1.

3.1.2 High level typical real time sequence

Below is an outline of the process for an organisation that chooses to use TDS for their own small data set only and does not subscribe to the bulk file feed. This can only be supported by Inland Revenue for small datasets. A slightly simplified onboarding stage will precede access to the TDS Real Time Service in this case. See sample process scenario III below – Section 4.2.3.

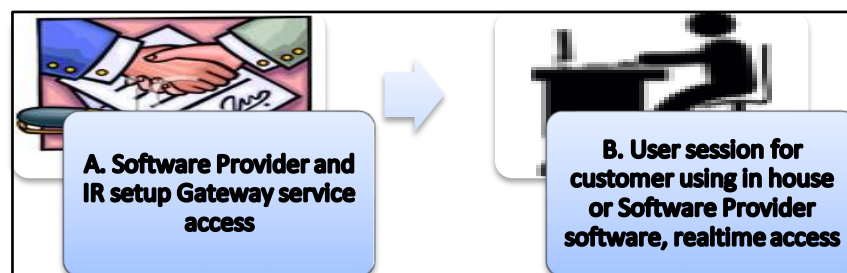


Figure 8. Sequence of Real Time access only

- **Stage A:** This is the initial onboarding of a Software Provider that does not need to or wish to consume the TDS Bulk File Feed. This only requires the ability to call Gateway Services. For more on onboarding refer to Section 5 of this document.
- **Stage B:** The user can access Inland Revenue via the TDS Real Time service.

3.3 Use Cases

The types of use case within this overall business process are many and diverse. An effort has been made below to generalise these to ensure Inland Revenue provides sufficient detail for Software Providers.

This list is neither exhaustive nor meant to represent every combination of process that the Tax Agent, Customer or Software Provider may execute.

In support of this the following diagram illustrates the multiple levels of use cases involved in TDS and how they are related to each other. Refer to the table following it for an explanation.

3.3.1 Use case diagrams

Due to the volume of use cases the use case diagram has been split across three diagrams with the first one showing the big picture and the subsequent two drilling into some more detail. After the diagrams there is a table listing all of the use cases and where they are documented.

Use cases have been classified into the following types:

Use case Group	Description	Colour
Tax Agent /Customer (Business)	Business Use cases specific to the Customer / Tax Agent point of view	Yellow
Software Provider	Some systems use cases on the Software Provider side are not user driven and broader than the integration with IR	Green
Software Provider plus Tax Agent/Customer (business)	Use cases that are a mix of events specific to the Customer / Tax Agent point of view and being Software Provider driven	Light Green
Systems use cases	The corresponding technical steps inside the above use cases which are required to integrate with Inland Revenue	Blue

Table 9. Use Case Types

3.3.2 Use Case Diagram - Summary

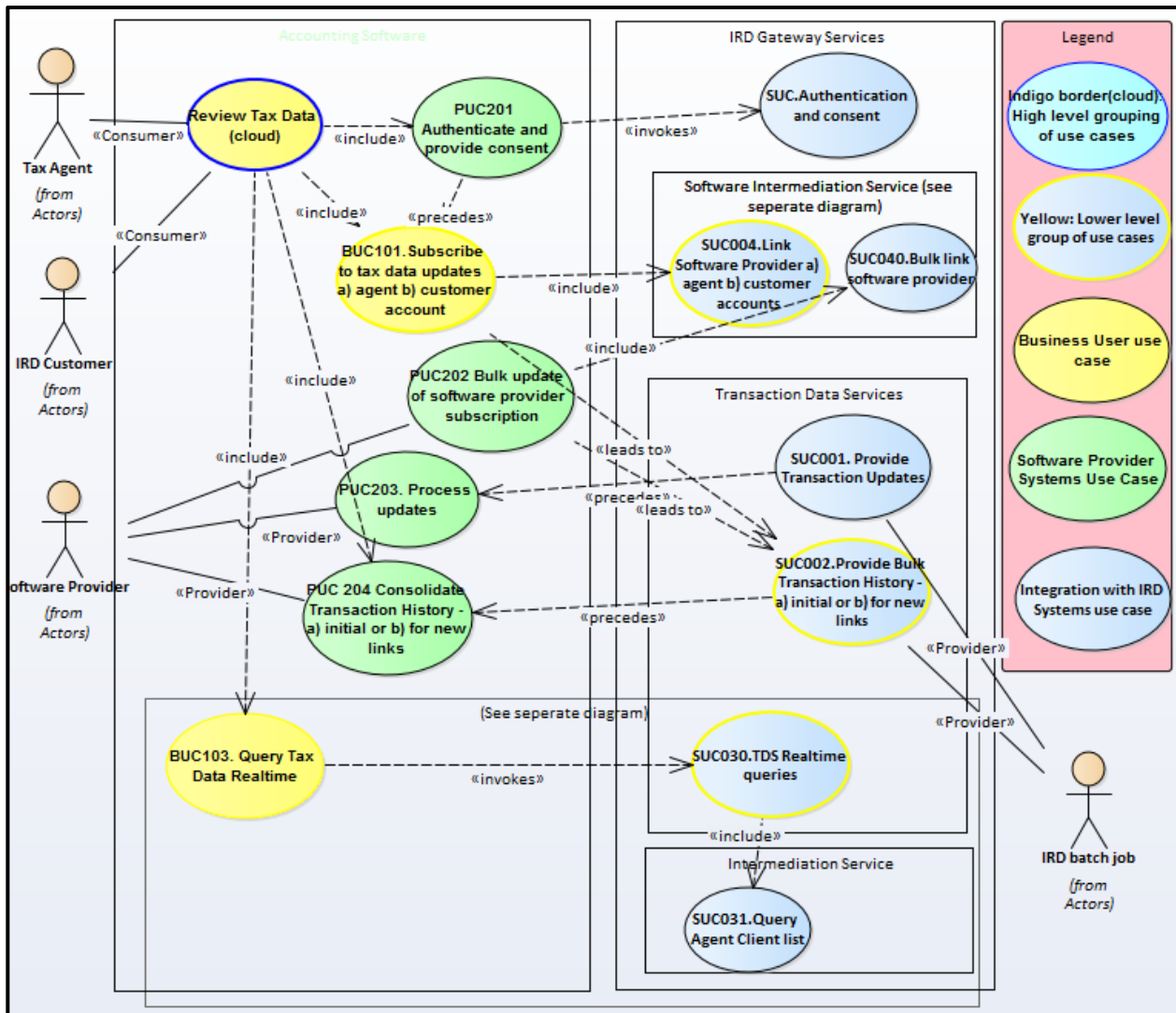


Figure 9. Use Case Diagram – Summary

Navigate to [Section 3.3.5 Use Case Listing](#).

3.3.3 Use case diagram – Software Provider linking focus

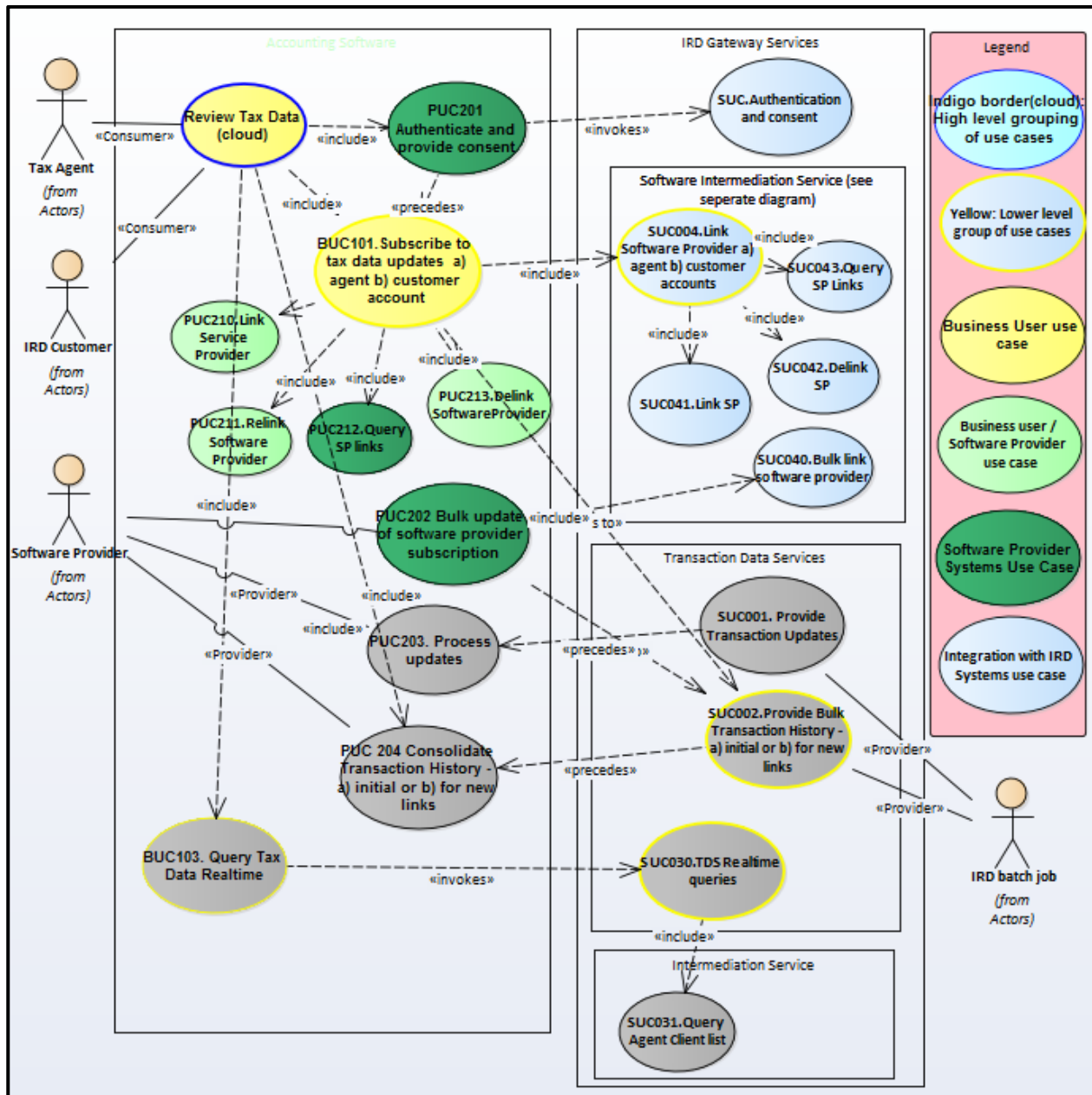


Figure 10. Use Case Diagram – Software Provider linking focus

Navigate to [Section 3.3.5 Use Case Listing](#)

3.3.4 Use case diagram – Real Time focus

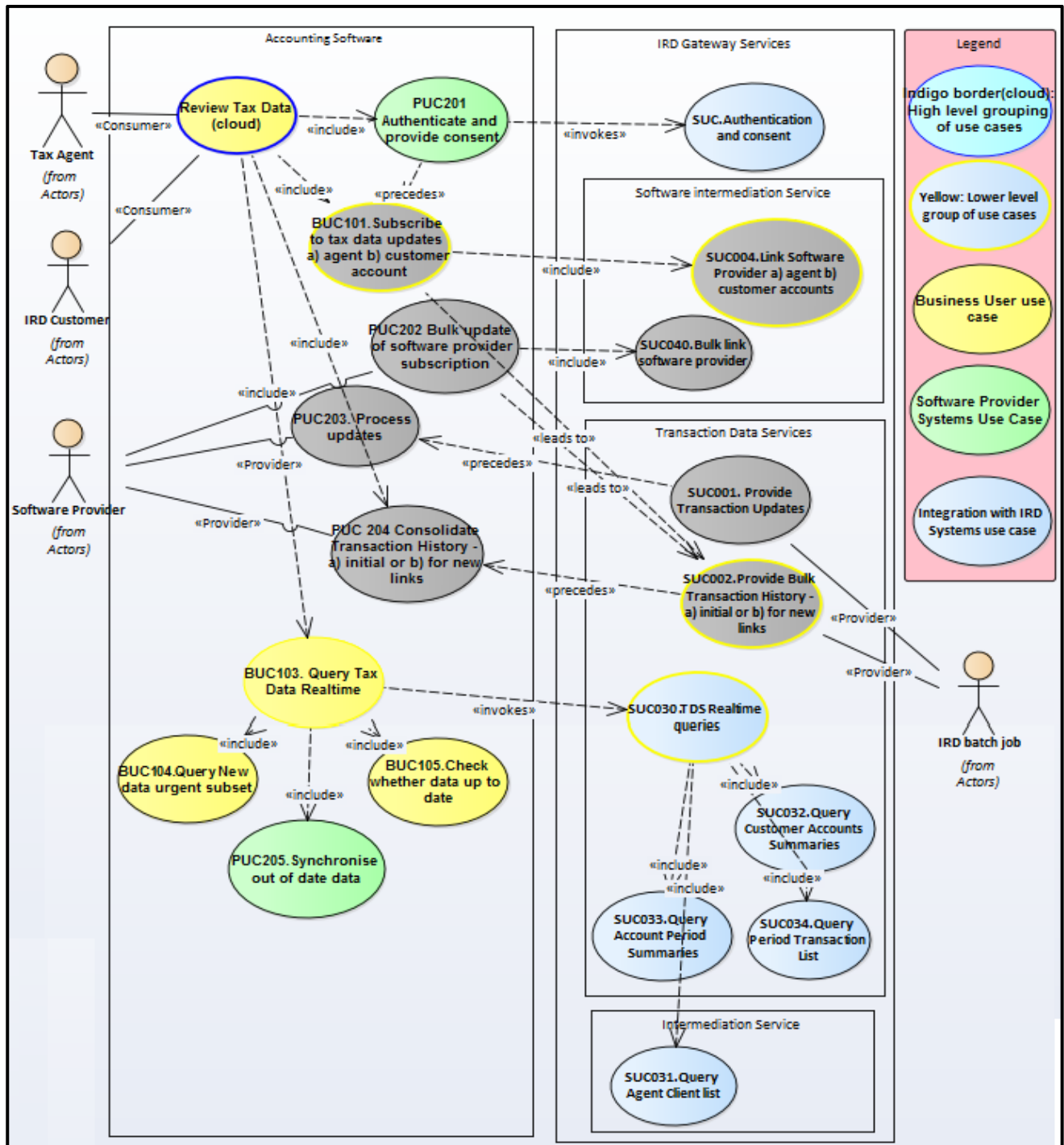


Figure 11. Use Case Diagram – Real Time focus

Navigate to [3.3.5 Use Case Listing](#)

3.3.5 Use Case Listing

The full list of Use cases have been classified and documented as follows:



Use case Group	Description	Colour	Use Case	Build Pack
Tax Agent /Customer	Use cases specific to the Customer / Tax Agent point of view	Yellow	BUC101 Subscribe to tax data updates a) Agent b) Customer account	This document, see 0
			BUC103 Query Tax Data real-time	This document, see 3.4.12
			BUC104 Query New data urgent subset	This document, see 3.4.13
			BUC105 Check whether data up to date	This document, see 3.4.14
Software Provider	Some systems use cases on the Software Provider side are not user driven and broader than the integration with IR	Green	PUC201 Authenticate and provide and consent	This document, see 3.4.1
			PUC202 Bulk update of Software Provider subscription	This document, see 3.4.4
			PUC203 Process updates	This document, see 3.4.9
			PUC204 Consolidate Transaction History - a) initial or b) for new link	This document, see 3.4.10
			PUC205 synchronise out of date data	This document, see 3.4.11
			PUC210.Link Software Provider	This document, see 0
			PUC211.Relink Software Provider	This document, see 3.4.6
			PUC212.Query Software Provider Links	This document, see 3.4.7
			PUC213.Delink Software Provider	This document, see 3.4.8
Systems use cases	The corresponding technical steps inside the above use cases which are required to integrate with IR	Blue	SUC Authentication and consent	Identity & Access Build Pack
			SUC004.Link Software Provider a) Agent b) Customer Account	Software Intermediation Build Pack
			SUC040.Bulk Link Software Provider	This document, see PUC202 (3.4.4)



Use case Group	Description	Colour	Use Case	Build Pack
				and section 5.3 Initial Bulk Linking under section 5 Onboarding
			SUC001 Provide Transaction Updates	TDS Bulk File Build Pack
			SUC002 Provide Bulk Transaction History - a) initial or b) for new link	TDS History Bulk File Build Pack
			SUC030 TDS real-time queries	TDS Real-time Build Pack
			SUC031 Query Agent Client List	Intermediation Build Pack
			SUC032 Query Customer Account Summaries	TDS Real-time Build Pack, operation Account.RetrieveAccountSummaries
			SUC033 Query Account Period Summaries	TDS Real-time Build Pack, operation Account.RetrievePeriodSummaries
			SUC034 Query Period Transaction List	TDS Real-time Build Pack, operation Transactions.RetrieveList
			SUC041.Link Software Provider	Software Intermediation Build Pack, operation SoftwareIntermediation.Link
			SUC042.Delink Software Provider	Software Intermediation Build Pack, operation SoftwareIntermediation.Delink
			SUC043.Query Software Provider Links	Software Intermediation Build Pack, operation SoftwareIntermediation.RetrieveClientList

Table 10. Use Cases and related documentation

3.4 Use cases described

3.4.1 Use Case PUC201 Authenticate and provide consent

This use case is included here at a high level for completeness. Full details of authentication are in the [Identity and Access Build Pack](#).

PUC201 – Authenticate and provide consent	
Primary Actor	Customer/Tax Agent
Secondary Actor	Software Provider Software Inland Revenue Identity and Access Service
Description	The goal of the user is to provide security details which enable the request for transactional details to be processed.
Inland Revenue systems involved	Gateway Services, START
Pre-Conditions	<p>User is licensed and has access to Software Provider software and is authenticated, authorised and logged in to that software. User has myIR Logon with delegated access to related tax accounts. This might be as employee of the entity or an employee of a Tax Agency.</p> <p>Software Provider software is Onboarded and therefore authorised to communicate with TDS (See Onboarding Pack for TDS).</p> <p>This use case assumes the user has taken an action in the Software Provider software that indicates they wish to receive tax data that they have access to at IR.</p> <p>The party whose data is to be subscribed to needs to be identified – one the user has delegated access to.</p>
Triggers	The request is sent using user's Software Provider software.
Constraints	The Software Provider has explicit consent from the user for receiving data for their clients.
Post-Conditions	The user request is accepted for processing
Use Case Scenarios	
1. Normal Flow	<ol style="list-style-type: none"> 1. The user lodges a valid request with Inland Revenue 2. Inland Revenue provides a valid unexpired OAuth2 token to the user. 3. Inland Revenue records successful validation. 4. Use Case Ends.


PUC201 – Authenticate and provide consent

2. Exception Flows	<p>In all the cases below the relevant error code will be returned. Request could be rejected because of:</p> <ol style="list-style-type: none"> 1. Invalid Software Provider software ID or incomplete onboarding 2. Invalid Tax Agency or Customer ID 3. Missing delegated permissions for logged in user to see tax information of the requested Tax Agency or Customer - myIR can be used to validate the information provided 4. Unavailability of, or internal error on the Gateway Services. Please contact Inland Revenue support. 5. The request message is garbled/unreadable - Inland Revenue sends the user a Signal Error Response Message. 6. There is an internal error within Inland Revenue - Inland Revenue responds to user with appropriate message. 7. The User name and/or password are incorrect - Inland Revenue responds to user with appropriate message and records the access attempt. 8. The user is valid, however does not have the correct permissions to use this service - for example: Is not a Tax Agent, or User has had their access revoked. Inland Revenue records the access attempt. 9. The structure of the information in the User Request is invalid. (i.e. does not conform to XML standard) – Inland Revenue records failure and responds to user with appropriate message. 10. The request information fails data validation checks - For example: Client IRD number is not 9 digits, fails modulus 11 checks - Inland Revenue fails request, records failure and responds to user with appropriate message
Alternative Flows	No alternatives

Table 11. Use case PUC201 Authenticate and provide consent

Navigate back to [3.3.1 Use Case Diagrams](#)

Navigate back to [3.3.5 Use Case Listing](#)

3.4.2 Use Case BUC101 Subscribe to tax data updates - a) Tax Agent

BUC101- Subscribe to tax data updates – a) Tax Agent	
User/Actors	Tax Agent
Secondary Actors	Software Provider software Transaction Data Services
Description	<p>The user goal is to subscribe to bulk transaction updates for their Clients.</p> <p>For Software Providers software: It is expected that in the initial uptake of the Bulk File Feed or History Bulk File Feed all Software Providers will provide Inland Revenue with a list of users to invoke PUC202 - Bulk Update of Software Provider Subscription - in advance of the first full file feeds (included below).</p> <p>This use case is for links not established in that initial phase. For accounting software the Bulk File logic and timing might not be applicable – an SFTP point (“Software Provider”) will need to be set up to consume bulk file and/or history bulk and that will be associated with one or a few Customers only.</p> <p>A Customer/Organisation who has been approved by Inland Revenue as a Tax Agent can choose whether to receive data as a Customer (Section 3.4.3) or as a Tax Agency (this use case). The file format received will depend on this decision. TDS does not require a Customer to be set up as a Tax Agent in order to get data.</p>
Inland Revenue systems involved	Inland Revenue’s Gateway Software Intermediation Service, Identity and Access Service
Pre-Conditions	<p>User is licensed and has access to Software Provider software and is authenticated, authorised and logged in to that software.</p> <p>User has myIR Logon with current authorised admin or owner access to the Tax Agency.</p> <p>Software Provider software is Onboarded and therefore authorised to communicate with TDS – See Section 5 of this document.</p>
Triggers	<p>The user takes an action in the Software Provider software that indicates they wish to have the tax data that they have access to at Inland Revenue pushed regularly to the Software Provider software they use.</p> <p>Depending on how the Software Provider software is structured this might be on first logging in, on first requesting Inland Revenue data, or an explicit request to have updates happen in the background.</p> <p>Whichever way this is done, the Software Provider is expected to have explicit consent from the user for subscribing to updates.</p>



BUC101- Subscribe to tax data updates – a) Tax Agent

Constraints

The request must be sent using user's Software Provider software.

User must have a valid login token. This could happen just prior to the start of this use case or might have happened previously. That login token must be available to the Software Provider software. If that login has timed out it might need to be repeated. An unexpired refresh token could be used to get a new access token.

The party whose data is to be subscribed to needs to be identified – one the OAuth2 token user has at least administrator delegated access to: User must be authorised at Inland Revenue myIR as a delegate with Owner or Administrator permissions on that Tax Agency.

Post-Conditions

A subscription link will be in place between the Software Provider software (represented by an SFTP site) and the Tax Agency Client List.

This subscription link will cause a file with an initial full dump and then daily and weekly updates to be added to any zip files the Software Provider software is receiving from Inland Revenue daily.

This link will also cause a one off Bulk History File to be sent to the Software Provider SFTP site - [Bulk History File Build Pack](#).

This content will be assimilated by the Software Provider software so the user on subsequent sessions using the Software Provider software will see recent changes and new transactions reflected.

Use Case Scenarios

1. Normal Flow

For specific use cases see:

- PUC210.Link Software Provider
- PUC211.Relink Software Provider
- PUC212.Query Software Provider Links
- PUC213.Delink Software Provider

See the systems use case in [Software Intermediation Build Pack](#) for the single technical step of interacting with Inland Revenue to create or maintain the link.

The steps before and after that depend on the Software Provider software; they are summarised in the preconditions and post conditions above.

2. Exception Flows

The variations depend on Software Provider software. See the systems use case in [Software Intermediation Build Pack](#) for exception flows around calling the Inland Revenue technical service.

3.Alternatives

It is expected that all Software Providers, in the initial uptake of the bulk feed or history bulk feed, provide Inland Revenue with a list of users prior to the first full file feeds – see PUC202 - Bulk Update of Software Provider Subscription – below and the onboarding section of this document – Section 5.

Table 12. BUC101 Subscribe to tax data updates – a) Tax Agent

3.4.3 Use Case BUC101 Subscribe to tax data updates – b) Customer

BUC101- Subscribe to tax data updates – b) Customer	
User/Actors	Customer
Secondary Actors	Software Provider Software Transaction Data Services
Description	<p>The user goal is to subscribe to bulk transaction updates for their Organisation.</p> <p>For Software Provider software: It is expected that in the initial uptake of the Bulk File Feed or History Bulk File Feed all Software Providers will provide Inland Revenue with a list of users to invoke PUC202 - Bulk Update of Software Provider Subscription (included below) - in advance of the first full file feeds.</p> <p>This use case is for links not established in that initial phase. For accounting software the Bulk File logic and timing might not be applicable – an SFTP point (“Software Provider”) will need to be set up to consume bulk file and/or history bulk and that will be associated with one or a few Customers only.</p> <p>A Customer/Organisation who has been approved by Inland Revenue as a Tax Agent can choose whether to receive data as a Customer (This use case) or as a Tax Agency (Section 3.4.2). The file format received will depend on this decision. TDS does not require a Customer to be set up as a Tax Agent in order to get data.</p>
Inland Revenue systems involved	Inland Revenue’s Gateway Software Intermediation Service, Identity and Access Service
Pre-Conditions	<p>User is licensed and has access to Software Provider software and is authenticated, authorised and logged in to that software.</p> <p>User has myIR Logon with current authorised access to relevant tax accounts. This might be as employee of the entity. Software Provider software is Onboarded and therefore authorised to communicate with TDS – see Section 5 of this document.</p>
Triggers and Constraints	<p>The user takes an action in the Software Provider Software that indicates they wish to have the tax data that they have access to at Inland Revenue pushed regularly to the Software Provider software they use.</p> <p>Depending on how the Software Provider software is structured this might be on first logging in, on first requesting Inland Revenue data, or an explicit request to have updates happen in the background.</p> <p>Whichever way this is done, the Software Provider is expected to have explicit consent from the user for subscribing to updates.</p>



BUC101- Subscribe to tax data updates – b) Customer

Constraints

The request must be sent using user's Software Provider software.

User must have a valid login token. This could happen just prior to the start of this use case or might have happened previously. That login token must be available to the Software Provider software. If that login has timed out it might need to be repeated. An unexpired refresh token could be used to get a new access token.

The party whose data is to be subscribed to needs to be identified – one the OAuth2 token user has at least administrator delegate access to: User must be authorised at Inland Revenue myIR as delegate with Owner or Administrator permissions on the Customer, and therefore authorised to view data for that Customer and Account.

Post-Conditions

A subscription link will be in place between the Software Provider software and Customer.

This subscription link will cause a file with an initial full dump and then daily and weekly updates to be added to any zip files the Software Provider software is receiving from Inland Revenue daily.

This link will also cause a one off Bulk History File to be sent to the Software Provider SFTP site - [Bulk History File Build Pack](#).

This content will be assimilated by the Software Provider software so the user on subsequent sessions using the Software Provider software will see recent changes and new transactions reflected.

Use Case Scenarios

1. Normal Flow

For specific use cases see:

- PUC210.Link Software Provider
- PUC211.Relink Software Provider
- PUC212.Query Software Provider Links
- PUC213.Delink Software Provider

See the systems use case in [Software Intermediation Build Pack](#) for the single technical step of interacting with Inland Revenue to create or maintain the link.

The steps before and after that depend on the Software Provider software; they are summarised in the preconditions and post conditions above.

2. Exception Flows

The variations depend on Software Provider software. See the systems use case in [Software Intermediation Build Pack](#) for exception flows around calling the Inland Revenue technical service.

3.Alternatives

It is expected that all Software Providers, in the initial uptake of the bulk feed or history bulk feed, provide Inland Revenue with a list of users prior to the first full file feeds – see PUC202 - Bulk Update of Software Provider Subscription – below and the onboarding section of this document – Section 5.

Table 13. BUC101 Subscribe to tax data updates - b) Customer

3.4.4 Use Case PUC202 Bulk Update of Software Provider Subscription

Also 'SUC Bulk Link Software Provider'

Note: This is a Transition Use case for the one off purpose of loading Links between Software Providers and their Customers/Tax Agents. In future, this will be managed by SUC010 – detailed in the [Software Intermediation Build Pack](#).

PUC202 - Bulk Update of Software Provider Subscription	
User/Actors	Software Provider software
Secondary Actor	START
Description	<p>The goal of the Software Provider software is to update multiple Inland Revenue links at once between Software Provider and Tax Agency Client Lists or Software Provider and Customer.</p> <p><i>Note: This is expected to be a one-off service at transition.</i></p>
Inland Revenue systems	START
Pre-Conditions	<p>Software Provider software is Onboarded and therefore authorised to communicate with TDS (See Onboarding in Section 5 of this document).</p> <p>It is expected that all Software Providers that are part of the initial uptake of the bulk feed or history bulk feed provide Inland Revenue with a list of users to link in advance of the first full file feeds.</p> <p>It is expected that the Software Provider has explicit consent from the Tax Agent or Customer to create a link between them.</p>
Triggers	File sent from Software Provider of the Client List IDs and direct Customers to be linked. See Software Intermediation Build Pack for details.
Constraints	This bulk linking will happens once only during each group of Account transitions to the new Inland Revenue systems.
Post-Conditions	A subscription link will be in place between the Software Provider and the Tax Agency Client Lists or Customers using their software.
Use Case Scenarios	
1. Normal Flow	<ol style="list-style-type: none"> Software Provider software provides Inland Revenue with Customer Account and/or Tax Agent list to be uploaded. See section 5.3 Initial Bulk Linking for file format and exchange. Inland Revenue uploads file and creates link between Software Provider software and Customer/Tax Agency Client Lists (SUC040 Bulk Link Software Providers) Use case ends
2. Exception Flows	This is a one off exercise and any fallout from the upload will be communicated directly to the Software Provider concerned.
3. Alternatives	No alternatives for initial Software Provider transition.

For additional users linked later the web service will be used – see BUC101.

Table 14. PUC202 Bulk Update of Software Provider Subscription

3.4.5 Use Case PUC210 Link Provider

PUC210 Link Software Provider	
User/Actors	Software Platform
Secondary Actor	User giving permission for linking their tax entity or tax agency
Description	The goal of the Software Provider software is to establish an Inland Revenue link from Software Provider in order to subscribe to daily bulk updates for either Tax Agency Client Lists or Customer Accounts . (See BUC101 a) and b) above (3.4.2) for the difference.)
Inland Revenue systems	START
Pre-Conditions	<p>Software Provider software is Onboarded and therefore authorised to communicate with TDS. See Section 5 of this document.</p> <p>It is expected that all Software Providers that are part of the initial uptake of the bulk feed or history bulk feed provide Inland Revenue with a list of Tax Agents and or Customer Accounts for their users to link in advance of the first full file feeds (PUC 202 - Section 3.4.4). This use case is for subsequent linking and link maintenance afterwards.</p> <p>It is expected that the Software Provider has explicit consent from the Tax Agent or Customer to create a link between them.</p>
Triggers	User decision to use a Software Platform in a way that justifies bulk updates and therefore a Software Intermediation link from the Software Platform to Tax Agency Client Lists or Customer Accounts
Constraints	User must be set up in eServices with owner or administrator permission for the entity they are linking
Post-Conditions	A subscription link will be in place between the Software Provider and the Tax Agency Client Lists or Customer using their software.
Use Case Scenarios	
1. Normal Flow	<ol style="list-style-type: none"> 1. User of a Software Platform representing the Tax Agency Client Lists or Customer signs onto Software Provider software and navigates to use Inland Revenue Gateway Services. 2. Software Provider software user is given an independent browser session for the user to log onto the Inland Revenue site. 3. At the end of this logon sequence an OAuth token is returned for use in further calls to the Gateway Services.



	<p>See the Identity and Access Build Pack for more information.</p> <p>4. The Software Provider software uses this token in a call to the Inland Revenue Software Intermediation Gateway Service Link Operation to request the creation of a link.</p> <p>5. The Software Platform and user receive confirmation the link has been created.</p> <p>See SUC041.Link Software Provider (Software Intermediation Build Pack, operation SoftwareIntermediation.Link)</p>
2. Exception Flows	<p>See SUC041.Link Software Provider (Software Intermediation Build Pack, operation SoftwareIntermediation.Link)</p> <p>Operation can be repeated and will not establish a new link if link exists already, unless if it is deleted first. This is to avoid unneeded full bulk file generation which happens the day after a new link is created. See relink use case for triggering full file creation.</p>
3. Alternatives	<p>Only alternative is for initial Software Provider transition to use bulk linking (Section 3.4.4 above)</p>

Table 15. PUC210 Link Software Provider

3.4.6 Use Case PUC211 Relink Software Provider

PUC211 Relink Software Provider	
User/Actors	Software Platform or user
Secondary Actor	
Description	<p>A new link from a Software Platform and a Tax Agency Client List or Customer Account results in a full dump of all related Transaction data in the overnight bulk file feed. This might be required at times by a Software Provider, but to ensure it doesn't happen accidentally and clog up both systems, it needs to be explicitly triggered.</p> <p>In order to explicitly relink a Software Platform to a Tax Agency Client List or Customer Account it has to be Delinked first and then Linked again.</p> <p><i>Note: When a delink and relink occurs a full History File will also be sent via SFTP – See Bulk History Feed Build Pack</i></p> <p>This use case might be invoked if a Platform or user realises a lot of data has been lost or corrupted and wishes to pull the full set from Inland Revenue again.</p> <p>Can apply to either a Tax Agency Client List or Customer Accounts. (See BUC101 a) and b) above (3.4.2) for the difference.)</p>
Inland Revenue systems	START
Pre-Conditions	This relates to a Software Platform that is already linked to a Tax Agency Client List or Customer Account.



PUC211 Relink Software Provider	
	Please see the pre-conditions on the individual use cases corresponding to the Normal flow steps
Triggers	This use case might be invoked if a Platform or user realises a lot of data has been lost or corrupted and wishes to pull the full set from Inland Revenue again.
Constraints	Please see the constraints on the individual use cases corresponding to the Normal flow steps
Post-Conditions	A new link from a Software Platform and a Tax Agency Client List or Customer Account is in place and results in a full dump of all related Transaction data in the overnight bulk file feed.
Use Case Scenarios	
1. Normal Flow	<ol style="list-style-type: none"> 1. (Optional) See SUC043.Query Software Provider Links (Software Intermediation Build Pack, operation SoftwareIntermediation.RetrieveClientList) 2. See SUC042.Delink Software Provider (Software Intermediation Build Pack, operation SoftwareIntermediation.Delink) 3. See SUC041.Link Software Provider (Software Intermediation Build Pack, operation SoftwareIntermediation.Link) 4. Use case ends
2. Exception Flows	Please see the related steps and their individual use cases
3. Alternatives	None.

Table 16. PUC211 Relink Software Provider

3.4.7 Use Case PUC212 Query Software Provider Links

PUC212 Query Software Provider Links	
User/Actors	Administrators or administrative batch jobs
Secondary Actor	
Description	<p>A software provider needs the ability to see what Tax Agency Client Lists and Customer Accounts are currently linked to its Software Platform(s) for bulk updates in order to maintain this list as its user base evolves and thereby keep the bulk data to be processed relevant. Includes both links to Tax Agency Client Lists and Customer Accounts. (See BUC101 a) and b) above (3.4.2) for the difference.)</p> <p>There is no specific end user involved in this type of maintenance and Inland Revenue has created user delegation on the Software Platform record that can be used as security for this operation to prevent it being misused by a third party (especially for Software Platforms that are desktop endpoint consumers and don't get validated by a TLS certificate). myIR portal can be used to add or modify additional administrative</p>



PUC212 Query Software Provider Links	
	<p>myIR Logons for this purpose and for Delinking. Please refer to Section 6 Delegation and permissions for more information</p> <p>There is no Gateway Service operation to get a list of all Software Platforms a Tax Agency Client List or Customer Account is linked to. Inland Revenue is looking at making this information available on myIR for scenarios where erstwhile users of a Software Platform can confirm they have been delinked after abandoning their usage of a Software Platform.</p>
Inland Revenue systems	START
Pre-Conditions	<p>An onboarded Software Platform</p> <p>A known administrative myIR Logon delegated to act on it with the user at hand or a Refresh token sequence to represent the user.</p>
Triggers	<p>Request from administrator or administrative batch job at Software Provider to get an up to date list of Software Intermediation Links for the Software Platform.</p> <p>Note this information is supplied daily in the TDS bulk feed and therefore the real time request is more likely to be needed only when administrative changes are being made.</p>
Constraints	
Post-Conditions	An up to date list of Software Intermediation Links to a Software Provider has been supplied and processed.
Use Case Scenarios	
<i>1. Normal Flow</i>	<ol style="list-style-type: none"> Administrator logs into Inland Revenue to get an OAuth token OR Administrative batch job uses refresh tokens to keep a long running session going and get an OAuth access token therefore. Token is used in service call. See SUC043.Query Software Provider Links (Software Intermediation Build Pack, operation SoftwareIntermediation.RetrieveClientList) Administrator or administrative batch job consolidates response data with Software Provider list of active users and identifies missing or superfluous links Administrator or administrative batch job calls Delink for undesired Tax Agency Client List or Customer Account data updates where related users are no longer using the platform. If required links are missing Software Platform flags it for attention of end user with when next logged in to login with their myIR Logon and allow the linking to be done. Use case ends
<i>2. Exception Flows</i>	<p>See SUC043.Query Software Provider Links</p> <ul style="list-style-type: none"> (Software Intermediation Build Pack, operation SoftwareIntermediation.RetrieveClientList)
<i>3. Alternatives</i>	This information is supplied daily in the TDS bulk feed

Table 17. PUC212 Query Software Provider Links



3.4.8 Use Case PUC213 Delink Software Provider

PUC213 Delink Software Provider	
User/Actors	Administrators or administrative batch jobs
Secondary Actor	
Description	<p>A software provider needs the ability to unlink its Software Platform from Tax Agency Client List and Customer Accounts currently linked to its Software Platform(s) for bulk updates in order to keep the bulk data to be processed relevant as its users depart.</p> <p>There is expected to often be no specific end user involved in this type of maintenance and Inland Revenue has created user delegation on the Software Platform record that can be used as security for this operation to prevent it being misused by a third party (especially for Software Platforms that are desktop endpoint consumers and don't get validated by a TLS certificate). myIR portal can be used to add or modify additional administrative myIR Logons for this purpose and for retrieving a list of current links. Please refer to Section 6 Delegation and permissions for more information</p> <p>Applies to either a link to a Tax Agency Client List or to a Customer Account. (See BUC101 a) and b) above (3.4.2) for the difference.)</p>
Inland Revenue systems	START
Pre-Conditions	<p>An onboarded Software Platform</p> <p>A known administrative myIR Logon delegated to act on it with the user at hand or a Refresh token sequence to represent the user.</p>
Triggers	Calculation from administrator or administrative batch job at Software Provider that a specific Tax Agency Client List or Customer Account is no longer in active use on the Software Platform and therefore the Software Intermediation link from the Software Platform to it needs to be removed, i.e. it needs to be delinked.
Constraints	
Post-Conditions	The Software Intermediation link from the Software Platform to the Tax Agency Client List or Customer Account has been removed. Bulk feeds will no longer contain any related data.
Use Case Scenarios	
1. Normal Flow	<ol style="list-style-type: none"> 1. Trigger identifies need to delink a Tax Agent or Customer Account 2. Administrator logs into Inland Revenue to get an OAuth token OR Administrative batch job uses refresh tokens to keep a long running session going and get an OAuth access token therefore.



	3. Token is used in service call. Delink operation invoked - See SUC042.Delink Software Provider (Software Intermediation Build Pack , operation SoftwareIntermediation.Delink) 4. Software platform might archive data or have other related processes for cleaning out related user data 5. Use case ends
2. Exception Flows	Please refer to the Software Intermediation Build Pack, operation SoftwareIntermediation.Delink
3. Alternatives	None

Table 18. PUC213 Delink Software Provider

3.4.9 Use Case PUC203 Process Updates

PUC203 – Process Updates	
User/Actors	Software Provider software
Secondary Actor	Inland Revenue Transaction Data Services
Description	The user goal is to process data received from TDS for later presentation through the software.
Inland Revenue systems involved	Bulk File
Pre-Conditions	<p>Software Provider software is Onboarded and therefore authorised to communicate with TDS (See Section 5 of this document).</p> <p>The Software Provider software is set up as a receiver of daily transaction data updates from Inland Revenue as bulk files over SFTP.</p> <p>It is expected all Software Providers in the initial uptake of the bulk feed or history bulk feed provide Inland Revenue with a list of users to invoke PUC202 - Bulk Update of Software Provider Subscription in advance of the first full file feeds.</p>
Triggers	<p>Inland Revenue daily batch processing generates files for Software Provider software subscription. These files are added to zip files that are PGP signed and encrypted and sent to the Software Provider software at an onboarded SFTP location waiting for it.</p> <p>This subscription link will cause a file with an initial full dump and then daily updates to be added to any zip files the Software Provider is receiving from Inland Revenue daily.</p>
Constraints	
Post-Conditions	The updates have been assimilated within the Software Provider Software so a Tax Agent or Customer on subsequent sessions using the software will see the data reflected.
Use Case Scenarios	



PUC203 – Process Updates	
1. Normal Flow	<p>The steps after the SFTP transfer completes depend on the Software Provider Software.</p> <p>Once all the file content has been transferred, the Software Provider software will process the file content and make it available to the software instances used by the users of the requesting organisations.</p>
2. Exception Flows	The variations depend on Software Provider software.
3. Alternatives	No alternatives

Table 19. PUC203 Process Updates

3.4.10 Use Case PUC204 Consolidate Transaction History

PUC204 - Consolidate Transaction History	
User/Actors	Software Provider software
Secondary Actor	Inland Revenue Transaction Data Services
Description	<p>The user goal is to consolidate transaction history data for a Customer for later presentation through their software.</p> <p><i>Note: This use case is for Tax Agents using Software Provider software where they previously received Customer data from the Tax Agent Web Service and where they have annotated or linked in the Tax Agent Web Service data they already hold.</i></p> <p>This use case facilitates replacing that Tax Agent Web Service data with new migrated TDS START data. The use case plugs possible gaps in the previously received history for that period and relates it to the new transaction IDs. This allows the Software Provider software and or Tax Agent to move the annotations or links from the Tax Agent Web Service data to the new TDS START data and use that as the point of reference going forward.</p>
Inland Revenue systems	Intermediation Service, Identity and Access Service (IAS)
Pre-Conditions	<p>Software Provider software is Onboarded and therefore authorised to communicate with TDS (See Onboarding Pack for TDS)</p> <p>Either the Customer or the Tax Agency Client List has been linked to the Software Provider software for their use of that software in Inland Revenue's Software Intermediation Service – See Onboarding and Build Pack for Software Intermediation Service.</p>
PUC204 a)	Consolidate Transaction History – a) initial
Pre-Conditions	In addition to the above, the Software Provider software has to be linked to the Tax Agency Client List or Customer at the time of the Inland Revenue cutover to be included in this bulk one off feed. This requires the Software Provider to provide



PUC204 - Consolidate Transaction History	
	relevant Tax Agency Client List or user IRD numbers to Inland Revenue for bulk linking – see PUC202 above.
Triggers	The Software Provider software receives Transaction History Bulk File from Inland Revenue.
Constraints	
Post-Conditions	The Transaction History data has been assimilated within the Software Provider software so a Tax Agent or Customer on subsequent sessions using the Software Provider software will see the historic data reflected.
Use Case Scenarios	
1. Normal Flow	<ol style="list-style-type: none"> Software Provider software receives Transaction History Data through TDS History Bulk File Feed - see the systems use case (SUC 002 in TDS History Bulk File Feed Build Pack) for details. The steps within the Software Provider software depend on that software. In principle: <ol style="list-style-type: none"> Tax Agent Web Service data would already be stored and will be matched with this data through the original Tax Agent Web Service transaction ID links. Gaps in the kept Tax Agent Web Service data would then also be filled. Those Tax Agent Web Service transactions will then be matched to the new TDS data from the TDS bulk feed (non-history) to prevent duplication. The Tax Agent Web Service data will typically be replaced with the new data over time and links and annotations will be moved across. Use case ends
2. Exception Flows	The variations depend on Software Provider software. See the systems use case (SUC 002 in TDS History Bulk File Feed Build Pack) for exception flows around the use of the TDS History Feed technical service.
3. Alternatives	No alternatives
PUC204 b) Consolidate Transaction History – b) for new links	
Pre-Conditions	<p>When a new Software Intermediation link is created between a Software Provider and a Tax Agency Client List or Customer a Bulk History File will be created and sent via SFTP. In addition where a new Client is added to a Tax Agency Client List a History File will be created for that Client and sent via SFTP. See Bulk History File Feed Build Pack.</p> <p>In cases where the Tax Agent in the Software Provider software already has equivalent Tax Agent Web Service data and has annotations or links next to it requiring consolidation; rather than just replacing the data this use case can be invoked.</p>
Triggers	The Software Provider software receives Transaction History Bulk File from TDS that contains data correlating with Tax



PUC204 - Consolidate Transaction History	
	Agent Web Service data already existing in that software and possibly already annotated or linked.
Constraints	
Post-Conditions	The Transaction History data has been assimilated within the Software Provider software so a Tax Agent or Customer will see the historic data reflected on subsequent sessions using the Software Provider software.
Use Case Scenarios	
1. Normal Flow	<ol style="list-style-type: none"> Software Provider software receives Transaction History Data through TDS History Feed - see the systems use case (SUC 002 in TDS History Bulk File Feed Build Pack) for details. The steps within the Software Provider software depend on that software. In principle: <ol style="list-style-type: none"> Tax Agent Web Service data would already be stored and will be matched with this data through the original Tax Agent Web Service transaction ID links. Gaps in the kept Tax Agent Web Service data would then also be filled. Those Tax Agent Web Service transactions will then be matched to the new TDS data from the TDS bulk feed (non-history) to prevent duplication. The Tax Agent Web Service data will typically be replaced with the new data over time and links and annotations moved across. Use case ends
2. Exception Flows	<p>The variations depend on Software Provider software</p> <ol style="list-style-type: none"> See the systems use case (SUC 020 in TDS History Bulk Feed Build Pack) for exception flows around the use of the TDS History Feed technical service.
3. Alternatives	No alternatives

Table 20. PUC204 Consolidate transaction history



3.4.11 Use Case PUC205 Synchronise out of date data

PUC205 – Synchronise out of date data	
User/Actors	Software Provider software
Secondary Actor	Inland Revenue Transaction Data Services
Description	<p>The system goal is to update and synchronise data within a period (or possibly periods), where the Bulk File Feed Period Summary data has shown that the Software Provider software does not hold up to date data, ie Software Provider software has identified a difference in the Last Activity date and kicks off this process to fix it being out of synch.</p> <p>The difference will manifest as either Period Balance or Last Activity Date (or both), sent in the overnight Bulk File not matching data already held by the Software when there are no transactions identified to account for the difference.</p> <p>This process is a workaround for a potential malfunction and might be manually facilitated, depending on Software Provider risk aversion and investment level.</p> <p>This use case is for automated response to discrepancies. For user requests to call real-time data please see BUC104 and BUC105</p>
Inland Revenue systems	Gateway Services
Pre-Conditions	Bulk file feed has been subscribed to and data has been received.
Triggers	Over time, an error in one of the systems, or between them, has caused data to not be fully or accurately updated or stored in the Software Provider software. The period summaries in the weekly bulk file or the balances in the daily file identifies to the Software Provider software that there is a gap in the transactions stored for a period.
Constraints	
Post-Conditions	The Account/Period data has been updated in the Software Provider software; is synchronised and presented to the requestor through that software as and when relevant.
Use Case Scenarios	



PUC205 – Synchronise out of date data	
1. Normal Flow	<ol style="list-style-type: none"> As per the trigger a weekly or daily Bulk Feed update has indicated to the Software Provider software that there is a gap in the data for a period. Either A(step 3) an existing user session, or B(step 4) a new user session, is used to get an OAuth token to allow the Software Provider software to call the Real Time web services: <ol style="list-style-type: none"> Option A) the Software Provider software kept an existing user session alive in the background using a refresh token (available only on cloud endpoint). Refer to the Identity and Access Build Pack for more information. Option B) the Tax Agent user logs in to Software Provider software and gets a message the software needs to connect to IRD so synchronise data. Software Provider software starts an independent browser session for the user to log onto the Inland Revenue site. At the end 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. The Software Provider software uses this token in a call to SUC032 –operation Account.RetrieveAccountSummaries to request an Account Summary for the relevant Account. If the max activity date returned for that account is not newer than what was already in the software it implies that there is no new data to retrieve, but still the existing gap. It will call SUC033 – Operation Account.RetrievePeriodSummaries to retrieve Period Summaries for that account. Only on those periods where there is the identified gap or a newer max activity date than what is already in the software will it call SUC034 – Operation Transactions.RetrieveList to get a full list of all transactions and update its records. The user might be visually shown what data was updated in the process. For any of the calls above as new data is returned it is stored in the software which also ensure the latest max activity date is stored is it is returned at Account and Period level, so future sessions don't unnecessarily repeat the same requests.
2. Exception Flows	The variations depend on Software Provider software
3. Alternatives	<p>This process is a workaround for a potential malfunction and might be manually facilitated depending on Software Provider risk aversion and investment level around this.</p> <p>The Software Provider might elect to request an ad hoc bulk feed file in cases like this – which are expected to be rare.</p>

Table 21. PUC205 Synchronise out of date data

3.4.12 Use Case BUC103 Query Tax Data Real Time

BUC103 - Query Tax Data Real Time	
User/Actors	Customer/Tax Agent
Secondary Actor	Software Provider software Inland Revenue Transaction Data Services
Description	<p>This is an umbrella use case followed by more specific use cases that have reasons in common. Namely, each has a justification for calling the TDS Real Time service rather than solely relaying on the TDS Bulk File Feed. Please see BUC 104, BUC105, and PUC 205 for more detail.</p> <p>The user or system goal is to get complete, up to date Real Time data for a specific Customer, Account and Period.</p>
Inland Revenue systems	Gateway Services, Identity and Access Service (IAS)
Pre-Conditions	<p>User is licensed and has access to Software Provider or Accounting Software and is authenticated, authorised and logged in to that software.</p> <p>User has myIR Logon with current authorised access to relevant tax accounts. This might be as an employee of the Customer or as an employee of a Tax Agency.</p> <p>Software Provider is onboarded and therefore authorised to communicate with TDS (See Section 5 Onboarding in this document and the Onboarding Pack for TDS).</p>
Triggers	The user or software requests transaction detail for a specific Customer/Account/Period through the Software Provider software. See individual use cases for specific triggers.
Constraints	<p>The request must be sent using the user's Software Provider software.</p> <p>User must have a valid login token.</p> <p>That login token must be available to the Software Provider.</p> <p>If that login has timed out it might need to be repeated or the refresh token used.</p> <p>User must be authorised at Inland Revenue as a Tax Agent for that Customer (or delegated employee of the Customer), and therefore authorised to view data for that Customer and Account.</p> <p>Individual Real Time requests are only for a single Client of the User at a time.</p> <p>Only Transactions that have been posted to the Customer's Account will be provided to the User at the time of the request.</p>
Post-Conditions	The data requested by the User or system is absorbed by the Software Provider software and presented when relevant.

Table 22. BUC103 Query Tax Data Real Time

3.4.13 Use Case BUC104 Query New data urgent subset

BUC104 - Query New data urgent subset	
User/Actors	Customer/Tax Agent
Secondary Actor	Software Provider software Inland Revenue Transaction Data Services
Description	Customer/Tax Agent has new client or new software package and wishes to retrieve data for specific Accounts and specific Periods before the overnight Bulk File push. (If the tax agent wants to do a double check on an existing client for some reason that would be BUC105 below).
Inland Revenue systems	Gateway Services, Identity and Access Service (IAS)
Pre-Conditions	User is licensed and has access to Software Provider software and is authenticated, authorised and logged in to that software. User has myIR Logon with current authorised access to relevant tax accounts. This might be as an employee of the Customer or as an employee of a Tax Agency. Software Provider software is onboarded and therefore authorised to communicate with TDS (See Section 5 of this document).
Triggers	There might be some urgent periods to look at and Tax Agent/Customer decides not to wait for overnight Bulk Feed but to look at a small subset of the data through Real Time queries. User of the Software Provider software has not yet received the bulk file feed for this data (that would be BUC 105) due to the client or package or sign up or linking being new.
Constraints	The request must be sent using the user's Software Provider Software. User must have a valid login token. That login token must be available to the Software Provider. If that login has timed out it might need to be repeated. User must be authorised at Inland Revenue as a Tax Agent for that Customer (or delegated employee of the Customer), and therefore authorised to view data for that Customer and Account. The request is only for a single client of the User. Only Transactions which have been posted to the Customer's Account will be provided to the User at the time of the request.
Post-Conditions	The data requested by the User is presented by the Software Provider software.



BUC104 - Query New data urgent subset

Use Case Scenarios

1. Normal Flow	<ol style="list-style-type: none"> 1. User signs onto Software Provider software and navigates to look at Inland Revenue data. The user starts requesting transaction detail for a specific Customer by Account and by Period through the Software Provider software – the mechanism might vary widely depending on the actual software. 2. Software Provider software starts an independent browser session for the user to log onto the Inland Revenue site. At the end of this logon sequence, an OAuth token is returned for use in further calls to the Gateway Services. Alternatively, an existing session might be used. See the Identity and Access Build Pack for more information. 3. Optional: If the user is a Tax Agent the Software Provider software uses this token in a call to the Inland Revenue Intermediation Gateway service to request a Client List to verify this customer is still linked. The software receives, updates, and displays the Client List. Alternatively, this step might be skipped if the Client is already identified or the user is not a Tax Agent but directly associated with the Customer organisation. 4. The user selects an Inland Revenue Customer to look at. 5. The Software Provider software reuses the token in a call to Account.RetrieveAccountSummaries to request Account Summaries for the Customer tax entity. 6. The User receives the Account Summary data and selects an Account for the Customer tax entity. 7. The Software Provider software reuses the token (possibly has to renew the token depending on the time that has passed) in a call to Account.RetrievePeriodSummaries to request the Period summaries for that Account. 8. The User receives the Period Summary data and chooses to request a Transaction listing for one specific Period. 9. The Software Provider software reuses the token (possibly has to renew the token depending on the time that has passed) in a call to Transactions.RetrieveList to request the transactions for that period for that Client Account. 10. Steps 4 to 9 repeat if the user keeps navigating across Periods, Accounts and Customers to cover work that is urgent that cannot wait for the overnight Bulk File Feed. After each step the local records are updated, the display is updated and the user is given relevant options. 11. User might do other work in the Software Provider software and eventually logs off and terminates session. 12. The next morning all data will be updated due to the bulk file feed.
2. Exception Flows	<p>Any variations depend on Software Providers and Accounting Software packages.</p> <p>See the systems use case SUC 030 in TDS Real Time Feed Build Pack for exception flows around the use of the TDS Real Time Feed technical service.</p>


BUC104 - Query New data urgent subset

3. Alternatives	<p>If the user was already using the Software Provider software and the Tax Agency Client List/Customer was already linked at the time of the initial bulk Software Provider linking, the content would already be available from bulk file feed.</p> <p>If data is not urgently needed it will be provided overnight in the bulk file feed.</p>
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Table 23. BUC104 Query new data urgent subset
3.4.14 Use Case BUC105 Check whether data is up to date
BUC105 – Check whether data is up to date

User/Actors	Customer/Tax Agent
Secondary Actor	Software Provider or Accounting software Inland Revenue Transaction Data Services
Description	<p>The user goal is to verify if the data held in the Software Provider software is up to date.</p> <p>This could be to check particular transactions such as receipt of payments, transfers, etc.</p> <p>Alternatively, the Tax Agent/Customer might have noticed on myIR there is a newer transaction not reflected in their Software Provider software and decides to bring the software up to date. This would happen automatically after the overnight bulk file feed but might be for the few transactions that come in during a day, such as a large payment run.</p>
Inland Revenue systems	Gateway Services, Identity and Access Service (IAS)
Pre-Conditions	<p>User is licensed and has access to Software Provider software and is authenticated, authorised and logged in to that software</p> <p>User has myIR Logon with current authorised access to relevant tax accounts. This might be as an employee of the Customer or as an employee of a Tax Agency.</p> <p>Software Provider software is onboarded and therefore authorised to communicate with TDS (See Onboarding Pack for TDS)</p>
Triggers	The user decides to request an update to Customer Account Transaction Data through the Software Provider software.
Constraints	<p>The request must be sent using the user's Software Provider software.</p> <p>User must have a valid login token. (This could happen just prior to the start of this use case or might have happened previously.)</p> <p>That login token must be available to the Software Provider software.</p>


BUC105 – Check whether data is up to date

	<p>If that login has timed out it might need to be repeated.</p> <p>User must be authorised at Inland Revenue as a Tax Agent for that Customer (or delegated employee of the Customer), and therefore authorised to view data for that Customer and Account.</p> <p>Each request is only for a single client of the User.</p>
Post-Conditions	<p>The User request has been received by GWS. See SUC030 and subsidiary use cases in TDS Real Time Build Pack.</p>
Use Case Scenarios	
1. Normal Flow	<ol style="list-style-type: none"> 1. User initiates request for transaction data for a specific Customer/Account/Period in their Software Provider software to be refreshed from Inland Revenue. 2. Software Provider software invokes that request to TDS - See systems use case (SUC 034 – Query Period Transaction List - in TDS Real Time Feed Build Pack) for details. 3. Usually there will be no new data due to the overnight Bulk File Feed and the use case would end here. 4. If there is new data and the max activity date has changed then the software needs to update its copy of the Account level max activity date by checking at that level: 5. Software Provider software invokes request to TDS - See systems use case (SUC 032 – Query Customer Account Summary - in TDS Real Time Feed Build Pack) for details. 6. Software Provider software receives the response, and sets the max activity date and balances on the Account data. 7. Software Provider software invokes request to TDS - See systems use case (SUC 033 – Query Account Period Summaries - in TDS Real Time Feed Build Pack) for details. 8. Software Provider software receives the response, identifies any periods that have changed. 9. For each period that has changed Software Provider software invokes a Transaction Detail request to TDS - See systems use case (SUC 034 – Query Period Transaction List - in TDS Real Time Feed Build Pack) for details. Each such period is updated in the records. 10. In the Software Provider software all data for that Account is now up to date and the balances and max activity dates at transaction, Period, and Account level match. 11. Use case ends
2. Exception Flows	<p>Any variations depend on Software Providers software packages.</p>
3. Alternatives	<p>If updated data is not urgently needed it will be provided overnight in the bulk file feed.</p>

Table 24. BUC105 Check whether data is up to date



4 Processes

Note: The processes in this section are illustrative and represent possible sequences in which the Gateway Services could be used. Variations are possible and expected.

The Transaction Data Services provides automated lookup abilities to external parties to incorporate into their accounting software and processes. As such, the end to end process of the customer is not controlled by, or visible to Inland Revenue. The points at which those processes can interact with TDS data are many and are individually considered use cases in these build packs.

This section aims to help clarify the overall flow of how those use cases could be sequenced in order to dovetail into the external party process controlled by the software or people. It also aims to progressively create a context for understanding the usage of the various components through the following steps:

1. The typical overall flow and sequence of events are summarised from an abstract and then from a relatively technical perspective in Section 3.1 above.
2. Section 4.1 "Sample process scenarios and technical components" introduces the sample process scenarios and maps out which processes use which technical components and identifies the services being used.
-
3. Section 4.2 "Sample process scenarios and related use case walk-throughs" details a walkthrough of each of these sample process variations introduced referencing the steps in the scenario and the use cases applied.
-
4. The technical service and resource service build packs (as listed under [Related documents](#)) then describe each of those use cases in more detail in terms of what the exact interaction and exception variations could be and what sample payloads look like.

4.1 Sample process scenarios and technical components

Some sample end to end process scenarios have been defined to show how the various use cases line up to help facilitate that scenario. The intention of these processes is to show enough variation of how they would typically be used. This will make it easier to identify the relevant use cases and sequences for specific processes an external party might use.

Section 4.2 below works through the process scenarios and relates them to the use cases in Section 3 above.

Below are some sample process scenarios showing which technical components might be utilised to fulfil the scenario:



Sample process scenarios	Functionality	Software Provider Linking	Agent to Client Linking	Delegation in eServices	Full file push	Daily Push	Query accounts	Query transactions	History Feed
	Technical component	Software Intermediation GWS	Intermediation GWS	myIR	Bulk file Feed	Bulk file Feed	Accounts GWS	Transactions GWS	Bulk History File
	Implications								
I. Tax Agent starts using Software Provider software to look at data of current clients, subscribes for updates, repeatedly has sessions to look at the data over subsequent days	Data for linked clients, provided through bulk file feed the next morning, daily updates thereafter	Y			Y	Y	Y	Y	Y
II. Delegated employee accesses Inland Revenue through Software Provider software and subscribes for updates; repeatedly has sessions over subsequent days	Data for the organisation is provided through bulk file the next morning, with daily updates thereafter	Y		Y	Y	Y	Y	Y	Y
III. Delegated employee accesses Inland Revenue transaction feed through Software Provider software and does NOT subscribe for updates, but repeatedly has sessions to look at the data over subsequent days using real-time access only	Suitable for smaller organisations with small datasets and infrequent need to query	Y		Y				Y	
IV. New Client is adopted by Tax Agency	As part of on-going daily file feeds the next morning would have the full data for the newly added client including History		Y		Y	Y			Y

Table 25. Sample Process Scenarios and technical components

4.2 Sample process scenarios and related use case walk-throughs

4.2.1 Sample Scenario I – Tax Agent to Software Provider Linking and Subscription

Description Scenario I	<p>Tax Agent starts using Software Provider software to look at data of current Clients; subscribes for updates and repeatedly has sessions to look at the data over subsequent days.</p> <p>This extended use case covers the five stages (see figure below) of the general process following on from the initial trigger:</p> <ul style="list-style-type: none"> A. FIRST USER SESSION (ON RELATED CLIENT, IN SPECIFIC SOFTWARE PROVIDER SOFTWARE PRODUCT) B. EXTENDED USER SESSION HOURS LATER C. NEXT MORNING, FIRST ONE AFTER SUBSCRIBING D. SUBSEQUENT USER SESSIONS AFTER FIRST OVERNIGHT RUN E. SUBSEQUENT DAYS
Actors	Tax Agent
Systems	<ul style="list-style-type: none"> ▪ Software Provider software ▪ Inland Revenue – Gateway Services, TDS bulk file feed
Pre-conditions	<p>Tax Agency is registered with Inland Revenue as Tax Agent, and linked to Clients for Tax Types for whom data will be being requested.</p> <p>Tax Agent has a valid myIR Logon with current authorised access to relevant tax accounts</p>
Triggers	Login of Tax Agent into Software Provider software that is integrated with Inland Revenue Transaction Data Services
Post-conditions	Software Provider software has received accurate, complete data for the Client(s) requested and subscribed for future transaction data updates in that software

Table 26. Sample Process Scenario I

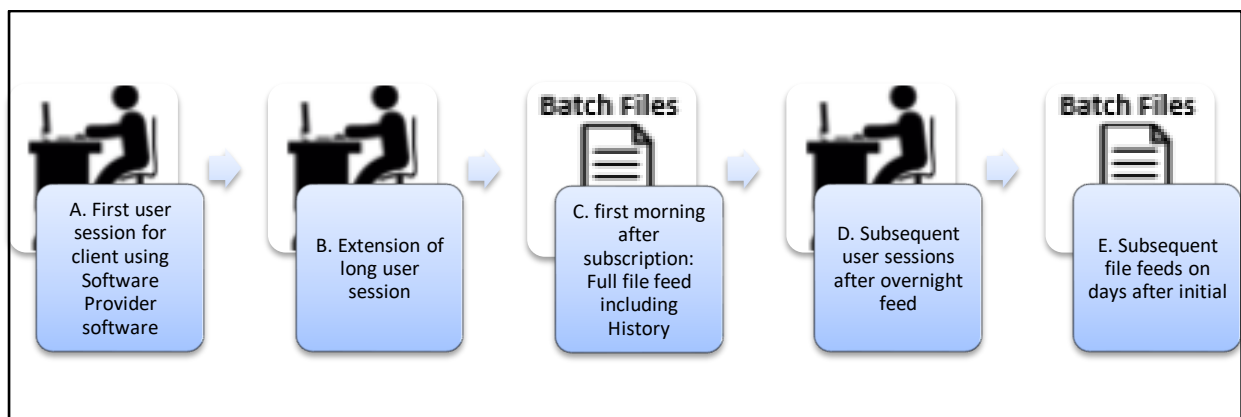


Figure 12. Scenario I - Tax Agent/Software Provider Linking and Subscription

The steps identified above are shown below associated with the relevant use case described in Section 3. The use cases are identified in the scenario flow detailed in Section 4.2.1.1 below:

	Functionality	Authorisation and authentication	Software Provider Linking	Delegation in eServices	Daily Push	Query accounts	Query transactions	Full File Push
	Technical component	Identity and Access	Software Intermediation GWS	myIR	Bulk file Feed	Accounts GWS	Transactions GWS	History File
A. First User Session using software								
Simple user login to software								
PUC201 Authentication and consent		Y		Y				
BUC101 Subscribe to tax data updates			Y					
BUC103 Query Tax Data real-time				Y		Y	Y	
SUC030 TDS real-time queries				Y		Y	Y	
B. Extension of user session								
PUC201 Authentication and consent		Y						
BUC103 Query Tax Data real-time				Y		Y	Y	
SUC030 TDS real-time queries				Y		Y	Y	
C. Next Day session – Full File Feed								
SUC001 Provide transaction updates					Y			
PUC203 Process Updates					Y			
PUC204 Consolidate Transaction History								Y
SUC002 Provide transaction history				Y				Y
PUC204 Consolidate Transaction History								Y
D. Subsequent sessions - Same as B								
E. Subsequent file feeds - Same as C								

Table 27. Use Cases Scenario I - Tax Agent to Software Provider Linking

4.2.1.1 Base Flow for Sample Scenario I – Tax Agent to Software Provider Linking and Subscription

Step	Actor	System	Description	Output
A. FIRST USER SESSION USING SOFTWARE				
1	Tax Agent	Software Provider Software	Tax Agent logs in to a Software Provider software integrated to Inland Revenue TDS.	Software Provider session
2	Tax Agent	Software Provider Software	Software gets Tax Agent to consent to access Tax Agency Customer data.	Consent
3 Use Case PUC201	Tax Agent	Inland Revenue Authentication service	The Software Provider software redirects/launches the user browser to Inland Revenue Authentication (XIAMS) sequence where the user logs in (and accepts a consent page) and is redirected back to the Software Provider software with an access token that is to be used for Inland Revenue web service calls.	Inland Revenue session token
4 Use Case BUC101	Tax Agent	Software Provider Software	Software gets Tax Agent to consent to subscribe for daily updates on Tax Agency Client List customer data – unless already subscribed. <i>If consent is not given then steps to link and processing of daily update files will be skipped.</i>	Confirmation
5 Use Case BUC101	Software Provider Software	Inland Revenue Software Intermediation service	Software Provider software calls Inland Revenue Software Intermediation service using user access token, to link Software Provider and Tax Agency Client List that creates subscription to daily updates. <i>This data will not be available until the next day.</i>	Confirmation
6 Use Case BUC103	Tax Agent	Software Provider Software	Tax Agency staff member selects a client to look at in more detail in this session and decides to request more detail from Inland Revenue.	Selected client IRD number
7 Use Case BUC103	Software Provider Software	Inland Revenue Account service	Software Provider software queries Account service for the visible list of accounts for the Client.	List of client accounts
8 Use Case BUC103	Tax Agent	Software Provider Software	Agency staff member selects the account and period to look at in more detail. Software Provider software queries the account and transaction services to drill down to the level of detail required.	Account, Period and Transaction data as selected



Step	Actor	System	Description	Output
9 Use Case SUC030	Software Provider Software	Inland Revenue Gateway Services (GWS)	Inland Revenue queries the account, period, and transaction services to drill down to the level of detail required.	Period and Transaction data as selected are returned
10	Tax Agent	Software Provider Software	Tax Agent does other work with Client and in software related to advising client on position and steps to take.	
B. EXTENSION OF USER SESSION				
11 Use Case PUC201	Software Provider Software	Inland Revenue Gateway Services (GWS)	If the Tax Agent login in the Software Provider software lasts for 8 hrs the token will expire. At that point in time the session might need to be extended by getting a new token – see Identity and Access Build Pack .	Token expiry notification or elapsed time
12 Use Case PUC201	Software Provider software	Inland Revenue Authentication service	The Software Provider software does a web service call to the Inland Revenue Authentication gateway service where it passes in a code received after the initial user login to Inland Revenue (XIAMS) in order to get a new session token see Identity and Access Build Pack .	New Inland Revenue session token
13 Use Case BUC103	Tax Agent	Software Provider software	Tax Agency staff member selects a client to look at in more detail in this session and decides to request more detail from IR.	Selected client IRD number
14 Use Case BUC103	Software Provider software	Inland Revenue Account service	Software Provider Software queries Account service for the visible list of accounts for the Client.	List of client accounts
15 Use Case BUC103	Tax Agent	Software Provider software	Tax Agency staff member selects the account and period to look at in more detail . Software Provider software queries the Account and Transaction services to drill down to the level of detail required.	Account, Period and Transaction data as selected
16 Use Case SUC030	Software Provider software	Inland Revenue Gateway Services (GWS)	Inland Revenue queries the Account, Period, and Transaction services to drill down to the level of detail required.	Period and Transaction data as selected are returned



Step	Actor	System	Description	Output
C. NEXT DAY SESSION – FULL FILE FEED				
17 Use Case SUC001	Inland Revenue	Software Provider central software and file location	For the next morning, (the first one after the software was subscribed to by the Tax Agency for daily updates), Inland Revenue batch processing will generate export files for each subscribing Tax Agency Client List, including this one. Any Clients that were newly added to the subscription will be added to this export file. All subscribed accounts, period and transaction detail and history kept in START will be included in this file. The file is sent to the Software Provider central location.	Software Provider central location has full export of client data related to recently subscribed client accounts.
18 Use Case PUC203	Software Provider central software and file location	Software Provider software	Based on triggers that see the daily file upload from Inland Revenue is completed, Software Provider centrally running software will process and import the file content to make it available for the Tax Agency users through their software.	Data ready for viewing by Tax Agent
19 Use Case SUC002	Inland Revenue	Software Provider central software and file location	TDS Bulk History has provided the converted data in Tax Agent Web Service format to Software Providers. See Appendix D for Tax Agent Web Services Codes	Software Provider has client history related to specific Account(s)/ Period(s).
20 Use Case PUC204	Software Provider central software and file location	Software Provider software	Software Provider centrally running software will process and import the file content in a way that makes it available for the Tax Agency users through their software.	Data available for Tax Agent to view
21			Tax Agent does other work and repeats steps above if necessary.	



Step	Actor	System	Description	Output
D. SUBSEQUENT SESSION				
22	Tax Agent	Software Provider software	Tax Agent logs into the Software Provider software again and accesses the centrally processed data from the previous step to show the user a navigable view of all the client data with no need to query Inland Revenue for it or log in to Inland Revenue to get a token.	User view of all the client data for all subscribed accounts and periods and transactions
23 Use Case BUC103	Tax Agent	Software Provider software Inland Revenue Gateway Services	Should the user have an event such as a payment run that makes them believe the data has changed since the overnight run they can select the specific account and period and request a Real Time refresh from IR , steps similar to those listed above including logging in to IR.	This is covered in TDS Real Time Feed Build Pack
E. SUBSEQUENT FILE FEEDS				
24 Use Case SUC001	Inland Revenue	Software Provider central software and file location	Subsequent mornings, when the software was not subscribed to for any additional Tax Agency clients for daily updates; Inland Revenue batch processing in START will generate export files for each subscribing Tax Agency Client List, including this one. Period summaries and new transactions will be included in the weekly file. New Transactions only will be included in the daily file. This file is sent to the Software Provider central location in the same way as the initial export file. <i>Note: If additional Software Intermediation links have been created or new Clients added to a Tax Agent Client List then a Bulk History File will be created using SUC002 and PUC204 will be required in the step below.</i>	Software Provider central location has full export of client data related to recently subscribed client accounts.



Step	Actor	System	Description	Output
25 Use Case PUC203	Software Provider central software and file location	Software Provider software	<p>Based on triggers that see the daily file upload from Inland Revenue is completed, Software Provider centrally running software will process and import the file content in a way that makes it available for the Tax Agency users and the software they use.</p> <p>The transactions provided for modified periods, and tax period summaries received for unmodified periods will be sufficient to pick up if a gap in transmission has arisen between what Inland Revenue has versus what the Software Provider has cached. Such periods could be marked for remediation when the user next logs in.</p>	Further uploads if necessary
26	Tax Agent	Software Provider software	<p>Tax Agent logs into the Software Provider software again and accesses the centrally processed data from the previous step with no need to query Inland Revenue for it or logging in to Inland Revenue to get a token.</p> <p>Changes in the data due to the overnight run are made available and cached locally if needed.</p> <p>Part of the data transferred may be whether there is a period marked as out of synch.</p>	User view of all the client data for all subscribed accounts and periods and transactions
27 Use Case BUC105	Tax Agent	Software Provider software Inland Revenue Gateway Services	<p>If there is a period marked as out of synch the Software Provider software may automatically or when triggered by user interest, call Inland Revenue TDS to get a full update on that period and cache that data locally, including centrally and remove or highlight the out of synch flag.</p>	Update of period data for out of synch periods

Table 28. Scenario I detail Tax Agent/Software Provider Linking and Subscription

4.2.2 Sample Scenario II - Customer to Software Provider Linking and Subscription

Description Scenario II	<p>Organisation staff member accesses Inland Revenue transaction feed through Software Provider software and subscribes for updates, then repeatedly has sessions to look at the data over subsequent days</p> <p>This sample process variation covers 5 typical stages following on from this initial trigger:</p> <ul style="list-style-type: none"> A. FIRST USER SESSION IN SPECIFIC SOFTWARE PROVIDER SOFTWARE PRODUCT B. EXTENDED USER SESSION HOURS LATER C. NEXT MORNING, FIRST ONE AFTER SUBSCRIBING D. SUBSEQUENT USER SESSIONS AFTER FIRST OVERNIGHT RUN E. SUBSEQUENT DAYS FILE FEEDS
Actors	<ul style="list-style-type: none"> ▪ Delegated employee of a large organisation
Systems	<ul style="list-style-type: none"> ▪ Software Provider software ▪ Inland Revenue – Gateway Services, TDS bulk file feed, START
Pre-conditions	<p>Delegated employee has a valid myIR Logon</p> <p>Delegated employee myIR Logon has current authorised access to relevant tax accounts</p> <p>Delegated employee has a Software Provider software login, internet access</p>
Triggers	Login of delegated employee into Software Provider software that is integrated with Inland Revenue Transaction Data Services
Post-conditions	Software Provider software has received and displayed accurate and complete data for the organisation requested and subscribed for future updates in that software

Table 29. Summary Scenario II - Customer to Software Provider Linking and Subscription

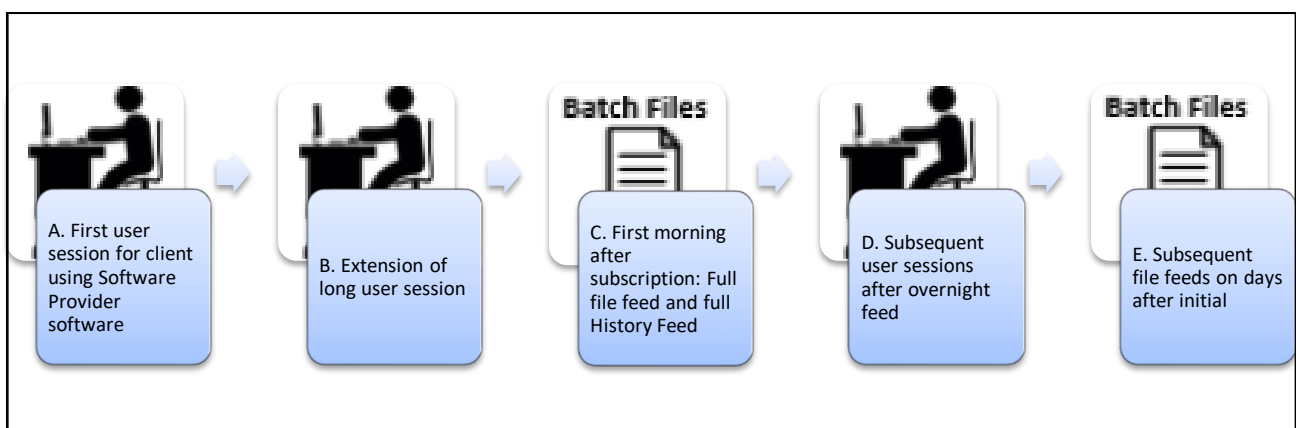


Figure 13. Scenario II – Customer/Software Provider Linking and Subscription

4.2.2.1 Base Flow for sample Scenario II - Customer to Software Provider Linking and Subscription

Step	Actor	System	Description	Output
A. FIRST USER SESSION USING SOFTWARE				
1	Delegated employee	Software Provider software	Delegated employee logs in to a Software Provider product that is integrated to Inland Revenue TDS.	Software Provider session
2 Use Case PUC201	Delegated employee	Inland Revenue Authentication service	The Software Provider software redirects/launches the user browser to Inland Revenue Authentication (XIAMS) sequence where the user logs in (and accepts a consent page) and is redirected back to the Software Provider software with a limited period access token that is to be used for Inland Revenue web service calls.	Inland Revenue session token
3 Use Case BUC101	Delegated employee	Software Provider software	Software gets delegated employee to subscribe for daily updates on customer data – unless already subscribed. <i>If subscription is not requested then the steps to link and processing of daily update files will be skipped.</i>	Confirmation
4 Use Case BUC101	Software Provider software	Inland Revenue Intermediation service	Software Provider software calls Inland Revenue Intermediation service using user access token, to link Software Provider to organisational or account IDs to subscribe for daily updates, using user token. <i>This data will not be available until the next day.</i>	Confirmation
5 Use Case BUC103	Delegated employee	Software Provider software	Delegated employee selects a period to look at in more detail and decides to request further detail from Inland Revenue.	Selected client IRD number
6 Use Case BUC103	Software Provider software	Inland Revenue Account service	Software Provider software queries Account service for the visible list of accounts for the customer.	List of client accounts
7 Use Case BUC103	Delegated employee	Software Provider software	Delegated employee selects the account and period to look at in more detail. Software Provider software queries the account and transaction services to drill down to the level of detail required.	Account, Period and Transaction data as selected



Step	Actor	System	Description	Output
8 Use Case SUC030	Software Provider software	Inland Revenue Gateway Services	Inland Revenue queries the account, period, and transaction services to drill down to the level of detail required.	Period and Transaction data as selected are
9	Delegated employee	Software Provider software	Delegated employee does other work in software related to organisation, including tax position and steps to take.	
B EXTENSION OF USER SESSION				
10 Use Case PUC201	Software Provider software	Inland Revenue Gateway Services	If the staff member login in the Software Provider software lasts for 8 hrs the token will expire. At that point in time the session might need to be extended by getting a new token – see Identity and Access Build Pack .	Token expiry notification or elapsed time
11 Use Case PUC201	Software Provider software	Inland Revenue Authentication service	The Software Provider software does a web service call to the Inland Revenue Authentication gateway service where it passes in the code received after the initial user login to Inland Revenue (XIAMS) in order to get a new session token.	New Inland Revenue session token
12 Use Case BUC103	Delegated employee	Software Provider session	Delegated employee selects a client/Account to look at in more detail in this session and decides to request more detail from Inland Revenue.	Selected client IRD number
13 Use Case BUC103	Delegated employee	Software Provider software	Delegated employee selects the account and period to look at in more detail . Software Provider software queries the account and transaction services to drill down to the level of detail required.	Account, Period and Transaction data as selected
14 Use Case SUC030	Software Provider software	Inland Revenue Gateway Services (GWS)	Inland Revenue queries the account, period, and transaction services to drill down to the level of detail required.	Period and Transaction data as selected are returned
15	Delegated employee	Software Provider session	Delegated employee does other work and repeats steps above if necessary for day, eventually logging off.	

Step	Actor	System	Description	Output
C. NEXT DAY SESSION – FULL FILE FEED				
16 Use Case SUC001	Inland Revenue	Software Provider central software and file location	The next morning Inland Revenue batch processing in START will generate export files for each subscribing organisation, including this one. Any organisations that were newly added to the subscription will be added in full to this export file. All subscribed accounts, all period and transaction detail and history kept in START will be included in this file. This file is sent to the Software Provider central location. <i>Note: A Bulk History File will also be created – SUC002</i>	Software Provider central location has full export of relevant subset of organisation tax data.
17 Use Case SUC002	Inland Revenue	Software Provider central software and file location	The next morning Inland Revenue batch processing in START will generate export files of History data for each subscribing organisation, including this one. Any organisations that were newly added to the subscription will be added in full to this export file. This file is sent to the Software Provider central location. See Bulk History Feed Build Pack .	Software Provider central location has full export of relevant subset of organisation History data.
18 Use Case PUC203	Software Provider central cloud software and file location	Software Provider software	Based on triggers that see the daily file upload from Inland Revenue is completed, Software Provider centrally running software will process and import the file content in a way that makes it available for the organisation employees that have delegated access and are Software Provider software users. <i>Note: PUC204 Consolidate Transaction History will be enacted on the Bulk History File.</i>	Data ready for viewing by Accountant or organisation employee
19 Use Case PUC204	Software Provider central cloud software and file location	Software Provider software	Based on triggers that see the daily file upload from Inland Revenue is completed, Software Provider centrally running software will process and import the History file content in a way that makes it available for the organisation employees that have delegated access and are Software Provider software users.	History Data ready for viewing by Accountant or organisation employee



Step	Actor	System	Description	Output
D. SUBSEQUENT SESSION				
20 Use Case BUC103	Delegated employee	Software Provider software Inland Revenue gateway services	Should the user have an event such as a payment run that makes them believe the data has changed since the overnight run they can select the specific account and period and request a real time refresh from IR , steps similar to those listed above including logging in to IR.	This is covered in TDS Real Time Feed Build Pack
E. SUBSEQUENT FILE FEED SESSIONS				
21 Use Case SUC001	Inland Revenue	Software Provider central software and file location	Subsequent mornings, when the software was not subscribed to for any additional subsets of data for that organisation for daily updates; Inland Revenue batch processing in START will generate export files for each subscribing organisation, including this one. Only period summaries and new transactions will be included - for all subscribed accounts, all period summaries and for modified periods transaction detail and history kept in START. This file is sent to the Software Provider central cloud location in the same way as the initial export file.	Software Provider central location has full export of organisational tax data related to any subscribed organisational accounts.
22 Use Case PUC203	Software Provider central cloud software and file location	Software Provider software	Based on triggers that see the daily file upload from Inland Revenue is completed Software Provider centrally running software will process and import the file content in a way that makes it available for the organisational employees and the software they use. The transactions provided for modified periods, and tax period summaries received for unmodified periods will be sufficient to pick up if a gap in transmission has arisen between what Inland Revenue has versus what the Software Provider has cached. Such periods can be marked for remediation when the user next logs in.	Further uploads if necessary



23	Delegated employee	Software Provider software	<p>Delegated employee logs into the Software Provider software again and accesses the centrally processed data from the previous step to show the user a navigable view of all the client data with no need to query Inland Revenue for it or logging in to Inland Revenue to get a token.</p> <p>Changes in the data due to the overnight run are made available if needed.</p> <p>Part of the data transferred is whether there is a period marked as out of synch.</p>	User view of all the client data for all subscribed accounts and periods and transactions
24 Use Case BUC103	Delegated employee	Software Provider software Inland Revenue Gateway Services	<p>If there is a period marked as out of synch, the Software Provider software will immediately after login or when triggered by user interest, call the Inland Revenue TDS to get a full update on that period and remove the out of synch flag.</p>	Update of period data for out of synch periods

Table 30. Scenario II - Customer to Software Provider Linking and Subscription

4.2.3 Sample Scenario III – Customer using frequent Real Time Sessions

Note: Suitable for smaller organisations with small datasets and an infrequent need to query.

Description Scenario III	<p>Delegated employee accesses Inland Revenue transaction feed through Software Provider software and does NOT subscribe for updates, but repeatedly has sessions to look at the data over subsequent days using real-time access only</p> <p>This scenario covers the 2 stages (see figure below) of the general process following on from the initial trigger:</p> <ul style="list-style-type: none"> A. FIRST USER SESSION (ON RELATED CLIENT, IN SPECIFIC SOFTWARE PROVIDER SOFTWARE PRODUCT) B. ACCESS TDS REAL TIME SERVICE
Actors	<ul style="list-style-type: none"> ▪ Delegated employee employed by a large organisation
Systems	<ul style="list-style-type: none"> ▪ Software Provider software ▪ Inland Revenue – Gateway Services, START
Pre-conditions	<p>Delegated employee has a valid myIR Logon</p> <p>Delegated employee myIR Logon has current authorised access to relevant tax accounts</p> <p>Delegated employee has a Software Provider software login, internet access</p>
Triggers	Login of Delegated employee into Software Provider software that is integrated with Inland Revenue Transaction Data Services
Post-conditions	Software Provider software has received and displayed accurate and complete data for the organisation requested

Table 31. Summary Scenario III - Customer using frequent Real Time Sessions

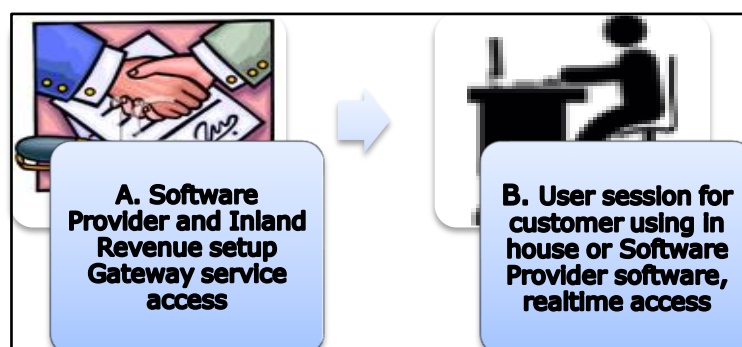


Figure 14. Scenario III - Customer using frequent Real Time Sessions



4.2.3.1 Base Flow for Sample Scenario III - Customer using frequent Real Time Sessions

Step	Actor	System	Description	Output
A. FIRST USER SESSION USING SOFTWARE				
1	Delegated employee	Software Provider software	Delegated employee logs in to a Software Provider product that is integrated to Inland Revenue TDS.	Software Provider session
2 Use Case PUC201	Delegated employee	Inland Revenue Authentication service	The Software Provider software redirects/launches the user browser to Inland Revenue Authentication(XIAMS) sequence where the user logs in (and accepts a consent page) and is redirected back to the Software Provider software with a limited period access token that is to be used for Inland Revenue web service calls.	Inland Revenue session token
B. ACCESS TRANSACTION DATA SERVICES REAL TIME SERVICE				
3 Use Case BUC103 (or BUC104 BUC105)	Delegated employee	Software Provider software	Delegated employee selects a period to look at in more detail and decides to request further detail from Inland Revenue. Note: The delegated employee can select an Account for which to request a Summary, a period for which to request a summary or a period for which they request transactions.	Selected client IRD number
4 Use Case BUC103	Delegated employee	Software Provider software	Delegated employee selects the account and period to look at in more detail. Software Provider software queries the Account, Period or transaction services to drill down to the level of detail required.	Account, Period and Transaction data as selected
5 Use Case SUC030	Software Provider software	Inland Revenue Gateway Services (GWS)	Inland Revenue queries the account, period, or transaction services to drill down to the level of detail required and responds to the user request.	Period and Transaction data as selected is returned to the Software Provider software

Table 32. Scenario III - Customer using frequent Real Time Sessions

4.2.3.2 Sample Scenario IV - New Client is adopted by Tax Agency

Description Scenario IV	<p>New Client for Tax Agency (As part of on-going daily file feeds the next morning would have the full data for the newly added client)</p> <p>This scenario covers the 2 stages (see figure below) of the general process following on from the initial trigger:</p> <p>A. FIRST USER SESSION (ON RELATED CLIENT, IN SPECIFIC SOFTWARE PROVIDER SOFTWARE PRODUCT)</p> <p>B. NEXT MORNING, FIRST ONE AFTER SUBSCRIBING</p>
Actors	<ul style="list-style-type: none"> ▪ Tax Agent
Systems	<ul style="list-style-type: none"> ▪ Software Provider software ▪ Inland Revenue – Gateway Services, TDS bulk file feed, START
Pre-conditions	<p>Tax Agency is registered with Inland Revenue as Agent, and not yet linked to the Client in this scenario for Tax Types for whom data will be being requested.</p> <p>Tax Agent has a valid myIR Logon with current authorised access to relevant tax accounts</p> <p>Tax Agency is already linked to Software Provider software</p> <p>Tax Agent has a Software Provider software login and internet access</p>
Triggers	Login of Tax Agent into Software Provider software that is integrated with Inland Revenue Transaction Data Services
Post-conditions	Software Provider software has received accurate, complete data for the Client(s) requested and subscribed for future transaction data updates in that software

Table 33. Scenario IV - New Client for Agency

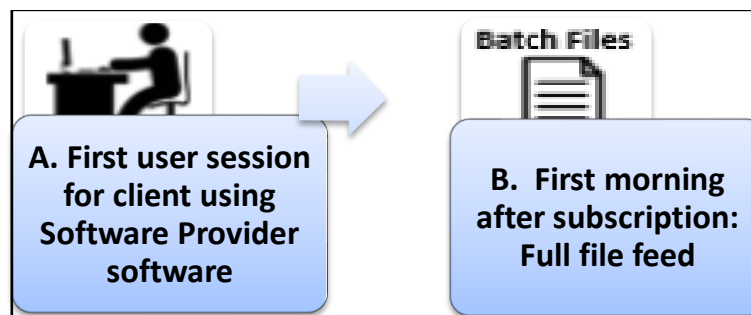


Figure 15. Scenario IV - New Client for Agency

4.2.3.3 Base Flow for sample Scenario IV - New Client is adopted by Agency

Step	Actor	System	Description	Output
A. FIRST USER SESSION USING SOFTWARE				
1	Tax Agent	myIR	Tax Agent uses Inland Revenue myIR and adds Customer to their Agents List. <i>This process continues as it is now and is not impacted by TDS.</i> This Tax Agent has already subscribed to receiving the Bulk File Feed	Confirmation
B. NEXT MORNING, FIRST ONE AFTER SUBSCRIBING				
2 Use Case SUC001	Inland Revenue	Software Provider central software and file location	For the next morning, (Inland Revenue batch processing in START will generate export files for each subscribing Tax Agency Client List, including this one. Any clients that were newly added to the subscription will be added in full to this export file. In addition a History File will be generated with data for newly added clients and sent via SFTP (SUC002) All subscribed accounts, all period and transaction detail and all history kept in START will be included in this file. The file is sent to the Software Provider central location.	Software Provider central location has full export of client data related to recently subscribed client accounts.
3 Use Case PUC203 and PUC204	Software Provider central software and file location	Software Provider software	Based on triggers that see the daily file upload from Inland Revenue is completed, Software Provider centrally running software will process and import the file content in a way that makes it available for the Tax Agency users through their software.	Data ready for viewing by Tax Agent

Table 34. Sample Process Scenario IV

5 Onboarding

To consume Inland Revenue services (including TDS) a Software Provider must first be "onboarded". This section contains information relating to the onboarding process.

This section assumes the conceptual overview in Section 1.4 " Fundamental concepts - interacting parties in TDS" has been read and understood.

Each Software Platform needs to be registered with Inland Revenue to be able to consume services. A Software Provider may use multiple Software Platforms. Inland Revenue will assign a unique identifier for each Software Platform.

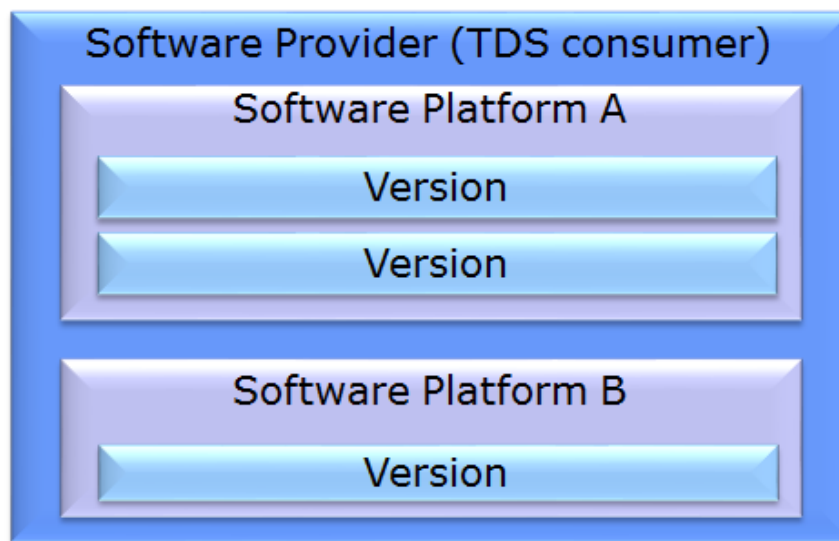


Figure 16. Software Provider with 2 Software Platforms

5.1 Onboarding process summary

1. Project work is aligned
 - a. Initial identification of Software Platforms to be created and related contact information and timelines
 - b. Shared Partner Test Plan drafted
2. Basic connectivity is established
 - a. Registration starts requesting software platform creation with related exchanging of keys and endpoint information and
 - b. Firewall changes and certificate trust (X509 for TLS, SSH, PGP) are then applied on both sides
3. Test data slice information and Software Provider/Platform/Release information is then formalised
4. Security related configuration and testing
 - a. OAuth related information like endpoints and redirect URI's are exchanged
 - b. Client ID and secret is provided by Inland Revenue
 - c. User accounts to be used in testing environments are clarified in the Partner Test Plan
 - d. Testing to ensure connectivity works up to functional services



5. Testing goes up to the point of validating it is production ready. Refer to the Partner Test Plan for a description. The core of the solution and first thing to be tested for most Software Providers would be the bulk files sent over SFTP to the Software Provider. All of the above sections and types of information exchange need to be set up for this to occur:
 - a. SFTP location and key exchange without which there can be no files provided
 - b. Bulk linking, without which there would be no data in the files
 - c. Real time access without which there is no way to keep the Software Intermediation links up to date – unless all data is put under one agency and that is all the software will be used for.
6. At that point the identifiers are activated in the Inland Revenue production environment.

5.2 Technical Requirements

Interactions with Inland Revenue can broadly be split into 2 technical categories:

- **Web Services**
 - For TDS this includes the Account, Transactions, Intermediation, & Software Intermediation Services.
- **File transfer (via SFTP)**
 - For TDS this includes the Bulk and History file feeds.

The setup components required for these are described below:

5.2.1 Web Services

- a) Before calling a web service, the consumer must firstly use the IR Authorisation service to obtain an *OAuth Access Token*. More information about the Authorisation service is available in the [Identity & Access Build Pack](#), including setup required. In summary, the Software Provider will be assigned an OAuth Client ID and secret (representing each Software Platform), and will need to provide a Redirect URI that Inland Revenue will use as part of the service handshake.
- b) Web services (accessed by Cloud based software) use mutual TLS authentication and the Software Provider is required to exchange TLS certificates for this purpose. There is also an endpoint for connections from Desktops and it does not use mutual TLS.
- c) Each web service has a header that contains the following information:
 - Software Provider name
 - Software Platform ID
 - Software Platform Version (Release)

These will be provided by Inland Revenue after consultation with the Software Provider. The values are checked at run time against values Inland Revenue holds to ensure alignment. These values must match exactly for requests to not be rejected at runtime.

- d) For testing, an additional value is required within the web service header that determines the "data slice" that is to be used. This value will be provided by Inland Revenue during the partnership testing phase.



5.2.2 File transfer (via SFTP)

In all cases, file transfers initiate from Inland Revenue to the Software Provider's SFTP server. This is true regardless of the direction of the file transfer (push or pull).

-
- a) Destination SFTP server details are required including:
 - SFTP server domain name (if available)
 - SFTP server IP Addresses (these addresses will be whitelisted by IR)
 - Destination directory details
-
- b) An SFTP server account is required for use with Inland Revenue's SSH key for connecting to the SFTP server.
- c) A PGP public certificate from the Software Provider is required to enable payload encryption of files sent by Inland Revenue.
-
- d) For initial bulk linking requests Inland Revenue requests that it first be signed with a provider private key for which the public part has been provided to Inland Revenue.
-
- e) A PGP Public certificate is provided by Inland Revenue to encrypt the initial Bulk Linking request (see section below) after it is signed.
-
- f) All Inland Revenue's SFTP connections will originate from the following IP addresses:
 - Test Systems 222.153.203.33
 - Production 222.153.202.39
 - Production(DR) 222.153.203.33
-

5.3 Initial Bulk Linking

The TDS Bulk File feeds require Software Intermediation links to be created between the Software Platform and the Tax Agency Client List/Customers that need to be included in the Software Provider files.

Normally these links are maintained via the Software Intermediation service, however for initial loading these can be provided to Inland Revenue in a file and will be loaded in bulk.

Sample bulk linking request file

```
A|1500011035|AGENT|123041507|1|
A|1500011035|CUSTOMER|123041507|1|
A|1500011035|CUSTOMER|123068602|0|GST
A|1500011035|AGENT|123068602|1|
```

Table 35. Sample Bulk Linking Request file

Field Name	Data Type	Size	Mandatory	Format	List of Values	Description
Record Type	CHAR	1	Yes		A	Identifies record type
Software Platform ID	CHAR	10	Yes	Keep leading zeros		Software Platform ID (will be provided by Inland Revenue).



Field Name	Data Type	Size	Mandatory	Format	List of Values	Description
Intermediation Type	CHAR	8	Yes		AGENT, CUSTOMER	
Agent or Customer ID	CHAR	9	Yes	Keep leading zeros		Customer ID or Agent Client ID
All Accounts flag	CHAR	1	Yes for Customer Ignored for Tax Agent		1,2	1 – ALL Accounts 0 – Specific – see next field
Account Type	CHAR	3	Yes – if All CUSTOMER and All Accounts flag = 0 Otherwise ignored			It will be possible to stipulate an Account type or All accounts (Customers only)

Table 36. Data for Bulk Linking Request

This file should be:

- structured as above
- named **BulkLinkingRequest.txt**.
- PGP signed using the Software Provider's PGP key
- PGP encrypted using Inland Revenue key
- made available on the Software Providers SFTP site under the default folder for the TDS user

Bulk linking may also be required in some test environments for Inland Revenue to provide access.



6 Delegation and permissions

This section looks at the various aspects of permissions, delegation, linking and permission sharing related to accessing TDS data; and how they overlap.

6.1 Relationship types

- **Delegation:** To query data in TDS or link to data in TDS a myIR Logon must have delegated permissions set up via myIR portal:
 - This can be done for a Customer by those set up as owner or administrator for that Customer
 - Tax agencies have equivalent delegation set up to their myIR Logons for their staff – the ability to do this directly in myIR portal is new in 2018
- **Intermediation Linking:** Customer Accounts are linked through Client Lists for a Tax Agency in myIR – these links are visible via Intermediation Service.
- **Software Platform linking:** This linking subscribes a specific Tax Agency Client List or Customer Account so that data gets sent to a specific Software Platform where it is being used.
- **Software Provider application data permissions:** This is the permission sharing internal to the Software Provider software. It may correlates with myIR Logon permissions as set up in myIR portal delegation: Inland Revenue supports a few variations.

6.2 Summary of relationship types

The following summarises key relationship types and their role in TDS. Subsequent subsections (6.4) explain this in more detail.

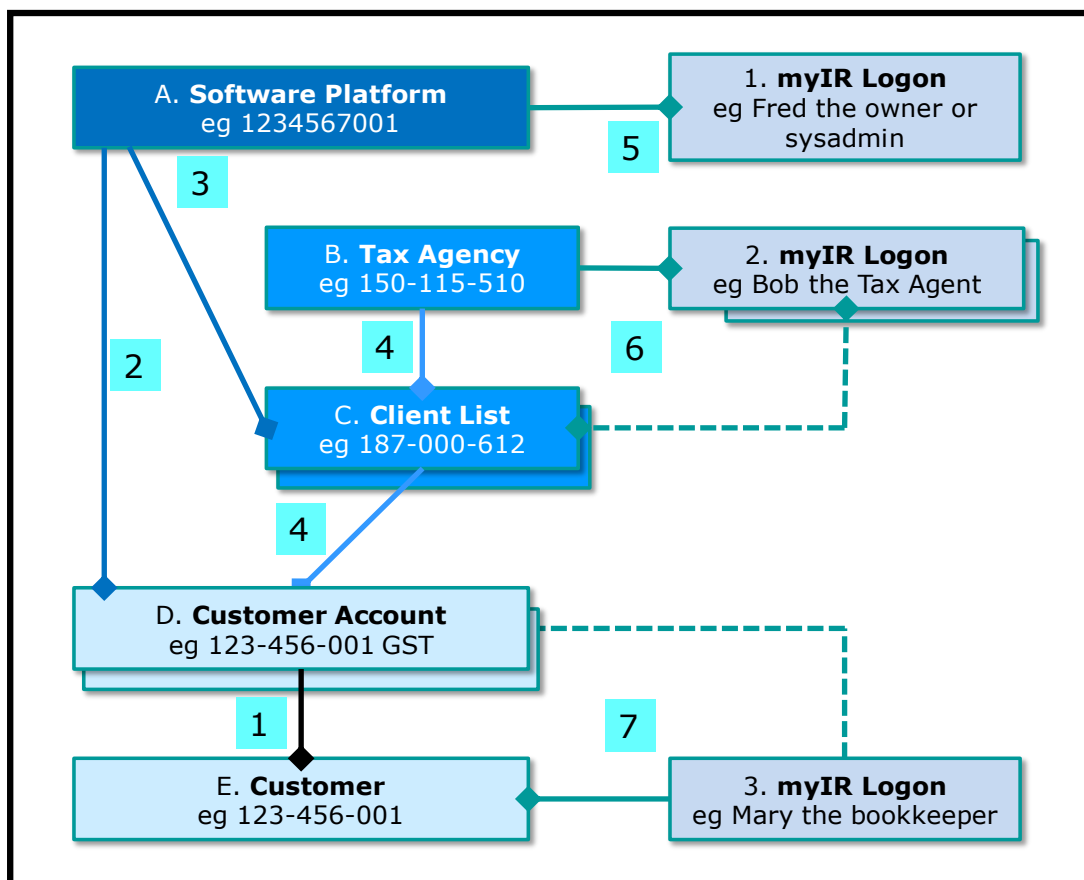


Figure 17. TDS Key relationship types



Number	Parties	Relationship	Purpose
1	D-E	Customer Accounts	Customer activity is by Account - typically a Tax Type (e.g. GST). All Transaction data is accessed under the relevant Account.
2	A-D	Software Intermediation link for Direct Customer Account	To subscribe for bulk updates of a Customer's Account data to be sent to a Software Platform when there is no Tax Agent involved.
3	A-C	Software Intermediation link for Tax Agent	To subscribe for bulk updates of Customer Account data linked to a Tax Agency (via Client Lists) to be sent to a Software Platform when there is a Tax Agent involved.
4	B-C C-D	Tax Agency Client Lists Client Lists Linked to Customer Accounts	All Tax Agent access to Customer Transaction Data is grouped under Client Lists. A Tax Agency can set up as many Client Lists as they desire to group their Customer Accounts. A given Customer Account can only be linked to one Client List at a time.
5	1-A	Software Platform myIR Logon delegation	Logons are set up to allow access to administer Software Platform Links through myIR and Gateway Services. Each such User ID is associated with the Software Platform with an Access Type(Role). The Access role of Owner can create, query or break Software Intermediation links.
6	2-B	Tax Agent myIR Logon delegation	Logons are set up to allow access to administer Tax Agency Links through myIR and Gateway Services. Each such User ID is first associated with the Tax Agency. This link has an Access Type(Role). Owner and Administrator users can establish and break Intermediation links. Note: There is also an Access Control Matrix defined to determine the Account Permissions (View/Filing/Pay/Full/None) each User ID has on specific Client Lists(Access Level). Initially a permission file will reflect what accounts are visible to each User ID based on this matrix



Number	Parties	Relationship	Purpose
7	3-E	Customer myIR Logon delegation – when there is no Tax Agent involved.	<p>UserIDs are set up to allow access to administer Customer Accounts through myIR and Gateway Services. Each such User ID is first associated with the Customer.</p> <p>This link has an Access Type(Role). Owner and administrator users can establish and break Software Intermediation and Intermediation links.</p> <p>Bookkeepers might be required to access data through Customers as they do not yet have an Inland Revenue Client List. If they do not have Owner or Admin access through myIR to their Customer Accounts, a user with that access will need to create Software Intermediation links to receive the data for the end Customer. The Service Provider would then need to have a mechanism that allows the Customer to share the data with the bookkeeper inside the Service Provider platform.</p> <p>Note: There is also an Access Control Matrix defined to determine the Account Permissions (View/Filing/Pay/Full/None) each User ID has on specific Accounts. Initially a permission file will reflect what accounts are visible to each User ID based on this matrix</p>

Table 37. TDS key Relationship Types

6.3myIR Logon delegation permissions

- Access to Inland Revenue's Online Services portal (myIR) is via a credential known as the "myIR Logon".
- All Gateway Web Services that require user authentication tokens rely on the same myIR Logon credentials and the permissions set up for each of these logons.
- What data a myIR Logon has access to, is controlled by the Inland Revenue delegation model.
- Any Customer or Tax Agent will have at least one associated myIR Logon that has owner Access Role. This logon can be used on myIR to set up delegated permissions for additional myIR Logons or to modify Account permissions for existing ones. Such delegated permissions up to 2018 in myIR are given in the context of a specific Customer or a Tax Agent's own internal Accounts. As of April 2018 myIR will also allow the online administration of such Account permissions for Tax Agent Client Lists.
- A myIR Logon is given permission on a Customer / Tax Agent / Software Platform with an Access Role. For Customer or Tax Agent there is then finer grained access control that is applied with Account Permissions in an Access Control List.

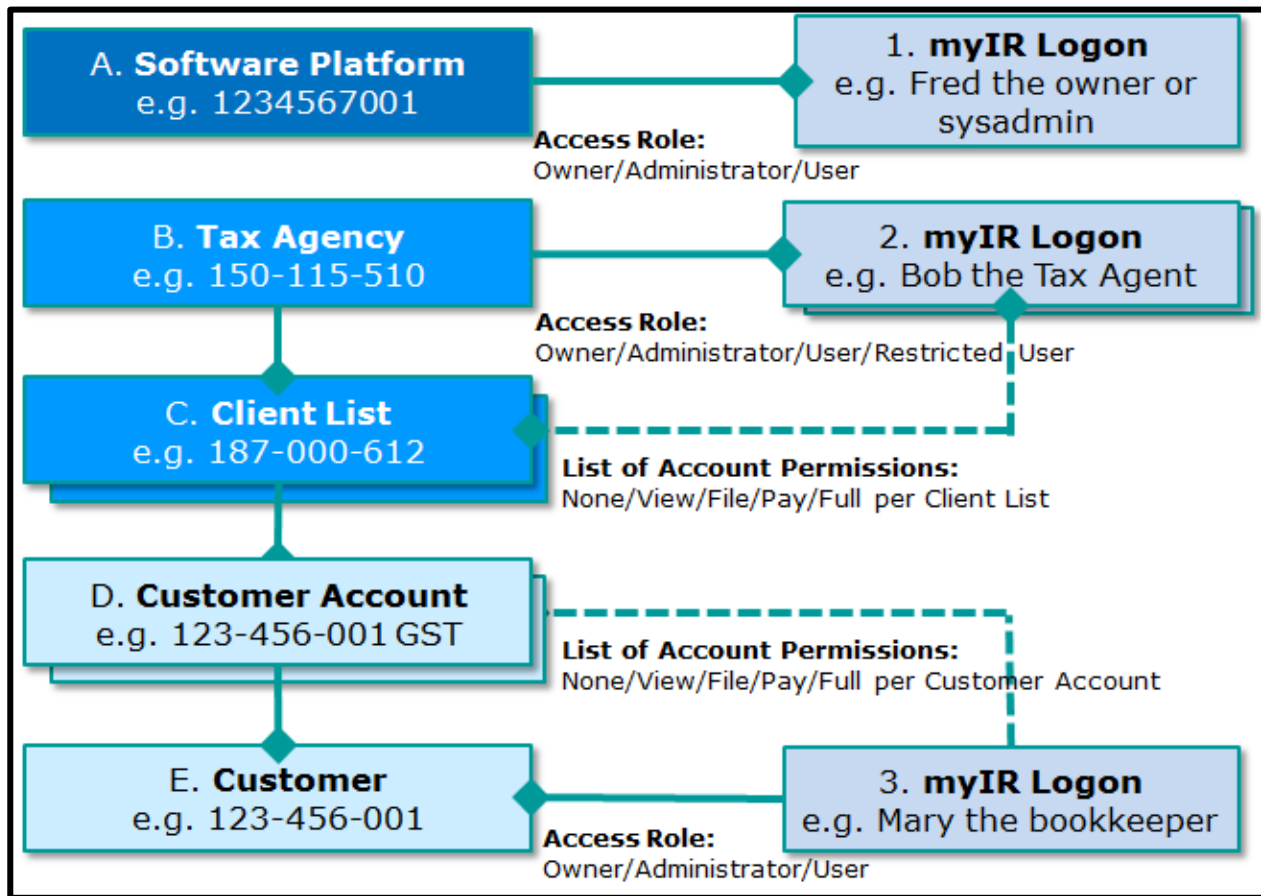


Figure 18. MyIR Logon delegation Permission model

6.3.1 Customer delegation management

- In previous systems Inland Revenue used a mechanism where multiple Customer Locations were associated with different myIR Logons and the selection of Customer Location (through IRD number) and myIR Logon dictated the subset of data for that Customer that was available.
- An Access Control List now applies Account Permissions across all Accounts and myIR Logons for that Customer.
- A Customer might elect to consolidate into one myIR Logon per person or still keep separate myIR logins for a user per location/profile/Account.

6.3.2 Tax Agent delegation management

- Inland Revenue uses a mechanism where multiple IRD numbers are used to represent different Client Lists for the same Tax Agency.
- To create a new Client List for use by a Tax Agency an Inland Revenue Account Manager has to be contacted to allocate a new unique IRD number for that new Client List.
- The choice of IRD number and User ID determines the subset of data to be retrieved.
- An Access Control List controls access across all Client Lists and myIR Logons for that Tax Agent.
- A Tax Agent might elect to consolidate into one logon per person or still keep separate myIR logins for a user per location/profile/Account.

6.3.3 MyIR Logon delegation Access Roles

Access Type	Customer delegation	Tax Agent Delegation	Software Platform
(Level applied at)	At Customer Level	At Tax Agent Level – for client lists	At Software Platform
Owner	<p>Can administer Access Role delegation on Customer</p> <p>Can administer Account Permissions delegation on all Customer Accounts</p>	<p>Can administer Access Role delegation on Tax Agent</p> <p>Can administer Account Permissions delegation on any Client Lists</p>	<p>Can create administrators</p> <p>Can create users</p> <p>Can list links and can delink</p>
Administrator	<p>Can administer Access Type delegation on Customer</p> <p>Can administer Account Permissions on any account they have been delegated permission to, limited to what their permission is e.g. if they have only been give View to FBT, they can only on-delegate View to the FBT account, not higher</p>	<p>Can administer Access Role delegation on Tax Agent</p> <p>Can administer Account Permissions on any Client Lists not given None access level on</p>	<p>Cannot create administrators</p> <p>Can create users</p> <p>Can list links and can delink</p>
User	<p>Only permissions as defined by Access Role per Customer Account</p> <p>No administration of Access Role or Account Permission delegation.</p>	<p>Can link and delink Customer Accounts to any client lists not given None access level on</p> <p>Permissions as defined by Account Permissions per Client List</p> <p>No administration of Access Role or Account Permission delegation.</p>	<p>Cannot create administrators</p> <p>Cannot create users</p> <p>Can list links and delink</p>
Restricted User	Same as User	<p>Cannot link and delink Customer Accounts</p> <p>Cannot request financial transfers of</p>	Same as user

Access Type	Customer delegation	Tax Agent Delegation	Software Platform
		client payments and/or credits Otherwise same as User	

Table 38. MyIR Logon delegation Access Types/Roles

6.4 Summary of links, operations to update them, and permissions and delegations required

6.4.1 Software intermediation

- In order to receive bulk file content a link needs to be established between the Software Platform and the Tax Agency Client List or Customer Accounts.
- In the call to the Software Intermediation service which establishes this link the security context for both parties to the link need to be provided.
- The Tax Agent or Customer or Software Platform Administrator is identified by an OAuth token representing a myIR Logon that has delegated permissions on that Customer or Tax Agency Client List and sufficient Role level permission.
- Whether the link is established to a Tax Agency Client List or a Customer will impact whether the daily content is sent in a Customer.xml file or Agent.xml file; the underlying transaction data content will be the same format regardless.
- If a link is established to a Agency Client List it will include all data for all client lists for that Tax Agent. Permissions need to then be applied on the Software Platform side to filter that as relevant for specific individuals.
- If a link is established to a Customer Account it cannot be at Customer level but needs to be at individual Customer Account level.
- If a User ID with administrator permission level is used it needs Administrator access to the relevant Accounts to have already been set up in delegation.
- To retrieve a list of Tax Agency Client Lists or Customers currently linked to a Software Platform an user OAuth token is not required but it is not appropriate to expect a token from an end user of the Software Platform, rather an administrator for the Software Platform. Each registered Software Platform will be given at least one associated myIR Logon with Owner level permission that can be used to administer permissions and other delegation to retrieve links and break links.
- The generic myIR portal administration screens allowing delegation to be controlled for Customer or Business entities will be available to this User ID to use for this purpose.
- Inland Revenue is looking into making it available in myIR portal that a Customer or Tax Agent can see the Software Platforms their data is linked to and to help facilitate having that cancelled. The preference is to have a clean process on the Software Provider side to manage that delinking.



6.4.2 Software Platform – Tax Agency Client List (Relationship 3 in Table 37 above)

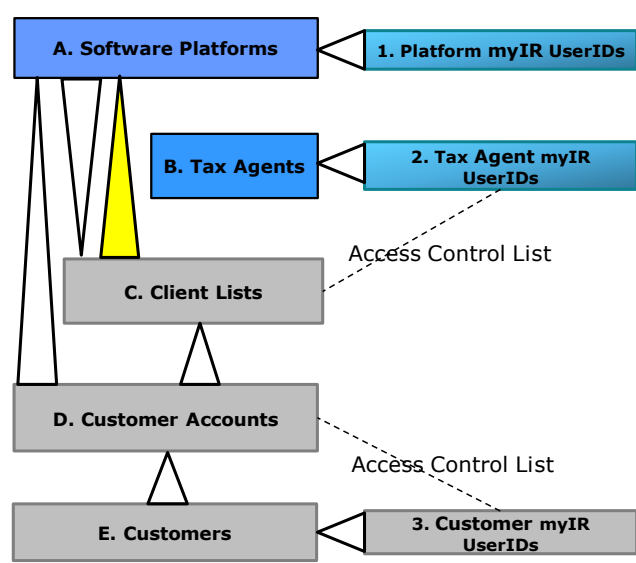
Relationship A-C - Software Intermediation Linking to Tax Agent Client List		
 <p>The diagram illustrates the linking process between five entities: A. Software Platforms, B. Tax Agents, C. Client Lists, D. Customer Accounts, and E. Customers. A. Software Platforms is connected to B. Tax Agents, C. Client Lists, and D. Customer Accounts. B. Tax Agents is connected to C. Client Lists. C. Client Lists is connected to D. Customer Accounts. D. Customer Accounts is connected to E. Customers. A yellow triangle highlights the link from A. Software Platforms to B. Tax Agents. Three numbered boxes are shown: 1. Platform myIR UserIDs (connected to A), 2. Tax Agent myIR UserIDs (connected to B), and 3. Customer myIR UserIDs (connected to E). Dashed lines labeled 'Access Control List' connect C to B and D to E.</p>	Permissions Required	Tax Agent delegated myIR Logon with owner or administrator permission – represented by OAuth token Proof of SoftwarePlatform – cert or matching IDs
	Operation	SoftwareIntermediation.Link
	Parameters	SoftwarePlatform ID Tax Agency IRD number Type Agent
	Results	Link is established resulting in any Customer Accounts for any Client Lists for the Tax Agency being included in daily and weekly TDS bulk file feed to the Software Platform

Table 39. Software Platform – Tax Agent Linking

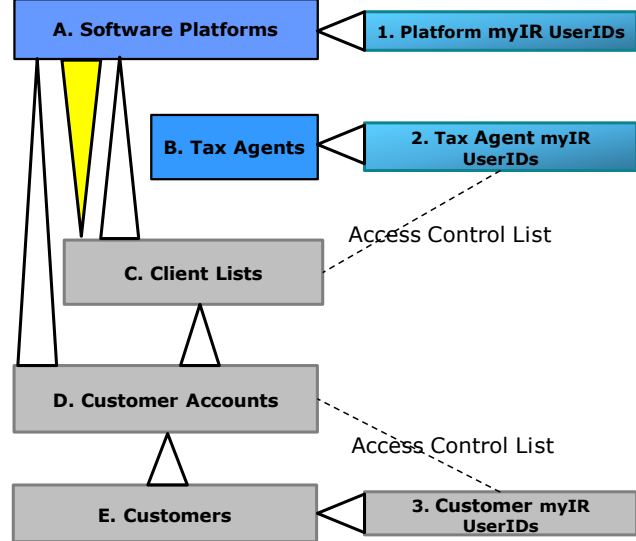
Relationship A-C - Software Intermediation Retrieve Links to Tax Agency Client Lists		
 <p>The diagram illustrates the retrieval process between five entities: A. Software Platforms, B. Tax Agents, C. Client Lists, D. Customer Accounts, and E. Customers. A. Software Platforms is connected to B. Tax Agents, C. Client Lists, and D. Customer Accounts. B. Tax Agents is connected to C. Client Lists. C. Client Lists is connected to D. Customer Accounts. D. Customer Accounts is connected to E. Customers. A yellow triangle highlights the link from A. Software Platforms to B. Tax Agents. Three numbered boxes are shown: 1. Platform myIR UserIDs (connected to A), 2. Tax Agent myIR UserIDs (connected to B), and 3. Customer myIR UserIDs (connected to E). Dashed lines labeled 'Access Control List' connect C to B and D to E.</p>	Permissions Required	Software Platform delegated myIR Logon with owner or administrator permission – represented by OAuth token Proof of SoftwarePlatform – cert or matching IDs
	Operation	SoftwareIntermediation.List
	Parameters	SoftwarePlatform ID Tax Agency IRD number Type Agent
	Results	Links are listed for all Tax Agents for the Software Provider

Table 40. Software Platform – Tax Agent Listing

Relationship A-C - Software Intermediation Delinking from Tax Agency Client List



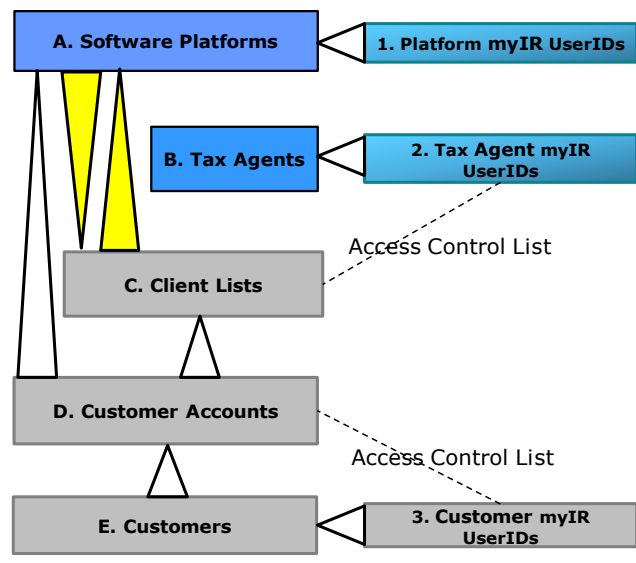
	<table> <tr> <td>Permissions Required</td><td> 1. Software Platform delegated myIR Logon with owner or administrator permission – represented by OAuth token OR 2. Tax Agent delegated myIR Logon with owner or administrator permission – represented by OAuth token Proof of SoftwarePlatform – cert or matching IDs </td></tr> <tr> <td>Operation</td><td>SoftwareIntermediation.Delink</td></tr> <tr> <td>Parameters</td><td> SoftwarePlatform ID Tax Agency IRD number Type Agent </td></tr> <tr> <td>Results</td><td>Link is removed resulting in no future Customer Accounts for any Client Lists for this Tax Agency, being included in daily or weekly TDS bulk file feed to Software Platform</td></tr> </table>	Permissions Required	1. Software Platform delegated myIR Logon with owner or administrator permission – represented by OAuth token OR 2. Tax Agent delegated myIR Logon with owner or administrator permission – represented by OAuth token Proof of SoftwarePlatform – cert or matching IDs	Operation	SoftwareIntermediation.Delink	Parameters	SoftwarePlatform ID Tax Agency IRD number Type Agent	Results	Link is removed resulting in no future Customer Accounts for any Client Lists for this Tax Agency, being included in daily or weekly TDS bulk file feed to Software Platform
Permissions Required	1. Software Platform delegated myIR Logon with owner or administrator permission – represented by OAuth token OR 2. Tax Agent delegated myIR Logon with owner or administrator permission – represented by OAuth token Proof of SoftwarePlatform – cert or matching IDs								
Operation	SoftwareIntermediation.Delink								
Parameters	SoftwarePlatform ID Tax Agency IRD number Type Agent								
Results	Link is removed resulting in no future Customer Accounts for any Client Lists for this Tax Agency, being included in daily or weekly TDS bulk file feed to Software Platform								

Table 41. Software Platform - Tax Agent Delinking

6.4.3 Software Platform - Customer Account (Relationship 2 in Table 37 above)

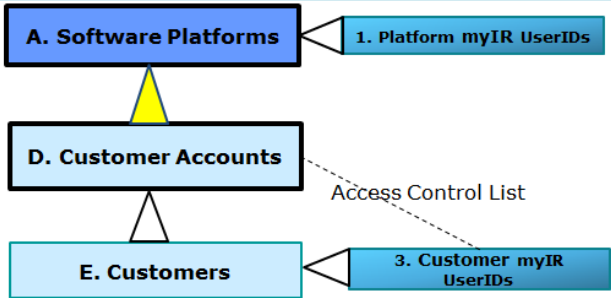
Relationship A-D - Software Intermediation Linking to Customer		
	Permissions Required	Customer delegated myIR Logon with owner or administrator permission – represented by OAuth token Proof of SoftwarePlatform – cert or matching IDs
	Operation	SoftwareIntermediation.Link
	Parameters	SoftwarePlatform ID Customer Account - IRD number and Account Type Type Customer
	Results	Link is established to a Customer Account resulting in that Customer Account being included in daily and weekly TDS bulk file feed to the Software Platform

Table 42. Software Platform – Customer linking


Relationship A-D - Software Intermediation Retrieve Links to Customers

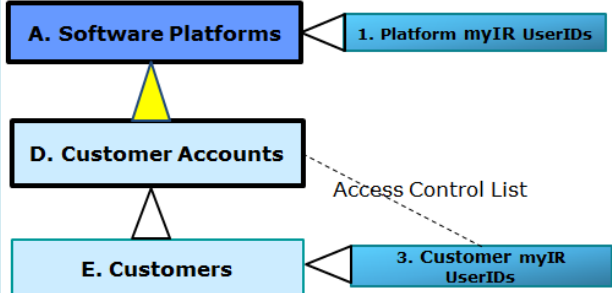
	Permissions Required	Software Platform delegated myIR Logon with owner or administrator permission – represented by OAuth token Proof of SoftwarePlatform – cert or matching IDs
	Operation	SoftwareIntermediation.List
	Parameters	SoftwarePlatform ID Customer Account - IRD number and Account Type Type Customer
	Results	Links are listed for all Customer Accounts linked to the Software Platform

Table 43. Software Platform – Customer listing
Relationship A-D - Software Intermediation Delinking to Customers

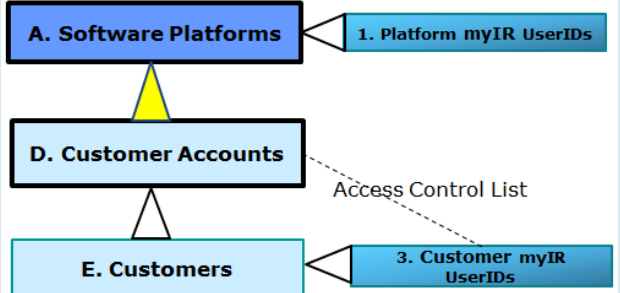
	Permissions Required	Software Platform delegated myIR Logon with owner or administrator permission – represented by OAuth token OR 2. Customer delegated myIR Logon with owner or administrator permission – represented by OAuth token Proof of SoftwarePlatform – cert or matching IDs
	Operation	SoftwareIntermediation.Delink
	Parameters	SoftwarePlatform ID Customer Account - IRD number and Account Type Type Customer
	Results	Link is removed resulting in those Customer Accounts not being included in daily overnight and weekend TDS bulk file feed to Software Platform

Table 44. Software Platform – Customer Delinking

6.4.4 Tax Agent – Client Relationship (Relationship 4 in Table 37 above)

- Intermediation links are created between a business “intermediary” like a Tax Agent and a Customer Account.
- This link is between a Tax Agency Client List (which has its own IRD Number) and individual Customer Accounts, (e.g. IRD number and Account Type).
- Currently, the Intermediation service only provides an operation to view the existing linked Client lists and associated customers for a given agency.
- This allows software provider software to generate a list of accounts a user might want to scroll through to find one that urgently needs to be looked at before the overnight TDS bulk feed
- Administration of which Customer Accounts are linked to specific Tax Agent client lists is not yet available through Gateway Services in 2018; existing mechanisms like myIR portal or calling Inland Revenue will still be relied on.

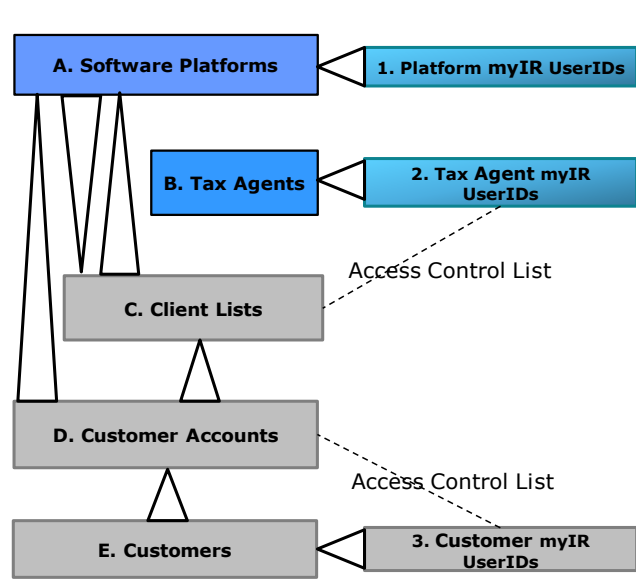
Relationship A-C - Intermediation Listing for Tax Agent	
	Permissions Required Tax Agent delegated myIR Logon with view permission – represented by OAuth token Proof of SoftwarePlatform – cert or matching IDs
	Operation Intermediation.RetrieveDelink
	Parameters SoftwarePlatform ID Tax Agency IRD number Type Agent
	Results Links are listed for all Client Lists for the Tax Agent that User ID has view permissions on

Table 45. Software Platform – Client listing

6.5 Permission alignment between Inland Revenue and Software Platforms

Transparency: Inland Revenue holds permissions by myIR Logons in its system. This is provided with bulk feed data for full transparency and enforced when a web service is called (same as eServices). In order to support the scenarios above TDS in the 2018 version is intended to **initially** include full transparency on delegation and permissions as set up for myIR Logons, for a while. This is a transition mechanism which is in place until Software Providers are able to manage permissions within their software. It has not yet been determined how long this data will be sent with the Bulk File.

6.5.1 Mapping User IDs

- For the above information around myIR Logons to be of use to Software Providers it is expected Software Providers will need to associate their internal/CRM user accounts to myIR Logon IDs.
- Due to the historical practice of providing a myIR Logon per Client List there might be multiple current User IDs that relate back to one Software Platform user. The new mechanisms no longer require this and Tax Agents or Customers might choose to

consolidate existing myIR logons, or might choose not to in order to keep their work segmented.

Inland Revenue plans to support this mapping of Software Platform users to myIR Logons as follows:

- Unlike previous systems where the Software Provider's Software Platform could, and sometimes needed to, intercept the username and password for the myIR logon, the OAuth mechanism now used does not allow this interception.
- An OAuth mediated login sequence will result in an OAuth token for the myIR Logon selected by the user. Inland Revenue will make available a simple way for the Software Platform to then get the username for that token so it can be associated with that user. The technical details of this are being finalised.
- If historical valid logins from old systems are kept the Software Provider might choose to associate those myIR Logons with the user.
- In principle, the Software Provider could just ask the user what myIR Logons they own, but would need a way to avoid fraud – potentially anyone could claim to own a myIR Logon if it is not validated by getting an OAuth token from Inland Revenue.

6.5.2 Summary of foreseen mapping and usage where Software Platforms mirror myIR Logon permissions

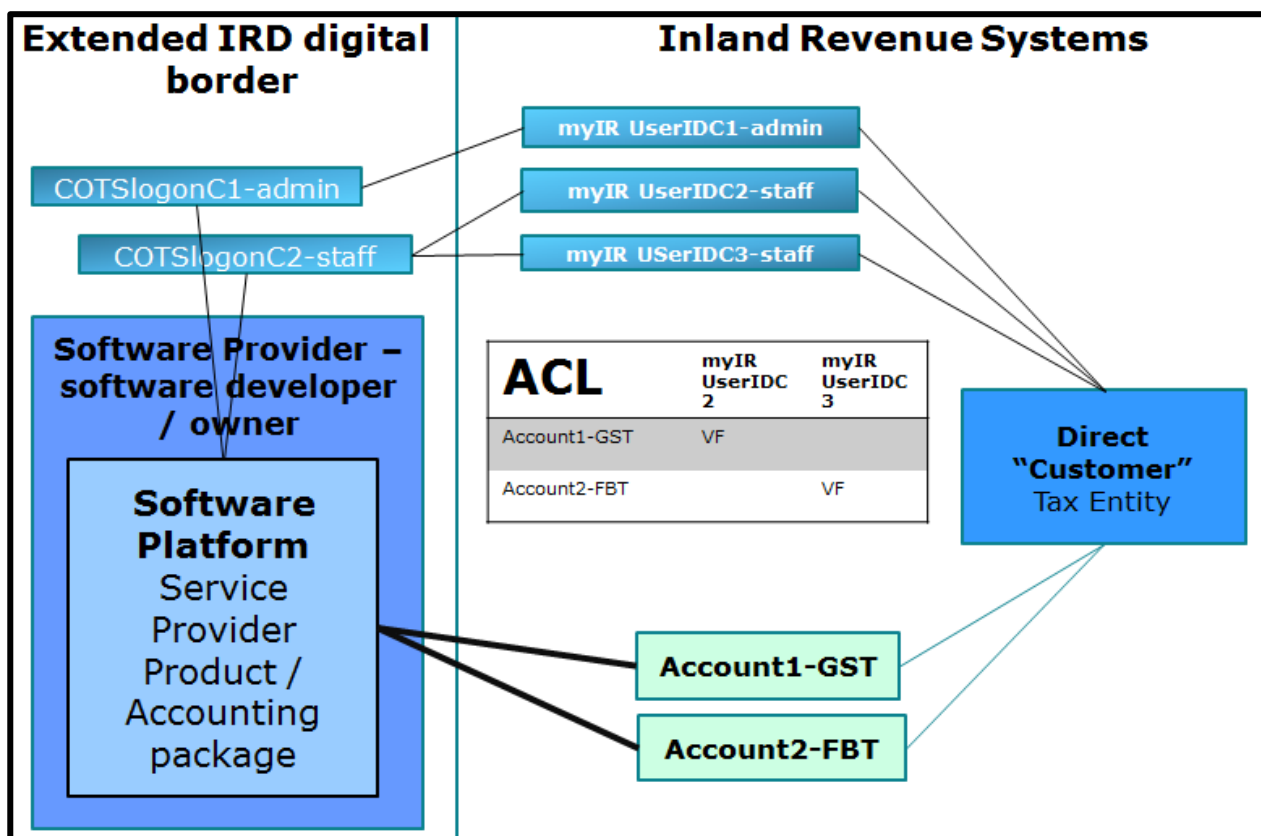


Figure 19. Customer level permission alignment

- This diagram is relevant only to Software Providers who wish to align to myIR permissions in their Software Platforms, and where a Software Intermediation Link is established directly to Customer Accounts and not to a Tax Agent.
- In the above diagram the Customer starts using a software platform. The initial links are established using myIR UserIDC1-admin that has the administrator permission to set up links to both Account1-GST and Account2-FBT.
- Inside the Software platform a user identified here as COTSLogonC2-staff logs in. That user has two different myIR Logons to access these two Customer Accounts.

- The Software Platform then twice allows the user to associate with those myIR Logons by using the OAuth sequence to login to IRD and get an OAuth token that the Software Platform then converts to a username.
- In the bulk file feed the Customer file set has a Intermediation.xml file showing what accounts specific myIR Logons have access to.
- Since the Software Platform has allowed the user to link to multiple myIR Service Accounts it can now translate those permissions in terms of its own local user credentials – in this case giving View (and Filing if relevant) permissions to COTSLogonC2-staff

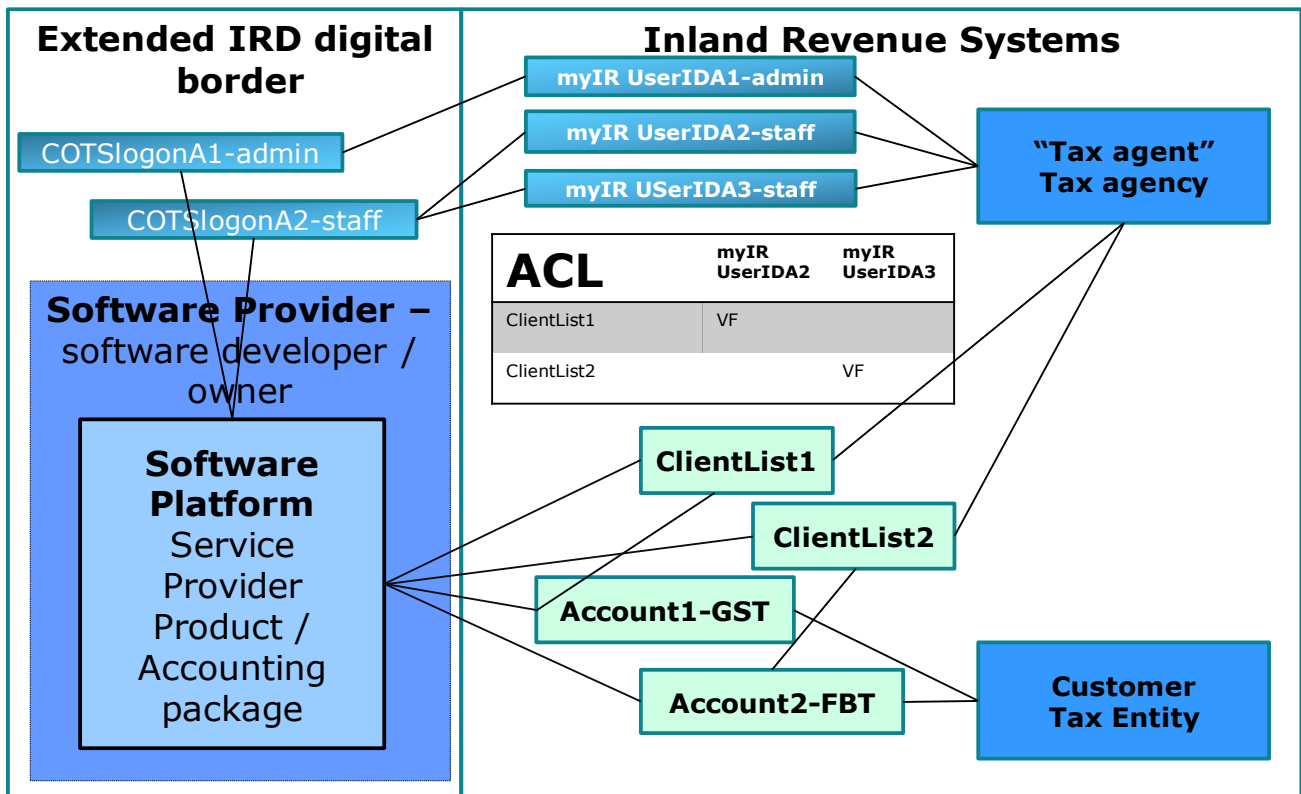


Figure 20. Tax Agent level permission alignment

- This diagram is relevant only to Software Providers who wish to align to myIR permissions in their Software Platforms, and where a Software Intermediation Link is established to a Tax Agency Client List and not directly to Customer Accounts.
- In the above diagram the Tax Agent starts using a software platform. The initial links are established using myIR UserIDA1-admin that has the administrator permission to set up links to both ClientList1 and ClientList2.
- Inside the Software platform a user identified here as COTSLogonCA-staff logs in. That user has two different myIR Logons to access these two Client Lists.
- The Software Platform then twice allows the user to associate with those myIR Logons by using the OAuth sequence to login to IRD and get an OAuth token that the Software Platform then converts to a username.
- In the bulk file feed the Tax Agent fileset has a Intermediation.xml file showing what client lists (and related Customer Accounts) specific myIR Logons have access to.
- Since the Software Platform has allowed the user to link to multiple myIR Service Accounts it can now translate those permissions in terms of its own local user credentials – in this case giving View (and Filing if relevant) permissions to COTSLogonC2-staff

Appendix A - Glossary

Acronym/Term	Definition
Authentication	The process of verifying an identity claimed by or for a system entity. [RFC 2828]
Authorisation	A right or a permission that is granted to a system entity to access a system resource. [RFC 2828]
Build Pack	Details the technical requirements and specifications, processes and sample payloads for the specified activity
Business Processing	Processing by Inland Revenue systems in retrieving data and constructing the Payload (business information content) of a message.
Business Service	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.
Customer	<p>A Customer is the party who is a taxpayer 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.</p> <p>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.</p>
Data integrity	The property that data has not been changed, destroyed, or lost in an unauthorized or accidental manner. [RFC 2828]
Digital certificate	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]
Encryption	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 called "decryption", which is a transformation that restores encrypted data to its original state. [RFC 2828]
myIR	START's authenticated customer-facing portal - myIR.
FIRST	Inland Revenue's old system which will still be in operation until 2021.
Gateway	START's web services gateway.
GWS	Gateway Services—the brand name for the suite of web services that Inland Revenue is providing.
HTTP	Hypertext Transfer Protocol is a networking protocol and is the foundation of data communication for the World Wide Web.
HTTPS	Hyper Text Transmission Protocol (Secure)—the protocol by which web browsers and servers interact with each other. When implemented over TLS1.2 HTTP becomes HTTPS.
IAS Build Pack	Identity and Access Build Pack



Acronym/Term	Definition
Intermediary	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.
Intermediation Service	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.
IP	Internet Protocol—the principal communication protocol in the Internet protocol suite for relaying datagrams across networks.
IR	Inland Revenue
LPP	Late Payment Penalty
Mutual authentication	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)
NSP	Inland Revenue's New Services Platform—includes START, XIAMS, the Application Publishing Service and supporting infrastructure.
OAuth2	An HTTPS based protocol for authorising access to a resource, currently at version 2.
Payload	The business information content of the message and/or file(s) between Inland Revenue and a Business Partner. This refers to the data contained within the messages that are exchanged when a web service is invoked. Messages consist of a Acronym/term Definition header and a payload.
Schemas	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.
Service	The exchange, as enabled by the Solution, of information, data and/or funds for the purpose of Clients' tax administration by Tax Agents.
Software Provider Software	<p>A Client Application is an operating instance of Software that is deployed in one or more sites. A number of deployment patterns are possible:</p> <ol style="list-style-type: none"> 1. A single cloud based instance with multiple tenants and online users, 2. An on premise instance (e.g. an organisation's payroll system) 3. A desktop application with an online user. <p>This is the computer software that contains interfaces to (consumes) the services that Inland Revenue exposes. Software is developed and maintained by a Software Provider and subsequently deployed as one or more Client applications.</p>
SFTP	Secure File Transport Protocol. SFTP 3.0 is used.
SOAP	Simple Object Access Protocol (SOAP) is a protocol specification for exchanging structured information in the implementation of Web Services in computer networks.



Acronym/Term	Definition
Solution	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.
Software Developer	The developer of a software package and its Gateway Channel integration capability which forms part of the Solution. In most cases this terminology is not used; instead we use Software Provider.
Software Platform	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. Previously referred to as Software Intermediary
SSH	Secure Shell (SSH) is a cryptographic network protocol for operating network services securely over an unsecured network. Version 2.0 is used.
SSL	Secure Sockets Layer (SSL) is a cryptographic protocol that provides security for communications over networks such as the Internet.
START	Inland Revenue's new system which stands for Simplified Taxation and Revenue Technology
Tax Agent	A Tax Agent who is formally registered as such with Inland Revenue. There might be multiple myIR Logons for one or more people associated with the Tax Agent entity.
TDS	Transaction Data Services
TLS1.2	Transport Layer Security version 1.2—the protocol that is observed between adjacent servers for encrypting the data that they exchange. Prior versions of TLS and all versions of SSL have been compromised and are superseded by TLS1.2.
UOMI	Use-of-money interest
URL	Universal Resource Locator—also known as a web address.
User	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 web logon used in myIR needs to be used in making Inland Revenue queries. This web logon must be granted permission there to access Customer Accounts. It is owned by one Customer but can be Linked to Accounts belonging to other Customers.
WSDL	Web Services Description Language (WSDL) is an XML-based language that provides a model for describing Web Services.
XIAMS	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.
XML	EXtensible Markup Language



Appendix B - Filing Frequency Codes

Account type	Filing Frequency Code	Filing Frequency Description	myIR Description
AIL	AIL6M3	Six monthly Mar/Sep	Six Monthly
AIL	AILI	Irregular	Irregular
AIL	AILMO	Monthly	Monthly
MPO	BPAMO	One monthly	Monthly
CRS	CRS1A	Annual	Annual
DSB	DSBMO	Monthly	Monthly
DWT	DWTMO	Monthly	Monthly
FBT	FBT3M	Quarterly	Quarterly - Jun/Sep/Dec/Mar
FBT	FBT3MA	Quarterly/Annual combination	Quarterly/Annual
FBT	FBTA01	Annual/Income - January	Annual/Income - Jan
FBT	FBTA02	Annual/Income - February	Annual/Income - Feb
FBT	FBTA03	Annual/Income - March	Annual/Income - Mar
FBT	FBTA04	Annual/Income - April	Annual/Income - Apr
FBT	FBTA05	Annual/Income - May	Annual/Income - May
FBT	FBTA06	Annual/Income - June	Annual/Income - Jun
FBT	FBTA07	Annual/Income - July	Annual/Income - Jul
FBT	FBTA08	Annual/Income - August	Annual/Income - Aug
FBT	FBTA09	Annual/Income - September	Annual/Income - Sep
FBT	FBTA10	Annual/Income - October	Annual/Income - Oct
FBT	FBTA11	Annual/Income - November	Annual/Income - Nov
FBT	FBTA12	Annual/Income - December	Annual/Income - Dec
FBT	FBTAN	Annual	Annual - year ending March
FBT	FBTM01	Quarterly/Income - January	Quarterly/Income
FBT	FBTM02	Quarterly/Income - February	Quarterly/Income
FBT	FBTM03	Quarterly/Income - March	Quarterly/Income
FBT	FBTM04	Quarterly/Income - April	Quarterly/Income
FBT	FBTM05	Quarterly/Income - May	Quarterly/Income
FBT	FBTM06	Quarterly/Income - June	Quarterly/Income
FBT	FBTM07	Quarterly/Income - July	Quarterly/Income
FBT	FBTM08	Quarterly/Income - August	Quarterly/Income



FBT	FBTM09	Quarterly/Income - September	Quarterly/Income
FBT	FBTM10	Quarterly/Income - October	Quarterly/Income
FBT	FBTM11	Quarterly/Income - November	Quarterly/Income
FBT	FBTM12	Quarterly/Income - December	Quarterly/Income
FBT	FBTS01	Income Year - January	Income Year
FBT	FBTS02	Income Year - February	Income Year
FBT	FBTS03	Income Year - March	Income Year
FBT	FBTS04	Income Year - April	Income Year
FBT	FBTS05	Income Year - May	Income Year
FBT	FBTS06	Income Year - June	Income Year
FBT	FBTS07	Income Year - July	Income Year
FBT	FBTS08	Income Year - August	Income Year
FBT	FBTS09	Income Year - September	Income Year
FBT	FBTS10	Income Year - October	Income Year
FBT	FBTS11	Income Year - November	Income Year
FBT	FBTS12	Income Year - December	Income Year
GMD	GMDMO	Monthly	Monthly
GSD	GSDMO	One Monthly	Monthly
GST	GSC2M1	Unpoliced Two Monthly Odd	Two Monthly
GST	GSC2M2	Unpoliced Two Monthly Even	Two Monthly
GST	GSC6M1	Unpoliced Six Monthly Jan/Jul	Six Monthly
GST	GSC6M2	Unpoliced Six Monthly Feb/Aug	Six Monthly
GST	GSC6M3	Unpoliced Six Monthly Mar/Sep	Six Monthly
GST	GSC6M4	Unpoliced Six Monthly Apr/Oct	Six Monthly
GST	GSC6M5	Unpoliced Six Monthly May/Nov	Six Monthly
GST	GSC6M6	Unpoliced Six Monthly Jun/Dec	Six Monthly
GST	GSCMO	Unpoliced One Monthly	Monthly
GST	GST2M1	Two Monthly Odd	Two Monthly
GST	GST2M2	Two Monthly Even	Two Monthly
GST	GST3M	Quarterly	Quarterly
GST	GST6M1	Six Monthly Jan/Jul	Six Monthly



GST	GST6M2	Six Monthly Feb/Aug	Six Monthly
GST	GST6M3	Six Monthly Mar/Sep	Six Monthly
GST	GST6M4	Six Monthly Apr/Oct	Six Monthly
GST	GST6M5	Six Monthly May/Nov	Six Monthly
GST	GST6M6	Six Monthly Jun/Dec	Six Monthly
GST	GSTMO	One Monthly	Monthly
GST	GSXCDA	Non standard accounting period	Non Standard
IPS	IPS6M3	Six Monthly Mar/Sep	Six Monthly
IPS	IPSI	Irregular	Irregular
IPS	IPSIN3	Irregular Excluding March	Irregular Excluding March
IPS	IPSMO	Monthly	Monthly
LGL	LGLDAY	Daily	Daily
NRT	NRT6M3	Six monthly Mar/Sep	Six Monthly
NRT	NRTI	Irregular	Irregular
NRT	NRTIN3	Irregular Excluding March	Irregular Excluding March
NRT	NRTMO	Monthly	Monthly
PIE	PIE1A	Annual - Income Tax	Annual - Income Tax
PIE	PIE3M	Quarterly	Quarterly
PIE	PIEA01	Annual - Jan balance date	Annual - Jan
PIE	PIEA02	Annual - Feb balance date	Annual - Feb
PIE	PIEA03	Annual - Mar balance date	Annual - Mar
PIE	PIEA04	Annual - Apr balance date	Annual - Apr
PIE	PIEA05	Annual - May balance date	Annual - May
PIE	PIEA06	Annual - Jun balance date	Annual - Jun
PIE	PIEA07	Annual - Jul balance date	Annual - Jul
PIE	PIEA08	Annual - Aug balance date	Annual - Aug
PIE	PIEA09	Annual - Sep balance date	Annual - Sep
PIE	PIEA10	Annual - Oct balance date	Annual - Oct
PIE	PIEA11	Annual - Nov balance date	Annual - Nov
PIE	PIEA12	Annual - Dec balance date	Annual - Dec
PIE	PIEMO	Monthly	Monthly
RLT	RLTMO	Monthly	Monthly
RWT	RWTMO	Monthly	Monthly

Appendix C - START Transaction Codes

Note – this list is likely to have more entries as conversion plans are finalised

Transaction Type	Short Description	Description
ADJFIT	Group ICA adjustment	Credit transaction used to offset an income tax liability recognising this will be satisfied by a payment of further income tax made by a group representative
ADSOTC	Audit settlement offset	Offset used to reduce liability due to an audit settlement adjustment.
AUDDPC	Audit dispute credit	Records an audit dispute credit transaction from the audit worksheet
AUDDPD	Audit dispute debit	Records an audit dispute debit transaction from an audit worksheet.
AUDFOR	Audit forecasting transaction	This trans type is used to manage the forecasting of interest for audits.
AUDTXC	Audit credit	Records when a decrease to the debit portion of the assessment is added by an audit
AUDTXD	Audit debit	Records when an increase to the debit portion of the assessment is added by an audit
BPAXFB	Multi payment direction, no lock	Portion of multi payment allocated to this period
BPAXFO	Multi payment transfer out	Credit from multi payment account allocated to other accounts.
BPAXFR	Multi payment direction, lock	Portion of multi payment allocated to this period for a return.
CNVAJC	Converted adjustment, credit	Adjustment to a debit transaction converted into START
CNVAJD	Converted adjustment, debit	Adjustment to a credit transaction converted into START
CNVCRC	Converted court cost, credit	Records a court cost credit transaction converted into START
CNVCRT	Converted court cost	Records a court cost transaction converted into START
CNVDOD	Converted deferral of tax credit	Records a deferral of tax transaction converted into START
CNVDOT	Converted deferral of tax	Records a deferral of tax transaction converted into START
CNVDSB	Converted disbursement	Records a disbursement transaction into START
CNVDTD	Converted deferral tax due	Records a deferral tax due transaction converted into START
CNVEWH	Converted Excess Withholding Credit	Converted Credit transaction for IPE credit claims.
CNVINC	Converted credit interest	Records credit interest that was converted into START
CNVINT	Converted interest	Records interest that was converted into START
CNVLTF	Converted late filing penalty	Records the late filing penalty that was converted into START



Transaction Type	Short Description	Description
CNVPLF	Converted late filing penalty	Records the late filing penalty that was converted into START. This penalty is not tied to the return and is manually reversible.
CNVPNL	Converted penalty	Records penalty that was converted into START
CNVPYM	Converted payment	Records a converted payment transaction as a transaction. This payment was manually converted.
CNVRID	Converted interest remission	Records an interest remission transaction converted into START. This remission is not tied to the return and is manually reversible.
CNVRIN	Converted interest remission	Records an interest remission transaction converted into START
CNVRLF	Cnv late filing penalty remission	Records a penalty remission transaction converted into START
CNVRPF	Cnv late filing penalty remission	Records a penalty remission transaction converted into START. This remission is not tied to the return and is manually reversible.
CNVRPN	Converted penalty remission	Records a penalty remission transaction converted into START
CNVRPP	Converted penalty remission	Records a penalty remission transaction converted into START. This remission is not tied to the return and is manually reversible.
CNVSBD	Converted small balance offset debit	Records a small balance offset transaction converted into START. This is a debit transaction offsetting a credit.
CNVSBO	Converted small balance offset	Records a small balance offset transaction converted into START
CNVSHR	Converted shortfall penalty	Records a shortfall penalty that was converted into START.
CNVSOL	Converted solicitor's fee	Records a solicitor's fee transaction converted into START
CNVSPY	Converted special tax	Records a special tax transaction converted into START
CNVTBR	Converted time bar	Time bar offset for a credit transaction
CNVTXC	Converted return credit	Records a tax credit that was converted into START
CNVTXD	Converted return debit	Records a tax debit that was converted into START
CNVWOC	Converted write-off	Records a write-off credit transaction converted into START
CNVWOD	Converted write-off of credit	Records a write-off debit transaction converted into START
CNVWTH	Converted withholding tax	Records a withholding tax transaction converted into START
CNVXFI	Converted transfer in	Records a credit transfer in transaction converted into START
CNVXFO	Converted transfer out	Records a credit transfer out transaction converted into START.
CRDEWH	Excess Withholding Credit	Credit transaction for IPE credit claims.
CRDNTE	GST Credit Note	Transaction to add when adding a credit note activity in the taxpayer rulings case.



Transaction Type	Short Description	Description
CROOTD	Converted remission offset	Records a debit transaction that offsets a converted remission when it has a balance
CSOOTC	Converted small balance offset offset, credit	Records a credit transaction that offsets a converted small balance offset when it has a balance
CSOOTD	Converted small balance offset offset, debit	Records a debit transaction that offsets a converted small balance offset when it has a balance
CWOOTC	Converted write-off offset, credit	Records a credit transaction that offsets a converted write-off when it has a balance
CWOOTD	Converted write-off offset, debit	Records a debit transaction that offsets a converted write-off when it has a balance
DSBCBD	Disbursement, international manual	Disbursement issued to the customer via citi direct portal
DSBCHQ	Disbursement, cheque	Disbursement issued to the customer via cheque
DSBDIR	Disbursement, direct credit	Disbursement issued to the customer via direct credit
DSBIAC	Disbursement, international ACH	Disbursement issued to the customer via international ACH
DSBIBD	Disbursement, bank draft	Disbursement issued to the customer via international bank draft.
DSBSEP	Disbursement, SEPA	Disbursement issued to the customer via SEPA
DSBTTR	Disbursement, telegraphic transfer	Disbursement issued to the customer via telegraphic transfer (SWIFT)
DSXCPR	FIRST Child Support Receiving Career Intercept	A portion of the disbursement has been intercepted to be sent to FIRST
DSXCSE	FIRST Child Support Employee Deductions Intercept	A portion of the disbursement has been intercepted to be sent to FIRST
DSXFAM	FIRST Working for Families Tax Credit Intercept	A portion of the disbursement has been intercepted to be sent to FIRST
DSXFIR	Disbursement intercept, FIRST	A portion of the disbursement has been intercepted to be sent to FIRST
DSXICA	FIRST Imputation Credit Account Intercept	A portion of the disbursement has been intercepted to be sent to FIRST
DSXINC	FIRST Income Tax Intercept	A portion of the disbursement has been intercepted to be sent to FIRST
DSXKSE	FIRST KiwiSaver Employee Deductions Intercept	A portion of the disbursement has been intercepted to be sent to FIRST
DSXKSR	FIRST KiwiSaver Employer Contribution Intercept	A portion of the disbursement has been intercepted to be sent to FIRST
DSXMAC	FIRST Maori Authority Credit Account Intercept	A portion of the disbursement has been intercepted to be sent to FIRST
DSXNCP	FIRST Child Support Payment Parent Intercept	A portion of the disbursement has been intercepted to be sent to FIRST



Transaction Type	Short Description	Description
DSXPAY	FIRST Pay As You Earn Income Tax Deductions Intercept	A portion of the disbursement has been intercepted to be sent to FIRST
DSXPRV	Disbursement intercept, Provisional Tax	A portion of the disbursement has been intercepted to be sent to FIRST for provisional tax.
DSXQCT	FIRST Qualifying Company Election Tax Intercept	A portion of the disbursement has been intercepted to be sent to FIRST
DSXREB	FIRST Tax Credit Overpayments Intercept	A portion of the disbursement has been intercepted to be sent to FIRST
DSXSHR	FIRST Shareholder Premium Intercept	A portion of the disbursement has been intercepted to be sent to FIRST
DSXSLE	FIRST Student Loan Employee Deductions Intercept	A portion of the disbursement has been intercepted to be sent to FIRST
DSXSLS	FIRST Student Loans Annual Account Intercept	A portion of the disbursement has been intercepted to be sent to FIRST
DSXSSC	FIRST Specified Superannuation Contribution Intercept	A portion of the disbursement has been intercepted to be sent to FIRST
EXGCRC	Ex gratia credit	Ex gratia credit that is used to decrease a debit transaction
FAMCRD	FAM entitlement credit	A weekly or fortnightly FAM entitlement credit transaction to be disbursed
FAMSQA	Amended FAM assessment debit	A debit FAM assessment which has been amended to an increased debit amount
FAMSQC	FAM assessment credit	An end of year square up assessment for FAM which resulted in a credit
FAMSQD	FAM assessment debit	An end of year square up assessment for FAM which resulted in a debit
FEEAPC	Application fee credit	Credit note for true application fee
FEEAPP	Application fee	Fee associated to an application.
FEECCC	Court awarded costs, credit	Credit that is awarded to the customer by the courts.
FEECCD	Court awarded costs, debit	Fee added as part of a legal action
FEEDMG	Damages and restitution costs	Costs that are applied as part of a damage or restitution case
FEEDSB	Legal disbursements	Court Filing Fee and Court Sealing Fee for bankruptcies or liquidations
FEEDSC	Legal disbursements credit note	Legal disbursements for issuing credit note in binding ruling case
FEEEXC	External costs credit note	External costs incurred by binding ruling case credit note
FEEEXT	External costs	External costs incurred by Departmental and passed on to the customer
FEEGSC	Goods and Service Tax Charged Credit	The amount of GST tax charged credit note



Transaction Type	Short Description	Description
FEEST	Goods and Service Tax Charged	The amount of goods and service tax that was charged as part of the service provided.
FEELQD	Liquidation costs	Costs that are applied as part of the liquidation process
FEESCR	Services provided credit note	Credit note for fee evaluated during binding ruling case
FESEEC	Security fee	Fee based on a security that has been issued
FEESOL	Solicitor's costs	Solicitor's Fees awarded by the Court
FEESVC	Services provided	Fee evaluated during the binding ruling process for services provided.
FRSCRD	Credit transferred from FIRST	Credit that was transferred from FIRST
FWDAIL	Transfer to AIL	Debit transaction used to offset a credit transaction when being transferred to a Account Issuer Levy account
FWDAIP	Transfer to AIP	Debit transaction used to offset a credit transaction when being transferred to an Account Information Provider account
FWDCRS	Transfer to CRS	Debit transaction used to offset a credit transaction when being transferred to a Common Reporting Standard account
FWDDWT	Transfer to DWT	Debit transaction used to offset a credit transaction when being transferred to a Dividend Withholding Tax account
FWDFAM	Transfer to FAM	Debit transaction used to offset a credit transaction when being transferred to a Working for Families Tax Credit account.
FWDFBT	Transfer to FBT	Debit transaction used to offset a credit transaction when being transferred to a Fringe Benefit Tax account
WDGMD	Transfer to GMD	Debit transaction used to offset a credit transaction when being transferred to a Gaming Machine Duty account
WDGSD	Transfer to GSD	Debit transaction that transfer a credit to a Goods Sold in Satisfaction of Debt account
WDGST	Transfer to GST	Debit transaction used to offset a credit transaction when being transferred to a Goods and Services Tax account
WDIIT	Transfer to INC	Debit transaction used to offset a credit transaction when being transferred to an individual customers Income Tax account.
WDIPE	Transfer to IPE	Debit transaction used to offset a credit transaction when being transferred to a Interest PAYE Exemption account
WDIPS	Transfer to IPS	Debit transaction used to offset a credit transaction when being transferred to an RWT - deductions from interest (IPS) account
WDITN	Transfer to INC	Debit transaction used to offset a credit transaction when being transferred to a non-individual customers Income Tax account.



Transaction Type	Short Description	Description
FWDLGL	Transfer to LGL	Debit transaction used to offset a credit transaction when being transferred to a legal costs account
FWDNRT	Transfer to NRT	Debit transaction used to offset a credit transaction when being transferred to a Non-Resident Withholding Tax account
FWDPIE	Transfer to PIE	Debit transaction used to offset a credit transaction when being transferred to a Portfolio Investment Entity account
FWDPRS	Transfer to PRS	Debit transaction used to offset a credit transaction when being transferred to a Payroll Subsidy account
FWDREB	Transfer to REB	Debit transaction used to offset a credit transaction when being transferred to a Donation Tax Credit account.
FWDRLT	Transfer to RLТ	Debit transaction used to offset a credit transaction when being transferred to a Residential Land Withholding Tax account
FWDRUL	Transfer to RUL	Debit transaction used to offset a credit transaction when being transferred to a Rulings & Determinations account
FWDRWT	Transfer to RWT	Debit transaction used to offset a credit transaction when being transferred to an RWT - Specified Dividends account
GLDCRD	GL disbursement credit	Credit that has been generated by a GL disbursement activity.
INTCRD	Use of money credit interest	Use of money interest that is calculated on credit transactions
INTMNC	Manual credit interest	Manually posted credit interest transaction
INTMND	Manual debit interest	Manually posted interest transaction
INTSTD	Use of money debit interest	Use of money interest that is calculated on debit transactions
INTTPA	Tax pool credit interest	Use of money credit interest that is calculated on funds transferred or disbursed from a tax pool account
INTWTH	Tax withheld on credit interest	Records the amount that is to be withheld from credit interest
LCKTPA	Tax pool deposit offset	Offsetting transaction used to record when a deposit has been received in a tax pool account
MNLLTF	Late filing penalty	Penalty recorded when a return or form is filed late manually applied
OFFBRP	Proceeds on bankruptcy, offset	Offsetting transaction used to record when a payment has been received for proceeds on a bankruptcy
PNLADT	Additional tax penalty	Pre 1997 penalty recorded when a payment is deemed late
PNLFPY	Failure to Meet Requirements	This transaction is used to apply a Failure to Meet Requirements' penalty to CRS accounts.
PNLFRC	Failure to Take Reasonable Care	This transaction is used to apply a 'Failure to Take Reasonable Care' penalty to CRS accounts.
PNLIMP	Imputation penalty	Penalty applied to a debit ICA/MAC closing balance



Transaction Type	Short Description	Description
PNLIPP	Information Provider Penalty	This transaction is used to apply a 'Information Provider Penalty' to AIP accounts.
PNLLFE	Late filing penalty evaluation	This transaction is used to apply late filing penalty when no return has been added
PNLLFR	Late filing penalty	Penalty recorded when a return or form is filed late
PNLLTF	Late filing penalty	Penalty recorded when a return or form is filed late
PNLLTP	Late payment penalty	Penalty recorded when a payment is deemed late
PNLMNL	Manual penalty	Manually posted penalty transaction
PNLSHR	Shortfall penalty	Records the shortfall penalty that is due
PRTOTC	Deferral of tax in dispute offset	Credit transaction that is used to mark a deferral of tax debit transaction that is under dispute.
PRTOTD	Deferral of tax in dispute offset, debit	Debit transaction that is used to mark a deferral of tax credit transaction that is under dispute.
PRVDBT	Provisional tax instalment	A debit transaction for a provisional tax instalment
PYMACC	Account payment	Credit resulting from a account payment voucher
PYMAUD	Audit payment	Credit resulting from an audit payment voucher
PYMBKD	Deduction Payment	Credit resulting from a deduction payment voucher
PYMBLK	Multi Payment	Credit resulting from a multi payment voucher
PYMBRP	Proceeds on bankruptcy, payment	Credit resulting from a proceeds on bankruptcy payment voucher
PYMCOL	Collection payment	Credit resulting from a collection payment voucher
PYMCST	Customer payment	Credit resulting from a customer payment voucher
PYMEST	Estimated Payment	Credit resulting from an estimated payment voucher
PYMLCA	Locked payment, audit	Offsets a payment transaction so that it does not offset other debit transactions until the audit transaction posts.
PYMLCR	Locked payment, return	Offsets a payment transaction so that it does not offset other debit transactions until the return transaction posts.
PYMLCP	Locked payment, provisional	Offsets a payment transaction in an Income Tax period which has no provisional instalments posted
PYMPLN	Instalment arrangement payment	Credit resulting from a instalment arrangement payment voucher
PYMPRD	Period payment	Credit resulting from a period payment voucher
PYMRTN	Return payment	Credit resulting from a return payment voucher
PYMTPA	Tax pool payment	Credit resulting from a tax pool payment voucher



Transaction Type	Short Description	Description
RCVTPA	Transfer from TPA, acquired	Credit transaction received from a Tax Pool account from an acquired deposit
RCVTPO	Transfer from TPA, owned	Credit transaction received from a Tax Pool account from an owned deposit
RECAIL	Transfer from AIL	Credit transaction received from a different account or period that posts from a Account Issuer Levy account
RECAIP	Transfer from AIP	Credit transaction received from a different account or period that posts from an Account Information Provider account
RECCRS	Transfer from CRS	Credit transaction received from a different account or period that posts from a Common Reporting Standard account
RECDWT	Transfer from DWT	Credit transaction received from a different account or period that posts from a Dividend Withholding Tax account
RECFAM	Transfer from FAM	Credit transaction received from a different account or period that posts from a Working for Families Tax Credit account
RECFBT	Transfer from FBT	Credit transaction received from a different account or period that posts from a Fringe Benefit Tax account
RECGMD	Transfer from GMD	Credit transaction received from a different account or period that posts from a Gaming Machine Duty account
RECGSD	Transfer from GSD	Credit transaction received from a different account or period that posts from a GSD account
RECGST	Transfer from GST	Credit transaction received from a different account or period that posts from a Goods and Service Tax account
RECIIT	Transfer from INC	Credit transaction received from a different account or period that posts from an individual customers Income Tax account
RECIPE	Transfer from IPE	Credit transaction received from a different account or period that posts from a Interest PAYE Exemption account
RECIPS	Transfer from IPS	Credit transaction received from a different account or period that posts from a RWT - deductions from interest (IPS) account
RECITN	Transfer from INC	Credit transaction received from a different account or period that posts from a non-individual customers Income Tax account
RECLGL	Transfer from LGL	Credit transaction received from a different account or period that posts from a Legal Costs account
RECNRT	Transfer from NRT	Credit transaction received from a different account or period that posts from a Non-Resident Withholding Tax account
RECPIE	Transfer from PIE	Credit transaction received from a different account or period that posts from a Portfolio Investment Entity account



Transaction Type	Short Description	Description
RECPRS	Transfer from PRS	Credit transaction received from a different account or period that posts from a Payroll Subsidy account
RECREB	Transfer from REB	Credit transaction received from a different account or period that posts from a Donation Tax Credit account
RECRLT	Transfer from RLT	Credit transaction received from a different account or period that posts from a Resident Land Withholding account
RECRUL	Transfer from RUL	Credit transaction received from a different account or period that posts from a Ruling and Determinations account
RECRWT	Transfer from RWT	Credit transaction received from a different account or period that posts from a RWT - Specified Dividends account
REVCRD	Reverse credit transaction	Debit transaction used to offset a credit transaction that is reversed
REVINC	Reverse interest transaction	Credit transaction used to offset an interest debit transaction that is reversed
REVIND	Reverse credit interest transaction	Debit transaction used to offset an interest credit transaction that is reversed
REVOTC	Reverse other transaction	Credit transaction used to offset another debit transaction that is reversed
REVOTD	Reverse credit other transaction	Debit transaction used to offset another credit transaction that is reversed
REVPNC	Reverse penalty transaction	Credit transaction used to offset a penalty debit transaction that is reversed
REVTXC	Reverse assessment transaction	Credit transaction used to offset a primary debit transaction that is reversed
REVTXD	Reverse credit assessment transaction	Debit transaction used to offset a primary credit transaction that is reversed
RTNACR	AIM credit	Credit transaction used to reduce the year-to-date provisional tax liability calculated under AIM from an instalment date
RTNADR	AIM debit	Debit transaction which posts from an AIM Statement of Account
RTNAMA	Amended annual return debit	Standard transaction for amended annual return forms that result in an increase of debit.
RTNAMI	Amended income year return debit	Standard transaction for amended income year return forms that result in an increase of debit.
RTNAMR	Amended return debit	Standard transaction for amended return forms that result in an increase of debit.
RTNANC	Annual return credit	Standard transaction for annual return forms that result in a Credit.
RTNAND	Annual return debit	Standard transaction for annual return forms that result in a debit.
RTNCRD	Return credit	Standard transaction for return forms that result in a Credit.
RTNDAA	Amended default assessment	Transaction that is posted from a default assessment which has been increased



Transaction Type	Short Description	Description
RTNDAC	Default assessment credit	Transaction that is posted from a default assessment when it results in a credit.
RTNDAD	Default assessment debit	Transaction that is posted from a default assessment when it results in a debit.
RTNEPC	Early payment discount	Credit transaction posted when a customer claims an early payment discount for Income Tax
RTNINC	Income year return credit	Standard transaction for income year return forms that result in a Credit.
RTNIND	Income year return debit	Standard transaction for income year return forms that result in a debit.
RTNFIT	Further Income Tax	A debit transaction for further income tax related to a debit ICA/MAC balance
RTNORI	Return debit	Standard transaction for return forms that result in a debit.
RTNPRV	Return debit	A return debit transaction which replaces provisional instalment transactions once the return has been filed
RTNRDC	Research & development credit	Credit transaction posted when an R&D loss tax credit is claimed
RTNRDD	Research & development debit	Debit transaction posted when R&D loss tax credit is liable to be paid back
SBOOTC	Small balance offset	Credit transaction that is used to offset a small debit transaction
TBROTD	Time bar	Time bar offset for a credit transaction
TPAFWD	Transfer to TPA	Debit transaction used to offset a credit transaction when being transferred to a Tax pool account
TPAREC	Transfer from customer	Credit transaction received by a Tax Pool account from a customer
WAVOTC	Remission	Offsets a penalty or interest transaction that has been remitted.
WOOTC	Other write-off	Write-off another transaction type
WOSOTC	Other system write-off	System write-off of another transaction type
WTDTPA	Tax pool withdrawal	A debit transaction that is posted when a withdrawal of funds is made from a tax pool account
XFRDSC	Disbursement transfer source credit	Credit transaction that is posted when a disbursement is transferred
XFRIN	Credit transfer in	Credit transfer into a period from a different period on the same account
XFROUT	Credit transfer out	Credit transfer from this period to a different period on the same account

Appendix D - Tax Agent Web Service Transaction Types

Tax Agent Web Service Transaction Type Code	Tax Agent Web Service Transaction Type Code Description
0000	Internal Data
0020	Additional Interest
0025	Additional Interest Reversal
0030	Additional Penal Charge
0034	Additional Penal Charge Reversal
0035	Additional Penal Charge Remission
0036	Additional Penal Charge Remission Reversal
0040	Additional Tax
0045	Additional Tax Remission
0046	Additional Tax Remission Reversal
0047	Additional Tax Reversal
0050	Amnesty Penalty
0055	Amnesty Penalty Reduction
0060	Assessment
0061	Reversal Assessment Reversal
0065	Assessment Reversal
0070	Capitalisation
0075	Capitalisation Reversal
0080	Court Costs
0085	Court Costs Reversal
0090	Credit retained
0095	Credit retained Reversal
0100	Credited to Loan
0105	Credited to Loan Reversal
0130	Default Assessment
0135	Default Assessment Reversal
0150	Deferred Tax
0151	Deferred Assessment Due
0152	Deferred Assessment Due Reversal
0153	Deferred Repayment Obligation
0154	Deferred Repayment Obligation Reversed
0155	Deferred Tax Reversal

0156	Deferred Tax Payable
0157	Deferred Tax Payable Reversal
0160	Early Payment Discount
0165	Early Payment Discount Reversal
0210	Incremental Late Payment Penalty
0211	Incremental Late Payment Penalty Cancellation
0212	Incremental Late Payment Penalty Cancellation Reversal
0214	Incremental Late Payment Penalty Remission
0215	Incremental Late Payment Penalty Remission Reversal
0216	Incremental Late Payment Penalty Reversal
0220	Interest
0221	Interest Adjustment
0222	Interest Adjustment Reversal
0223	Interest C/Fwd
0224	Interest C/Fwd Reversal
0225	Interest on Tax in Dispute
0226	Interest on Tax in Dispute Reversal
0227	Interest Remission
0228	Interest Remission Reversal
0230	Interest Reversal
0235	Interest Write-Off
0236	Interest Write-Off Reversal
0240	Interim Repayment Obligation
0245	Interim Repayment Reversal
0255	Late filing Penalty
0256	Late Filing Penalty Remission
0257	Late Filing Penalty Remission Reversal
0258	Late Filing Penalty Reversal
0260	Late Payment Penalty
0262	Late Payment Penalty Cancellation
0263	Late Payment Penalty Cancellation reversal
0265	Late Payment Penalty Remission
0266	Late Payment Penalty Remission Reversal
0267	Late Payment Penalty Reversal
0350	Non Payment Penalty Partial Remission
0352	Non Resident Interest Write-Off



0360	Non-electronic Filing Penalty
0365	Non-electronic Filing Penalty Remission
0366	Non-electronic Filing Penalty Remission Reversal
0368	Non-electronic Filing Penalty Reversal
0370	Reduced Late Payment Interest
0372	Reduced Late Payment Interest Reversal
0374	Reduced Late Payment Interest Remission
0376	Reduced Late Payment Interest Remission Reversal
0380	Payment - Thank You
0383	Payment Dishonoured
0385	Payment Reversal
0386	Payment Cancelled
0387	Late Payment Interest
0388	Payment Transferred In
0389	Payment Transferred Out
0390	Penal Assessment
0391	Penal Charge
0392	Penal Tax
0393	Penal Tax Additional Tax
0394	Penal Tax Reversal
0395	Penal Assessment Reversal
0396	Penal Charge Reversal
0397	Penal Tax Additional Tax Remission
0398	Penal Tax Additional Tax Remission Reversal
0399	Penal Tax Additional Tax Reversal
0400	Penalty
0401	Penalty - failure to provide info remission
0402	Penalty - failure to provide info remission reversal
0403	Penalty Remission
0404	Penalty Remission Reversal
0405	Penalty Reversal
0406	Penalty Tax
0407	Penalty Tax Remission
0408	Penalty Tax Remission Reversal
0409	Penalty Tax Reversal
0416	Late payment penalty - waived



0417	Late payment interest - waived
0450	Refund
0452	Payment
0455	Refund reversal
0480	Reversal of previous Interest Reversal
0485	Reversal of Additional Tax Reversal
0490	RWT on Interest Reconciliation Assessment
0495	RWT on Interest Reconciliation Assessment Reversal
0500	Shortfall Penalty
0501	Shortfall Penalty Reversal
0510	Solicitor's Fees
0515	Solicitor's Fees Reversal
0520	Special Return
0525	special Return Reversal
0540	Tax Credit for Payroll Donations
0545	Tax Credit for Payroll Donations Reversal
0570	Transfer
0580	Transfer Reversed
0600	Use of Money Interest
0601	Use of Money Interest Reversal
0605	Use of Money Interest Remission
0606	Use of Money Interest Remission Reversal
0670	Write-off
0675	Write-off Reversal
0680	Write-Off Purification
0685	Write-Off Purification Reversal
0690	GST Special Return Assessment
0695	GST Special Return Assessment Reversal
0800	Payment returned
0802	Payment returned to other IRD number
0803	Payment returned cancelled
UNKN	N/A

Appendix E – Bank Standards

Attribute	Description	Data Type	Length
NZBankStandard			
Bank Number	The Bank where the Account is held	Char	2
Branch Number	The branch number of the bank	String	4
Account Number	Number of the bank account	String	8
Account Number Suffix	Suffix to the bank account number	String	4
NZ Bank Credit Union	Uses NZ Bank Standard and add an additional field		
Reference Number	Reference number for Credit Union account transaction	String	12
AUS Bank Standard			
BSB	Corresponds to bank ID, bank branch, state where bank is	String	6
Account	Account Number	String	9
US CAN Bank Standard			
Routing Number	Used to identify the specific bank	String	9
Account Number	Number of the bank account	String	17
SWIFT IBAN Bank Standard			
SWIFT BIC Code	Unique identification code for financial institution	String	11
Country Code	Country specific code	String	2
Check Digit	Allows for sanity check of bank account number for integrity	String	2
Basic Bank Account Number	Number of the bank account	String	30
Other Bank Standard			
Branch	This field is a generic field for branch identifiers and account prefixes	String	30
Account	This field is a generic field for an account	String	30



Appendix F – Possible FIRST Transfer Codes

Tax type code	Short description
CSE	Child support (NCP employer)
KSE	Kiwisaver Employee Deductions
KSR	Kiwisaver Employer Contributions
NCP	Child Support (Liable Parent)
CPR	Child Support (Receiving Carer)
SLS	Student Loans (Student)
FAM	Working for Families Tax Credits
QCT	Qualifying Company Election Tax
SHR	Shareholder Premium
SSC	Employer Superannuation Contribution Tax
WPE	Foreign Dividend Withholding Elected
WPN	Foreign Dividend Withholding Non-Elected
IPS	Resident Withholding Tax on Interest
DWT	Dividend Withholding Tax
NRT	Non-Resident Withholding Tax
RLT	Resident Land Withholding Tax
GST	Goods and Services Tax
GMD	Gaming Machine Duty
INC	Income Tax
PIE	Portfolio Investment Entity Tax
AIL	Approved Issuer Levy
FBT	Fringe Benefit Tax
FBA	Fringe Benefit Tax (Annual)
FBI	Fringe Benefit Tax (Income Year)
ICA	Imputation Credit Account
IPE	Resident Withholding Tax on Interest (exempt recipient)
RWT	Resident Withholding Tax on Specified Dividends
REB	Tax Credit Claim form (formerly Rebates)
MAC	Maori Authority Credit Account
CRS	Common Reporting Standard
AIP	Account Information Provider
MPO	Multi Payment Option (also known as Bulk Payment Account)



Appendix G - Document History

This table lists all changes that have been made to this build pack document since initial external release (most recent changes listed first).

Version	Date	Description
20181009	9 October 2018	<p>Updates made for Release 3:</p> <ul style="list-style-type: none"> Added the April 2019 table to section 2.4 Added new sections 2.5.2.4, and 2.5.10 through to 2.5.14 inclusive Added Release 3 scenarios to section 2.8 Removed last bullet point in section 6.3 re supply of Permissions file New START Transaction Codes for Release 3 added into Appendix C, highlighted in yellow The following START Transaction Codes have been removed from Appendix C as more generic reversal codes are being used instead: BPAXFBREVCRD, BPAXFOREVOTC, BPAXFRREVCRD, DSBIBDREVOTC, FWDAILREVOTC, FWDALPREVOTC, FWDICRSREVOTC, FWDIDWTREVOTC, FWDIFBTREVOTC, FWDGMDREVOTC, FWDIPEREVOTC, FWDIPSREVOTC, FWDNRTREVOTC, FWDPIEREVOTC, FWDRLTREVOTC, FWDRTREVOTC, PYMBKDREVCRD, PYMBLKREVCRD, PYMESTREVCRD, RECAILREVCRD, RECAIPREVCRD, RECCRSREVCRD, RECDWTREVCRD, RECFBTREVCRD, RECGMDREVCRD, RECIPIREVCRD, RECIPSREVCRD, RECNRTREVCRD, RECIPIREVCRD, RECRLTREVCRD, RECRWTREVCRD.
20180930	30 Sept 2018	<p>Updated various sections to reflect the Software Intermediation link is between the Software Platform and Tax Agency Client List (previously the link was to the Tax Agent or Tax Agency). Changes highlighted in yellow.</p> <p>Updated the following Figures/Tables to also reflect this change:</p> <ul style="list-style-type: none"> 1.4 Figure 3 6.2 Figure 17 6.4.2 Tables 39, 40 and 41 6.4.4 Table 45 6.5.2 Figure 19 <p>Removed PRS account type from April 2018 table in section 2.2</p> <p>Also updated Max Period Activity in section 2.4 and 2.7 to note in regard to checking all transactions have been included in latest feed</p> <p>Appendix B:</p> <ul style="list-style-type: none"> Corrected account type from AIP to AIL <p>Removed FATCA, IPE and PRS</p>
20180606	29 April 2018	<p>1.2 Update to description of History Feed to include when it will be produced other than initial one-off production.</p>



Version	Date	Description
	29 May 2018	5.2.2 Corrected DR SFTP IP address to 222.153.203.33
1.0	12 April 2018	<p>P1,2 Reformatted title and second page slightly to remove duplication of versioning information and standardise naming</p> <p>1 Inserted new paragraphs</p> <p>1.1 New paragraphs in beginning of Section 1.1</p> <p>1.2 Transition explanations in first paragraph</p> <p>1.3 Explanatory addition to paragraph</p> <p>1.4 Fundamental Concepts – addition to last paragraph of Tax Agent definition</p> <p>2.4.1 Addition of this section</p> <p>3.3.2 – 4 New diagrams to account for replacement of adhoc History queries and general clarifications</p> <p>3.3.5 Use Case Listing – removal of BUC102, SUC020 and amendments to PUC204 and SUC002.</p> <p>3.4.2 BUC101 Updated to reflect History File production when new Links are created</p> <p>3.4.6 PUC211 Updated to reflect History File production when delinked and relinked</p> <p>3.4.10 PUC204 b) updated to reflect History file production – removal of query ability</p> <p>3.4.12 – BUC 102 Removed</p> <p>4.1 Addition of History File production with new links</p> <p>4.2.1 Addition of PUC204 into Table 27. Removal of Step 19 in Table 28 and additions into new Step 24 to reflect History File production</p> <p>4.2.2 Changes for Steps 17 onwards to reflect production of History File</p> <p>4.2.3.3 Addition to Step 2 to reflect History file production</p> <p>6.2 Table 37 Update to Number 7 Relationship to reflect updated position on Bookkeepers. Update to numbers 6 and 7 to reflect updated permission file more accurately.</p> <p>6.5 Updated to highlight permissions file being temporary</p>



Version	Date	Description
0.81	21 March 2018	<p>Updated History Feed Section of Table 1: Business Services in TDS and added paragraph following that table</p> <p>Updated Descriptions in Table 2 for Customer, System Customer Record, and Tax Agent for clarification</p> <p>Updated Description for Customer and User in Section 2.1 Data Model for clarification</p> <p>Section 2.2 Data Items:</p> <ul style="list-style-type: none"> Updated Account Type with clarification Updated Forecasted Balances for Accounts, Periods and Bills Updated descriptions for Transfers Added Retrieve Date <p>Updated Table 6 – Additional data available through TDS</p> <p>Added Section 2.4.4 GST Credit Assessments</p>
0.8		<p>Updated Transaction Data Service Layer diagram – Fig 1</p> <p>Updated Data fields in Section 2 for forecasted amounts, Intermediation and Notes following Table 5.</p> <p>Delete Section 2.5 – unnecessary as information is contained in preceding tables</p> <p>Updated links to Github</p> <p>Updated Fundamental Concepts Section 1.3 with new and changed definitions</p> <p>Addition of statement about the Intermediation File being an interim solution for an as yet unknown period.</p> <p>Updates to Section 6 on delegation and permissions – cosmetic - including removal of the type of permission data</p> <p>Formatting corrections and amendments for minor errors throughout the document</p> <p>Updated Bank Accounts – Appendix E</p> <p>Updated Appendix B – Filing Frequency – Removed duplicate RLT code, Updated filing Frequency for MPO, Changed AIL to AIP</p>
0.52	15 December 17	<p>Added Section 1.3 Fundamental concepts - interacting parties in TDS – updated throughout document to standardise terminology</p> <p>Updated Bank Account information in Section 2.2 and added Appendix E – Bank Standards</p> <p>Updated Migration Date in Section 2.2</p> <p>Section 4 Refined TDS Real-Time use cases:</p> <p>3.4.6 PUC 205, 3.4.8 BUC 103, 3.4.9 BUC 104, 3.4.10 BUC 105</p>



Version	Date	Description
		<p>Expanded BUC101 to differentiate tax agent and direct customer more</p> <p>Added use case diagrams and put in cross references to help navigate between use case diagrams, listing and individual descriptions</p> <p>Added GitHub links to other build pack folders</p> <p>Onboarding section 5 expanded to explain</p> <ul style="list-style-type: none"> • software intermediary registration • provide an indication of project sequencing • give more detail on information to be exchanged <p>Added Section 6 on delegation and permissions</p>
0.51	22 Nov 2017	<p>Updated Bank Account details</p> <p>New Build Pack Overview diagram including second Intermediation Build Pack</p> <p>Added MPO and DSB as Account Types – Section 2.3</p> <p>Added History transaction and tax type list sections</p> <p>Updates to Section 2.9 Data Conversion</p> <p>Updated use case diagram – Section 3.3 and Use cases BUC104, BUC105, PUC205 - Expanded TDS Real time related Use cases listing. Cosmetic updates to other use cases</p> <p>Added onboarding section including bulk linking</p> <p>Added Tax Agent Web Service Transaction Type Table – Appendix D</p>
0.5	Oct/Nov 2017	<p>Removed financial descriptions</p> <p>Updated scenarios and use cases</p> <p>Finalised various sections ready for review</p>
0.2	8 Sep 17	<p>Draft for initial feedback</p> <p>Updated with SME changes</p> <p>Inserted Sections 2.4, 2.5, 2.6 and 2.7</p>
0.1	15 Aug 2017	Internal only