Inland Revenue
Te Tari Taake

Inland Revenue

Build Pack: Bill API

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Contents

1 Overview

Before you continue, please be sure to consult
http://www.ird.govt.nz/software-providers/
for the products that use this service, business-level context and use cases, links to relevant policy, and information on how to integrate with Inland Revenue's products and services.

1.1 This solution

Inland Revenue has a suite of digital services available for consumption by our service providers that supports efficient, electronic business interactions with Inland Revenue. This service is an application programming interface (API) that external applications can call in real-time to retrieve information for a particular customer bill item. The response also includes provisional tax method details and history associated to the account to which the bill item belongs.

The objective of this API is to allow transaction data services (TDS) software providers to query information that was formerly available in the Tax Agent Web Services (TAWS) data feed.

1.2 Intended audience

The solution outlined in this document is intended to be used by TDS software providers.

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

1.3 Prerequisites

Party	Requirement	Description
Digital Service Provider	Acquire a X.509 certificate from a competent authority for the Test and Production environments	This is required when using mutual TLS with cloud-based service providers or financial institutions. Note that the same certificate cannot be used for the Test and Production environments.

1.3.1 Mutual Transport Layer Security and certificates

Mutual Transport Layer Security (TLS) is implemented for this API. This requires the use of a publicly-issued X509 certificate from one of the trusted certificate authorities. Inland Revenue does not issue certificates to external vendors for web service security implementations.

Inland Revenue has the following minimum requirements for accepting public X509 keys:

- Minimum Key Length: 2048
- Signature Algorithm: SHA256[RSA]
- Self-signed certificates are not accepted
- Certificates issued by a private/internal certificate authority are not accepted.

In general, shorter-lived certificates offer a better security posture since the impact of key compromise is less severe but there is no minimum requirement for certificate expiry periods.

Below is a list for examples of certificate authority providers with no recommendations or rankings incorporated. It is recommended that a business researches which certificate authority meets their requirements:

- Comodo
- GeoTrust
- DigiCert
- GlobalSign
- Symantec
- Thawte
- IdenTrust
- Entrust
- Network Solutions
- RapidSSL
- Entrust Datacard
- GoDaddy.

2 Solution design

2.1 Architecture

Inland Revenue offers a suite of web applications in order to facilitate interactions via software packages. This API will be used by approved organisations to retrieve bill item and provisional tax information from Inland Revenue.

2.2 Supported message type

This service supports the following message type:

- **BILL:** Retrieves bill item information and associated provisional tax method and history from Inland Revenue. Requires a bill ID, which is available in the TDS file as the value of element <billID>.

2.3 Bill item and provisional tax information

2.3.1 Request payload

Field	Description
Id	This refers to the bill ID as it appears in the TDS file (value of element <billID>). Id is the only parameter within the Bill object.

2.3.2 Response payload

Field	Description
Bill **➢CustomerId**	Customer ID of customer to whom requested bill item belongs. This ID is the customer's IRD number.
Bill **➢CustomerIdType**	NOTE: This will only ever be "IRD"
Bill **➢AccountId**	Account ID of the account to which requested bill item belongs.
Bill **➢AccountIdType**	NOTE: This will only ever be "ACC"
Bill **➢Period**	End date of the filing period to which requested bill item belongs.
Bill **➢Id**	This refers to the bill ID as it appears in the TDS file. This is identical to the value provided in the request payload.
Bill **➢RetrieveDate**	Date that the requested bill item information was retrieved.
ProvMethodHistory[]	Array containing all versions of all provisional methods belonging to the account.

Field	Description
ProvMethodHistory[] ➢MethodKey	Unique identifier for the provisional method.
ProvMethodHistory[] ➢Version	Version of provisional tax method. Value of 0 indicates the original record; all subsequent versions are modifications thereof.
ProvMethodHistory[] ➢Method	Method used. Available options are STD (standard), EST (estimation), RATIO, and AIM.
ProvMethodHistory[] ➢TaxYear	Tax year associated with provisional tax method.
ProvMethodHistory[] ➢Commence	Provisional tax method commencement date.
ProvMethodHistory[] ➢Cease	Provisional tax method cessation date.
ProvMethodHistory[] ➢Amount	Total provisional tax method amount.
ProvMethodHistory[] ➢Ratio	Provisional tax method ratio (applicable to ratio method only).
ProvDetails TransactionId	Unique identifier of provisional tax instalment transaction.
ProvDetails ➢TransactionType	Type of transaction associated with the bill item.
ProvDetails ➢FilingPeriod	Provisional tax method filing period. This date is the last day of the tax year.
ProvDetails ➢DueDate	Provisional tax instalment due date.
ProvDetails ➢Amount	Provisional tax instalment amount due.
ProvDetails ➢FITReduction	Provisional tax instalment FIT reduction.
ProvDetails ➢Method	Provisional tax instalment method that the instalment and bill item were generated for. Available options are STD (standard), EST (estimation), RATIO, and AIM.
ProvDetails ➢Reversed	Provisional tax instalment reversed date.
ProvDetails ➢Processed	Provisional tax instalment processed date.

3 End points and OpenAPI specifications

IMPORTANT
For the authoritative definitions, please refer to the OpenAPI specifications at
https://www.ird.govt.nz/software-providers/

3.1 End points

End point	URL
Mock Data Testing	TBD
Production Data Testing	TBD
Production	TBD

NOTE: These endpoints are subject to change due to environment updates in the future.

3.2 OpenAPI specifications

An OpenAPI file describes the entire API, along with endpoints, operations on each endpoint, and operation parameters. The included .yaml file can be used along with an OpenAPI editor such as editor.swagger.io to view technical specifications for this operation and generate example client code.

4 Glossary

Acronym/term	Definition
ACC	A unique account ID that includes an IRD number and an account type code
API	Application Programming Interface—set of functions and procedures that allow applications to access the data or features of another application, operating system or other service.
End points	A term used to describe a web service that has been implemented
Gateway	Inland Revenue's web services gateway
HTTP, HTTPS	Hyper Text Transmission Protocol (Secure)—the protocol by which web browsers and servers interact with each other. When implemented over TLS1.2 HTTP becomes HTTPS.
IRD	Inland Revenue Department (ie IRD Numbers)
OpenAPI specifications	Formerly known as Swagger specifications—a specification for machine-readable interface files for describing, producing, consuming and visualising RESTful web services.
Payloads	This refers to the data contained within the messages that are exchanged when a web service is invoked. Messages consist of a header and a payload.
START	Simplified Taxation and Revenue Technology—IR's new core tax processing application. It is an implementation of the GenTax product from FAST Enterprises.
TLS1.2	Transport Layer Security version 1.2—the protocol that is observed between adjacent servers for encrypting the data that they exchange. Prior versions of TLS and all versions of SSL have been compromised and are superseded by TLS1.2.
URL	Universal Resource Locator—also known as a web address
X.509 certificate	An international standard for encoding and describing a digital certificate. In isolation a public key is just a very large number, the X.509 certificate to which it is bound identifies whose key it is, who issued it, when it expires etc. When a counterparty's X.509 digital certificate is received, the recipient takes their public key out of it and store the key in their own key store. The recipient can then use this key to encrypt and sign the messages that they exchange with this counterparty.
YAML	"YAML Ain't Markup Language"—a human-readable data-serialisation language commonly used for configuration files and in applications where data is stored or transmitted.

5 Change log

This table lists all material changes that have been made to this build pack document since its release (most recent changes listed first). It does not encompass non-material changes, such as to formatting etc.

Version	Date of change	Document section	Description
	30/01/20	2.3.2	• Updated AccountIdType response from ACCIRD to ACC
V0.8	29/01/20		• V0.8 created