

Inland Revenue

## Gateway Services onboarding: Employment activities

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## About this document

This document is the onboarding guide for service providers to guide them step-by-step through the process of consuming Inland Revenue's new Gateway Services for Employment Activities. It focuses on core business activities as prerequisites, testing activities, organisation contact lists etc.

There are also service build pack documents e.g. Identity and Access Management service, Return service, Employment service that list the technical requirements and specifications, solution design and other bi-directional information sources between IR and external clients.

## Document control

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|---------------------------|---|
| <b>File name and path</b> | <a href="https://github.com/InlandRevenue/Gateway-Services/tree/master/Process%20-%20Employment%20Activities/Latest">https://github.com/InlandRevenue/Gateway-Services/tree/master/Process%20-%20Employment%20Activities/Latest</a> |
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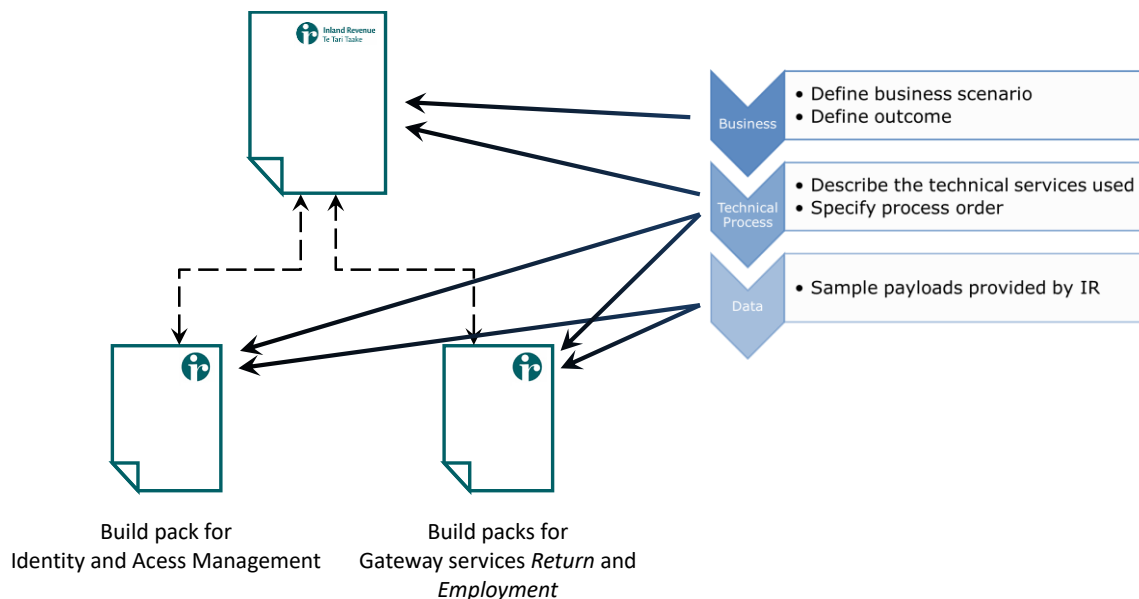
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## 1 Overview

Inland Revenue has a range of digital services that facilitate secure and efficient business interactions between itself and its customers. Inland Revenue's Gateway Services provide a suite of services, including the Return service and Employment service for Employment Activities that allows customers to submit and retrieve payroll obligation data electronically through this gateway.

This document should be read in conjunction with the relevant technical build packs (see appendix A).

The diagram below shows how the Onboarding and Build packs link together.



**Figure 1: Onboarding and build pack structure**

### 1.1 This solution

Proposed legislation in the Taxation (Annual Rates for 2017–18, Employment and Investment Income, and Remedial Matters) Bill provides for employer obligations to be filed to IR on a payday basis. This differs to the currently monthly basis which may or may not align with the employer's payday cycle.

The Bill is subject to the parliamentary process; should it become legislation the following applies:

- Payday filing of employer obligations is voluntary from 1<sup>st</sup> April 2018
- Payday filing becomes compulsory for all employers from 1<sup>st</sup> April 2019

Payday filing comprises two sets of data:

- Employment Information
- Employee Details

#### 1.1.1 Employment Information

*Employment Information* includes employees' income and deduction information for a specific paydate.

For employers and payroll providers using payroll software (whether voluntarily or mandated), Employment Information is required to be supplied to IR within two working days of the paydate that the data relates to.

The Return service enables employers to file their Employment Information on a paydate basis. It offers the following capability:

- **Prepop** provides the Employment Information schema with some employee data already populated
- **File** enables filing of Employment Information data for a specific paydate, and also enables amendments to previously filed Employment Information to be made
- **RetrieveStatus** provides the processing status of previously of filed Employment Information for a specific paydate
- **RetrieveReturn** provides a copy of previously filed Employment Information for a specific paydate.

Please note that the *RetrieveFilingObligations* operation is not relevant for Employment Information.

### 1.1.2 Employee Details

*Employee Details* includes:

- Employee/employer relationship specific information, for example employment start and finish dates, tax code
- KiwiSaver enrolment (KS1) and KiwiSaver opt out (KS10) information
- Non-relationship specific information such as employee name, address, phone numbers, date of birth etc.

Employee Details information is expected to be supplied to IR no later than the next filing of Employment Information.

The Employment service enables employers to submit Employee Details for new, departing and existing employees.

The Employment service offers the following capability:

- **Create** enables information for a new employee to be submitted to IR
- **Update** enables information for an existing employee to be submitted, for example a KS10
- **RetrieveList** provides Employee Details previously submitted for an employee, or all employees (depending on which has been requested)
- **Terminate** enables an employer to submit information in regard to a departing employee.

## 1.2 Benefits of using the Return service

The Return service provides the following benefits:

- **Prepop** is beneficial for existing employers who are using the Return Service for the first time. It provides prepopulated data for the employer's employees (where this is known by IR); IRD number, employee name, tax code, start date, end date. This data can be added to or modified before the first Employment Information is submitted.
- **File** can be used in conjunction with the *Prepop* as described above. It can also be used in isolation by brand new employers, or employers not requiring prepopulated data as part of submitting Employment Information. It can also be used to amend previously filed Employment Information for a paydate.
- **RetrieveStatus** enables the employer to check the status of the Employment Information after IR's nightly batch processing has completed.

- **RetrieveReturn** enables the employer to request the Employment Information data that was filed previously.

### 1.3 Benefit of using the Employment service

The Employment service provides the following benefits:

- **Create** enables an employer to submit information to IR in regard to a new employee, IRD number, name, tax code, start and finish dates, date of birth, contact details, KS1 KiwiSaver enrolment information etc.
- **Update** enables an employer to make changes for recently joined employees, for example a KS10 KiwiSaver opt-out, or other changes for existing employees, such as a correction to a date of birth etc. (The exception is supplying an end date for an employee, the Terminate operation is to be used for this.)
- **RetrieveList** enables an employer to request a subset of previously submitted data; employee IRD number, employee name information, tax code, date of birth, employee start date, employee end date. The request can be for one, or all, of the employer's employees (for whom data has previously been submitted).
- **Terminate** enables an employer to submit information to IR in regard to a departing employee; employee IRD number, employee name, employee date of birth, employee end date.

## **2 Path to production**

### **2.1 Registration prerequisites**

Service Partner registration requests should include information about the entity requesting access, the system(s) that will integrate with Inland Revenue (examples include software products to market and in-house software) and the intended use of Gateway Services and the data exchanged (customer reach, customer segmentation, expected volumes, etc).

Inland Revenue has a legislative duty of care for treating all tax payer and business information as confidential. Inland Revenue will complete due diligence which your Relationship Manager will discuss with at the time of registration.

### **2.2 Supporting your software development lifecycle**

Your Inland Revenue Relationship Manager will support the entire software development lifecycle including the journey from initial registration, testing, deployment to production and managing the on-going relationship in a BAU environment. Your Relationship Manager will ensure access to the latest documentation and Inland Revenue non-production environments.

The design and build phase of your software development lifecycle is supported by Inland Revenue on-boarding documentation and associated build packs listed in the appendix. This document links the business overview with the technical information contained in the associated build packs. Build packs describe the technical interactions for services, lists of response codes and provide links to schemas, WSDLs and the like. Emulated services may be available to support early development effort while the testing phase, test planning and Inland Revenue test environments are described in section 2.3. Your Relationship Manager will work with you on go-live and production support.

Inland Revenue will release minor and major upgrades to the Gateway Services from time to time. Your Relationship Manager will manage your transition and any associated certification requirements, if any.

Discussions regarding volume changes, your product roadmap(s) and innovative uses for Gateway Services should be directed to your Inland Revenue Relationship Manager in the first instance.

#### **2.2.1 Emulated Services**

These are provided for service providers to build against. Once they have a basic service ready service providers should move to the Digital Test Environment (DTE) from the Emulated Services offering.

Service providers will be given access to Emulated Services for the Return and Employment service operations that can be used to test software builds against, prior to partnership testing with IR.

| Emulated service                         | Expected outcome   |
|--|--|
| <b>Authentication</b>                    | Authentication emulated service will: <ul style="list-style-type: none"> <li>• Issue Authorisation token</li> <li>• Validate Authorisation Access token.</li> </ul>  |
| <b>Employment Information operations</b> | Employment Information Return Emulated Service will: <ul style="list-style-type: none"> <li>• Send mock positive responses for four operations (Prepop, RetrieveReturn, File and Retrieve Status)</li> <li>• Validate request schema for all four operations and throw mock error if submitted schema is not valid.</li> </ul> |
| <b>Employee Details operations</b>       | Employee Details Employment Emulated Service will: <ul style="list-style-type: none"> <li>• Send mock positive responses for four operations (Create, Update, Terminate, RetrieveList)</li> <li>• Validate request schema for all four operations and throw mock error if submitted schema is not valid.</li> </ul>            |

**Table 1: Emulated Services and expected outcomes**

## 2.3 Testing phase and environment information

Testing with Inland Revenue will be carried out in an integrated test environment, mirroring Production. The objective of the partnership test is to allow Inland Revenue and its partners to ensure their readiness for Production.

Test duration timelines will be managed via a partnership test plan.

Testing will be conducted in the dedicated digital test environment.

### 2.3.1 Data allocation

Inland Revenue will set up and provide test data for partners to use in the scenarios outlined in section 2.3.2. Test data will be refreshed in a controlled fashion during Partnership testing by Inland Revenue as requested by its partners.

### 2.3.2 Test scenarios

Scenarios identified for testing purposes are outlined below. The figure below lists the typical test scenarios that have been identified for testing. Note that these scenarios are in draft state and are subject to change final list of scenario will be confirmed via Partnership Test Plan:





**Figure 2: Test Scenarios Mind Map**

## 2.4 Certification

This section will articulate:

- Any certification required to consume the Employment Activities services

## 3 Business use cases

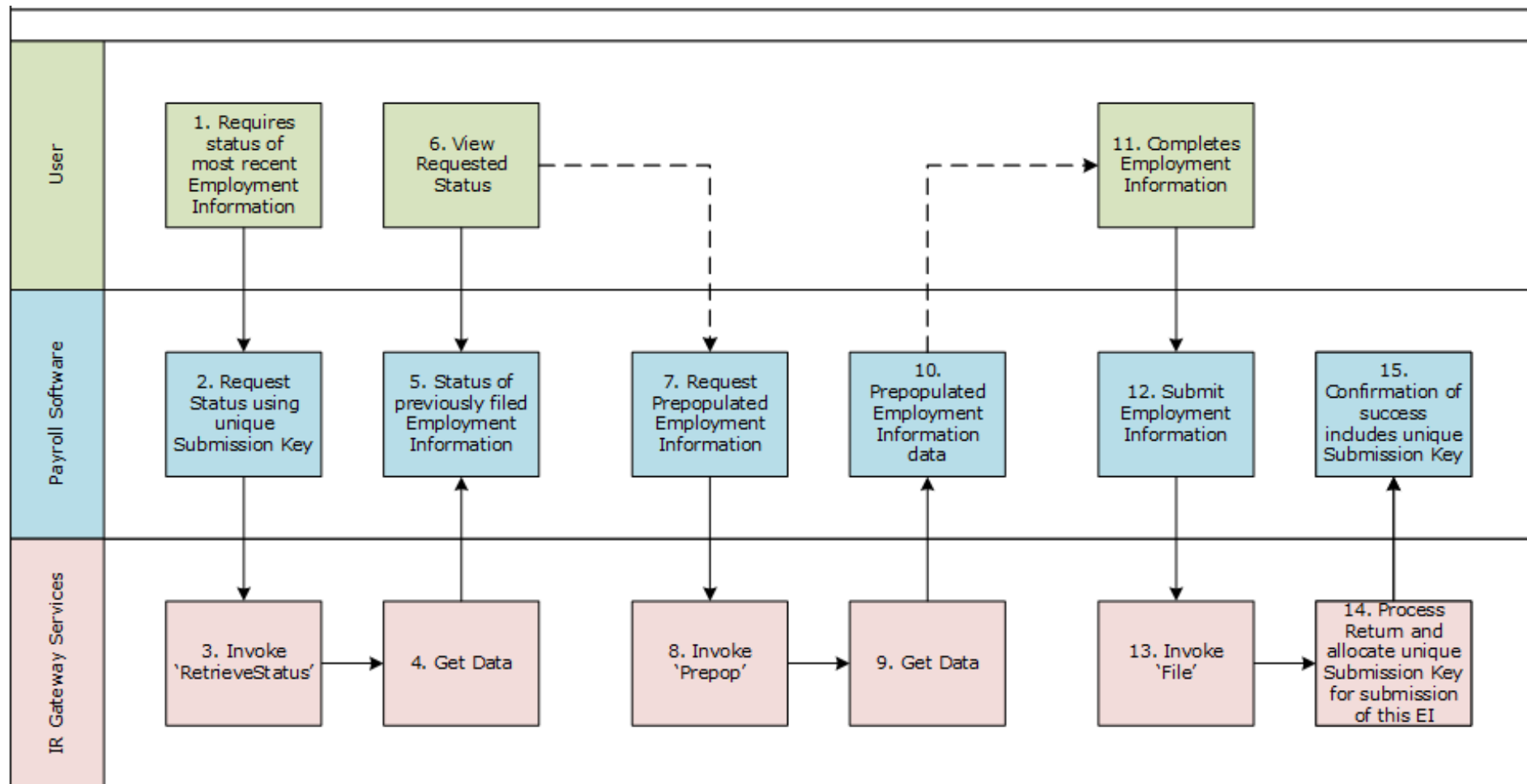
Please note this following

- This section identifies a selection of use cases and business outcomes. It also identifies a sequence of Gateway Services calls to achieve those outcomes. The sequence of calls has been confirmed as functionally correct by Inland Revenue. IR recognises Gateway Services may be called in different ways to satisfy the same outcome.

Additionally the detail in this section should not inhibit innovation to combine calls across the Gateway Services to achieve the same outcome or solve business needs not described here.

| fSNo | Use case   | Return service |        |                |                | Employment service |        |              |           |
|------|--|----------------|--------|----------------|----------------|--------------------|--------|--------------|-----------|
|      |  | File           | Prepop | RetrieveStatus | RetrieveReturn | Create             | Update | RetrieveList | Terminate |
| 1    | Confirm PAYE position and file next Employment Information   | 3              | 2      | 1              |                |                    |        |              |           |
| 2    | Existing employer payday filing for the first time   | 2              | 1      |                |                |                    |        |              |           |
| 3    | New employer payday filing   | 2              |        |                |                | 1                  |        |              |           |
| 4    | Amend previously filed Employment Information  | 2              |        |                | 1              |                    |        |              |           |
| 5    | Submit departing employee information, file Employment Information                                     | 2              |        |                |                |                    |        |              | 1         |
| 6    | Submit change to employee's tax code, file Employment Information                                      | 2              |        |                |                |                    | 1      |              |           |
| 7    | Submit KiwiSaver information for recently joined employee, file Employment Information                 | 3              |        |                |                | 1                  | 2      |              |           |
| 8    | Request previously submitted employee details, create, update, terminate, file Employment Information  | 5              |        |                |                | 2                  | 3      | 1            | 4         |
| 9    | Multiple sites for the same IRD Number/Location Number submitting for the same paydate on the same day | 1              |        |                |                |                    |        |              |           |

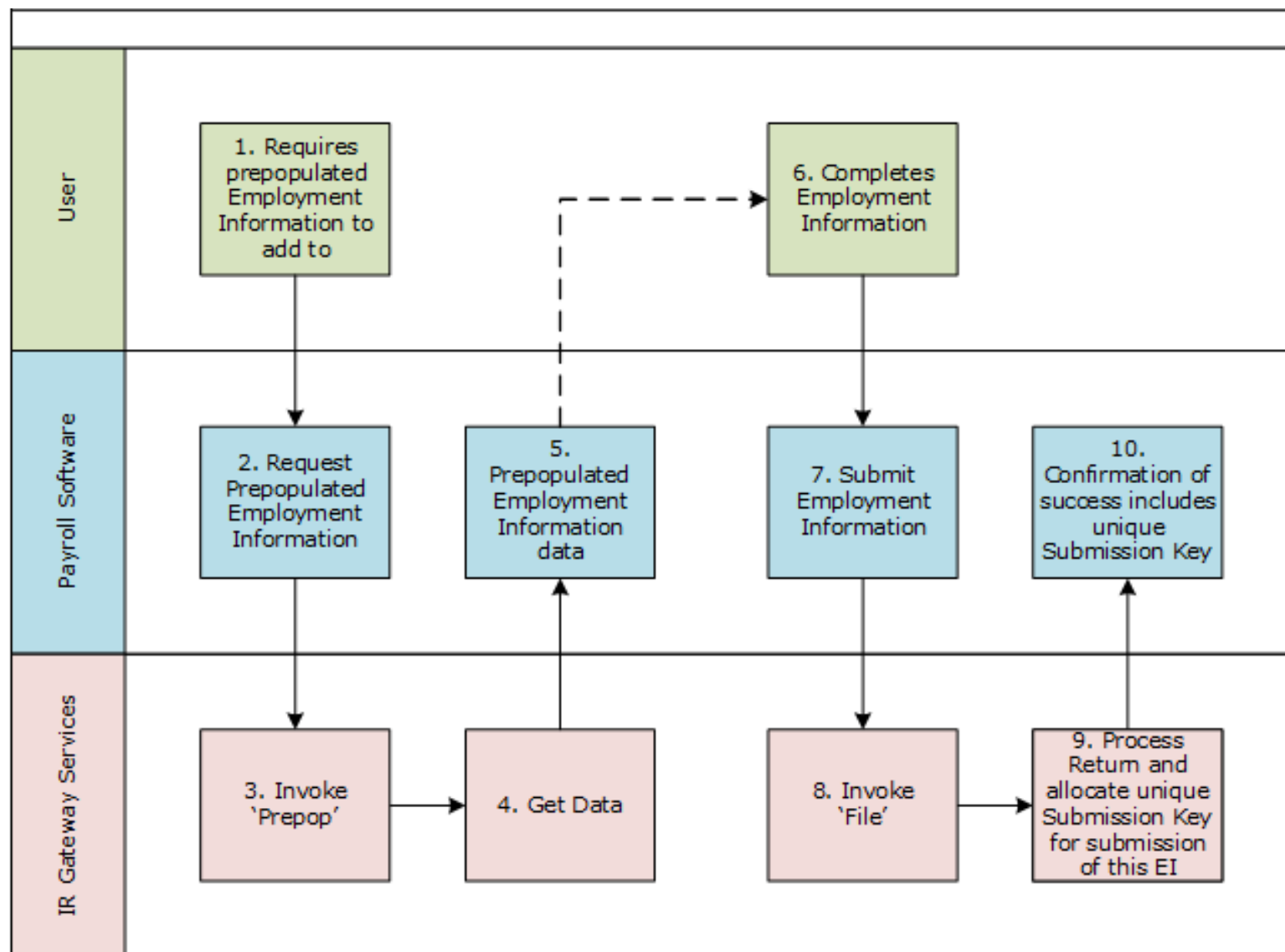
### 3.1.1 Confirm PAYE position and file next Employment Information



| Use case: Confirm PAYE position and file next Employment Information |  |
|--|--|
| <b>Primary actor</b>   | User   |
| <b>Secondary actors</b>  | Payroll software<br>Return service   |
| <b>Description</b>   | User is requiring the current PAYE status for an employer.<br>User retrieves status of most recent Employment Information.<br>User retrieves prepopulated Employment Information and files.  |
| <b>Pre-conditions</b>  | User is authenticated, authorised and logged-in to third party software<br>User is enrolled for "Employment Activities" service<br>User is registered for PAYE   |
| <b>Post-conditions</b>   | User's request is accepted and responded to  |
| <b>Constraints</b>   | The request must be sent using a third party's payroll software<br>Requests received can only be for one employer IRD number at a time   |
| Use case scenarios   |  |
| <b>1. Normal flow</b>  | <p>1.1 User requires the status of the Employment Information for the most recent paydate.</p> <p>1.2 Payroll software requests the status of previously filed Employment Information using the unique Submission Key allocated to that Employment Information by the Return service when it was originally submitted to IR.</p> <p>1.3 Return service '<i>RetrieveStatus</i>' operation is invoked.</p> <p>1.4 Return service retrieves the Employment Information data.</p> <p>1.5 Return service responds with the status of the previously filed Employment Information for that Submission Key.</p> <p>1.6 User views the status of the Employment Information.</p> <p>1.7 Payroll software requests prepopulated Employment Information.</p> <p>1.8 Return service '<i>Prepop</i>' operation is invoked.</p> <p>1.9 Return service retrieves data.</p> <p>1.10 Return service responds with prepopulated Employment Information.</p> <p>1.11 User completes the Employment Information.</p> <p>1.12 Payroll software submits the completed Employment Information.</p> <p>1.13 Return service '<i>File</i>' operation is invoked.</p> <p>1.14 Return service processes the Employment Information.</p> <p>1.15 Return service responds with confirmation that the Employment Information has been filed successfully; this response includes the unique Submission Key.</p> <p>1.16 Use Case Ends.</p> |
| <b>2. Exception flow – User is not registered for service</b>        | <p>2.1 User is not registered for 'Employment Activities' service.</p> <p>2.2 Identity and Access service returns an error response to the third party payroll software. (Please see section 5.1 Response codes in Build Pack Return Service)</p> <p>2.3 Use Case Ends.</p>  |

| Use case: Confirm PAYE position and file next Employment Information |  |
|--|--|
| <b>3. Exception Flow – paydate is not a date that exists</b>         | <p>3.1 The paydate is not a date that exists e.g. 31<sup>st</sup> September, 31<sup>st</sup> November etc.</p> <p>3.2 Return service returns an error message to third party payroll software.</p> <p>3.3 Use Case Ends.</p>   |
| <b>4. Exception – User is not Authorised to use Service</b>          | <p>4.1 The user is valid, however doesn't have the correct permissions to use this service.</p> <p>4.2 Return service fails to authorise the user and returns an error response to the accounting software (please refer section 5.1 'Response codes' in the Return service build pack)</p> <p>4.3 Payroll software displays the error message</p> <p>4.4 User views the error message</p> <p>4.5 Use case ends.</p> |
| <b>5. Exception – Authentication token is expired</b>                | <p>5.1 Identity and Access services validate and find authentication token expired (please refer section 2 in the 'Identity and Access Services' build pack)</p> <p>5.2 Identity and Access services validate credentials and generate new token</p> <p>5.3 Identity and Access services records new token generation request</p> <p>5.4 Use case ends.</p>  |

### 3.1.2 Existing employer payday filing for the first time

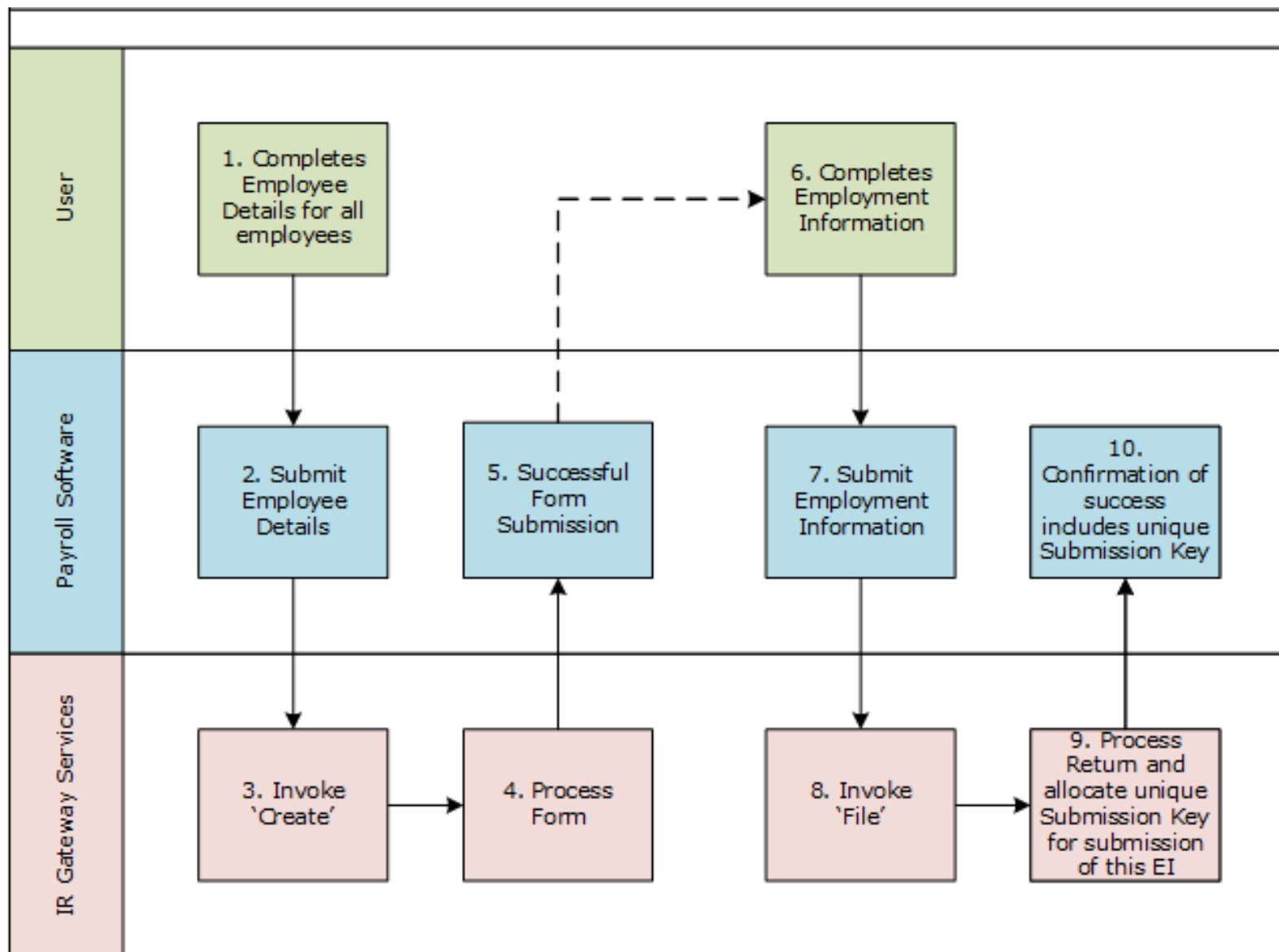


| Use case:   |   |
|---|---|
| <b>User/Actor</b>   | User  |
| <b>Secondary Actor</b>  | Payroll software<br>Return service  |
| <b>Description</b>  | An existing employer payday filing for the first time requests an Employment Information schema with some employee data already populated, adds to/modifies data, files the Employment Information.   |
| <b>Pre-Conditions</b>   | User is authenticated, authorised and logged-in to third party software<br>User is enrolled for "Employment Activities" service<br>User is registered for PAYE  |
| <b>Post-Conditions</b>  | User's request is accepted and responded to   |
| <b>Constraints</b>  | The request must be sent using a third party's payroll software<br>Requests received can only be for one employer IRD number at a time  |
| Use Case Scenarios  |   |
| <b>1. Normal Flow</b>   | 1.1 An existing employer requires prepopulated Employment Information to add to.<br>1.2 Payroll software requests prepopulated Employment Information.<br>1.3 Return service 'Prepop' operation is invoked.<br>1.4 Return service retrieves data.<br>1.5 Return service responds with prepopulated Employment Information.<br>1.6 User completes the Employment Information.<br>1.7 Payroll software submits the completed Employment Information.<br>1.8 Return service 'File' operation is invoked.<br>1.9 Return service processes the Employment Information.<br>1.10 Return service responds with confirmation that the Employment Information has been filed successfully; this response includes the unique Submission Key.<br>1.11 Use Case Ends. |
| <b>2. Exception Flow – User is not registered for service</b> | 2.1 User is not registered for 'Employment Activities' service.<br>2.2 Identity and Access service returns an error response to the third party payroll software. (Please see section 5.1 Response codes in Build Pack Return Service)<br>2.3 Use Case Ends.  |
| <b>3. Exception Flow – paydate is not a date that exists</b>  | 3.1 The paydate is not a date that exists e.g. 31 <sup>st</sup> September, 31 <sup>st</sup> November etc.<br>3.2 Return service returns an error message to third party payroll software.<br>3.3 Use Case Ends.   |
| <b>4. Exception – User is not Authorised to use Service</b>   | 4.1 The user is valid, however doesn't have the correct permissions to use this service.<br>4.2 Return service fails to authorise the user and returns an error response to the accounting software (please refer section 5.1   |

| Use case:   |   |
|---|---|
|   | <p>'Response codes' in the Return service build pack)</p> <p>4.3 Payroll software displays the error message</p> <p>4.4 User views the error message</p> <p>4.5 Use case ends.</p>  |
| <b>5. Exception – Authentication token is expired</b> | <p>5.1 Identity and Access services validate and find authentication token expired (please refer section 2 in the 'Identity and Access Services' build pack)</p> <p>5.2 Identity and Access services validate credentials and generate new token</p> <p>5.3 Identity and Access services records new token generation request</p> <p>5.4 Use case ends.</p> |



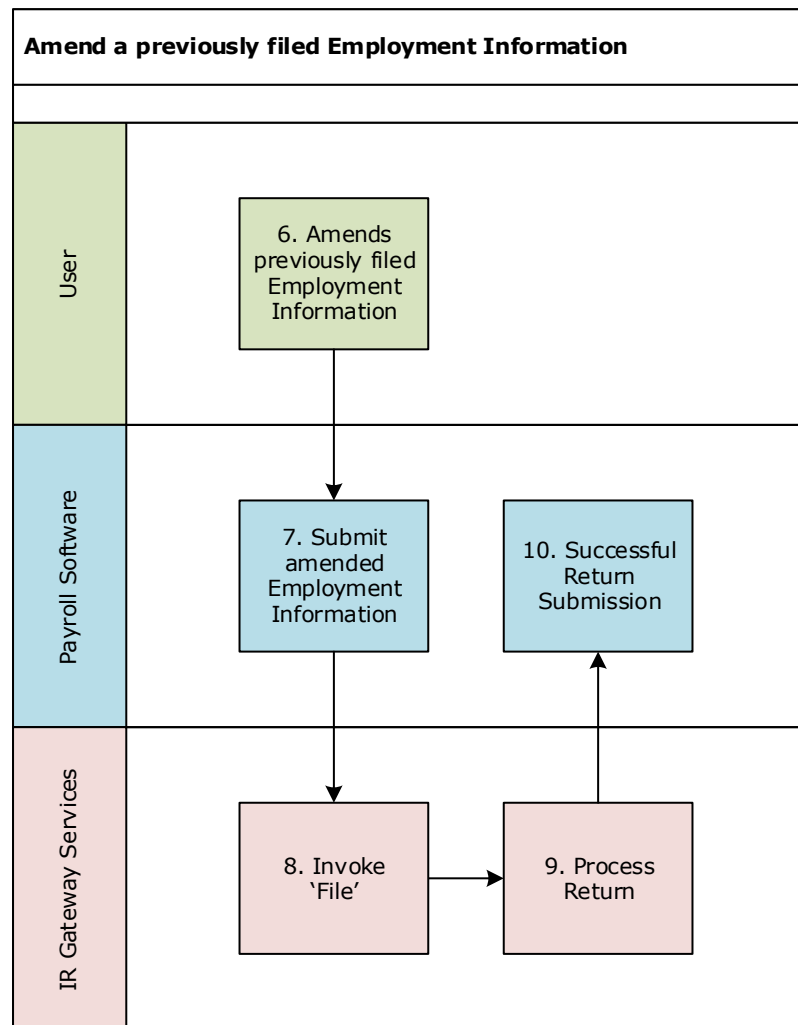
### 3.1.3 New employer payday filing



| Use case:   |   |
|---|---|
| <b>User/Actor</b>   | User  |
| <b>Secondary Actor</b>  | Payroll software<br>Employment service<br>Return service  |
| <b>Description</b>  | New employer payday filing for the first time supplies Employee Details to IR including KiwiSaver enrolment data. Employer files Employment Information also.   |
| <b>Pre-Conditions</b>   | User is authenticated, authorised and logged-in to third party software<br>User is enrolled for "Employment Activities" service<br>User is registered for PAYE  |
| <b>Post-Conditions</b>  | User's request is accepted and responded to   |
| <b>Constraints</b>  | The request must be sent using a third party's payroll software<br>Requests received can only be for one employer IRD number at a time  |
| Use Case Scenarios  |   |
| <b>1. Normal Flow</b>   | 1.1 Brand new employer completes Employee Details for all of their employees.<br>1.2 Payroll software submits the completed Employee Details.<br>1.3 Employment service 'Create' operation is invoked.<br>1.4 Employment service processes the Employee Details.<br>1.5 Employment service responds with confirmation that the Employee Details has been filed successfully.<br>1.6 User completes the Employment Information.<br>1.7 Payroll software submits the completed Employment Information.<br>1.8 Return service 'File' operation is invoked.<br>1.9 Return service processes the Employment Information.<br>1.10 Return service responds with confirmation that the Employment Information has been filed successfully; this response includes the unique Submission Key.<br>1.11 Use Case Ends. |
| <b>2. Exception Flow – User is not registered for service</b> | 2.1 User is not registered for 'Employment Activities' service.<br>2.2 Identity and Access service returns an error response to the third party payroll software. (Please see section 5.1 Response codes in Build Pack Return Service)<br>2.3 Use Case Ends.  |
| <b>3. Exception Flow – payday is not a date that exists</b>   | 3.1 The payday is not a date that exists e.g. 31 <sup>st</sup> September, 31 <sup>st</sup> November etc.<br>3.2 Return service returns an error message to third party payroll software.<br>3.3 Use Case Ends.  |

| Use case:   |  |
|---|--|
| <b>4. Exception – User is not Authorised to use Service</b> | <p>4.1 The user is valid, however doesn't have the correct permissions to use this service.</p> <p>4.2 Return service fails to authorise the user and returns an error response to the accounting software (please refer section 5.1 'Response codes' in the Return service build pack)</p> <p>4.3 Payroll software displays the error message</p> <p>4.4 User views the error message</p> <p>4.5 Use case ends.</p> |
| <b>5. Exception – Authentication token is expired</b>       | <p>5.1 Identity and Access services validate and find authentication token expired (please refer section 2 in the 'Identity and Access Services' build pack)</p> <p>5.2 Identity and Access services validate credentials and generate new token</p> <p>5.3 Identity and Access services records new token generation request</p> <p>5.4 Use case ends.</p>  |

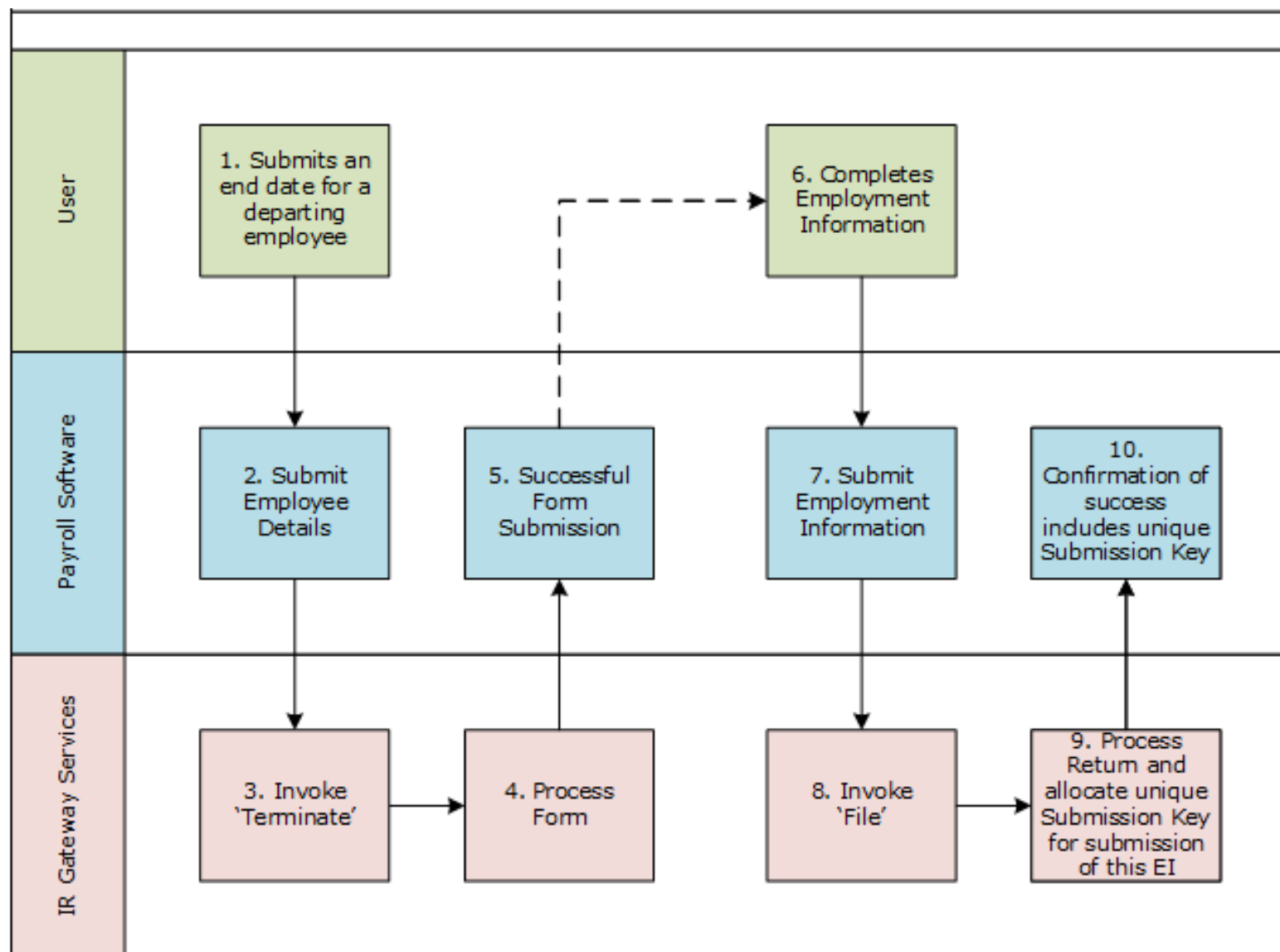
### 3.1.4 Amend previously filed Employment Information



| Use case:   |  |
|---|--|
| <b>User/Actor</b>   | User   |
| <b>Secondary Actor</b>  | Payroll software<br>Return service   |
| <b>Description</b>  | User requests previously filed Employment Information for a specific paydate. A review of what was submitted confirms that an amendment is required. User submits an amendment.  |
| <b>Pre-Conditions</b>   | User is authenticated, authorised and logged-in to third party software<br>User is enrolled for "Employment Activities" service<br>User is registered for PAYE   |
| <b>Post-Conditions</b>  | User's request is accepted and responded to  |
| <b>Constraints</b>  | The request must be sent using a third party's payroll software<br>Requests received can only be for one employer IRD number at a time   |
| <b>Use Case Scenarios</b>                                     |  |
| <b>1. Normal Flow</b>   | <p>1.1 User completes the Employment Information including amendment fields.</p> <p>1.2 Payroll software submits the completed Employment Information including:</p> <ul style="list-style-type: none"> <li>the unique Submission Key (allocated to that Employment Information when it was originally submitted to IRD), and;</li> <li>the unique ID for each employee line item that is being amended (this can be the IRD generated ID or the software allocated ID).</li> </ul> <p>1.3 Return service 'File' operation is invoked.</p> <p>1.4 Return service processes the Employment Information.</p> <p>1.5 Return service responds with confirmation that the Employment Information has been filed (amended) successfully; this response includes the existing (unchanged) Submission Key.</p> <p>1.6 Use Case Ends.</p> |
| <b>2. Exception Flow – User is not registered for service</b> | <p>2.1 User is not registered for 'Employment Activities' service.</p> <p>2.2 Identity and Access service returns an error response to the third party payroll software. (Please see section 5.1 Response codes in Build Pack Return Service)</p> <p>2.3 Use Case Ends.</p>  |
| <b>3. Exception Flow – paydate is not a date that exists</b>  | <p>3.1 The paydate is not a date that exists e.g. 31<sup>st</sup> September, 31<sup>st</sup> November etc.</p> <p>3.2 Returns service returns an error message to third party payroll software.</p> <p>3.3 Use Case Ends.</p>  |
| <b>4. Exception – User is not Authorised to use Service</b>   | <p>4.1 The user is valid, however doesn't have the correct permissions to use this service.</p> <p>4.2 Return service fails to authorise the user and returns an error response to the accounting software (please refer section 5.1</p>   |

| Use case:   |   |
|---|---|
|   | <p>'Response codes' in the Return service build pack)</p> <p>4.3 Payroll software displays the error message</p> <p>4.4 User views the error message</p> <p>4.5 Use case ends.</p>  |
| <b>5. Exception – Authentication token is expired</b> | <p>5.1 Identity and Access services validate and find authentication token expired (please refer section 2 in the 'Identity and Access Services' build pack)</p> <p>5.2 Identity and Access services validate credentials and generate new token</p> <p>5.3 Identity and Access services records new token generation request</p> <p>5.4 Use case ends.</p> |

### 3.1.5 Submit Employee Details for departing employee, file Employment Information

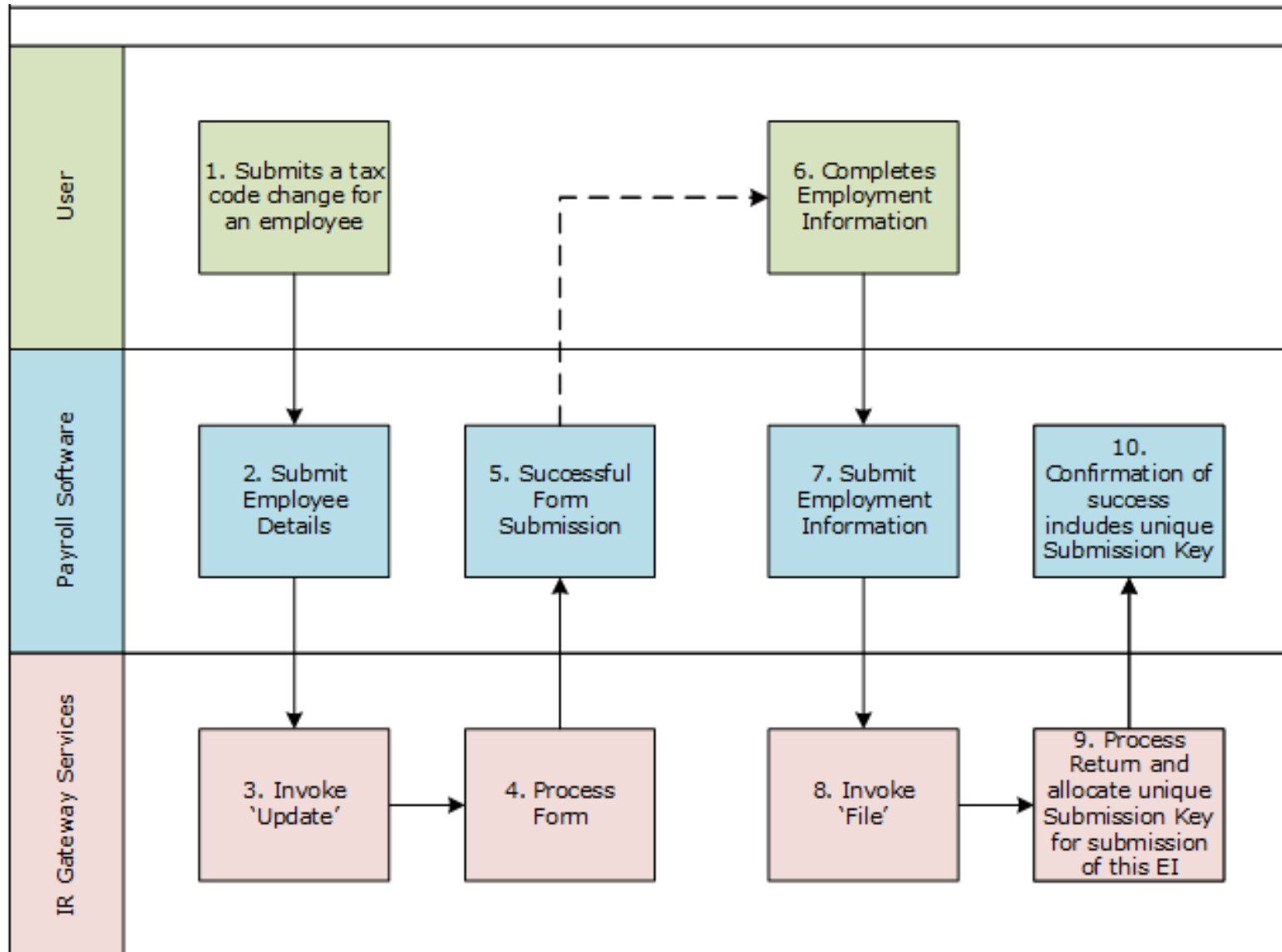


| Use case:   |   |
|---|---|
| <b>User/Actor</b>   | User  |
| <b>Secondary Actor</b>  | Payroll software<br>Employment service<br>Return service  |
| <b>Description</b>  | An employer submits Employee Details to notify IR of a departed/departing employee.   |
| <b>Pre-Conditions</b>   | User is authenticated, authorised and logged-in to third party software<br>User is enrolled for "Employment Activities" service<br>User is registered for PAYE  |
| <b>Post-Conditions</b>  | User's request is accepted and responded to   |
| <b>Constraints</b>  | The request must be sent using a third party's payroll software<br>Requests received can only be for one employer IRD number at a time  |
| Use Case Scenarios  |   |
| <b>1. Normal Flow</b>   | 1.1 User completes the Employee Details for the departed/departing employee.<br>1.2 Payroll software submits the completed Employee Details.<br>1.3 Employment service ' <i>Terminate</i> ' operation is invoked.<br>1.4 Employment service processes the Employee Details.<br>1.5 Employment service responds with confirmation that the Employee Details has been filed successfully.<br>1.6 User completes the Employment Information.<br>1.7 Payroll software submits the completed Employment Information.<br>1.8 Return service ' <i>File</i> ' operation is invoked.<br>1.9 Return service processes the Employment Information.<br>1.10 Return service responds with confirmation that the Employment Information has been filed successfully; this response includes the unique Submission Key.<br>1.11 Use Case Ends. |
| <b>2. Exception Flow – User is not registered for service</b> | 2.1 User is not registered for 'Employment Activities' service.<br>2.2 Identity and Access service returns an error response to the third party payroll software. (Please see section 5.1 Response codes in Build Pack Return Service)<br>2.3 Use Case Ends.  |
| <b>3. Exception – User is not Authorised to use Service</b>   | 3.1 The user is valid, however doesn't have the correct permissions to use this service.<br>3.2 Return service fails to authorise the user and returns an error response to the accounting software (please refer section 5.1 'Response codes' in the Return service build pack)<br>3.3 Payroll software displays the error message   |



| Use case:   |   |
|---|---|
|   | <p>3.4 User views the error message</p> <p>3.5 Use case ends.</p>   |
| <b>4. Exception – Authentication token is expired</b> | <p>4.1 Identity and Access services validate and find authentication token expired (please refer section 2 in the 'Identity and Access Services' build pack)</p> <p>4.2 Identity and Access services validate credentials and generate new token</p> <p>4.3 Identity and Access services records new token generation request</p> <p>4.4 Use case ends.</p> |

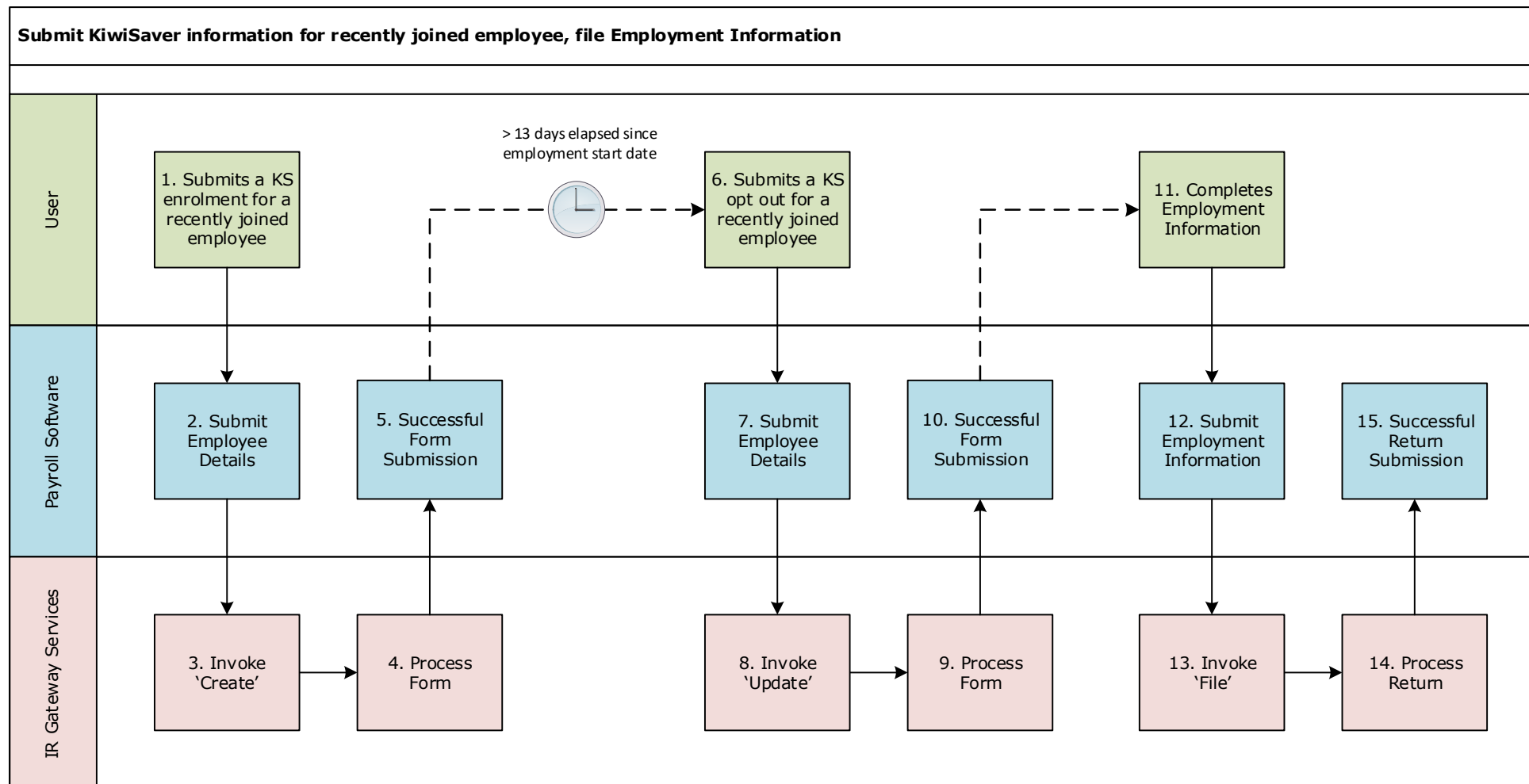
### 3.1.6 Submit change to employee's tax code, file Employment Information



| Use case:   |   |
|---|---|
| <b>User/Actor</b>   | User  |
| <b>Secondary Actor</b>  | Payroll software<br>Employment service<br>Return service  |
| <b>Description</b>  | An employer submits Employee Details to notify IR of a change to an employee's tax code.  |
| <b>Pre-Conditions</b>   | User is authenticated, authorised and logged-in to third party software<br>User is enrolled for "Employment Activities" service<br>User is registered for PAYE  |
| <b>Post-Conditions</b>  | User's request is accepted and responded to   |
| <b>Constraints</b>  | The request must be sent using a third party's payroll software<br>Requests received can only be for one employer IRD number at a time  |
| Use Case Scenarios  |   |
| <b>1. Normal Flow</b>   | 1.1 User completes the Employee Details for the change in employee's tax code<br>1.2 Payroll software submits the completed Employee Details.<br>1.3 Employment service 'Update' operation is invoked.<br>1.4 Employment service processes the Employee Details.<br>1.5 Employment service responds with confirmation that the Employee Details has been filed successfully.<br>1.6 User completes the Employment Information.<br>1.7 Payroll software submits the completed Employment Information.<br>1.8 Return service 'File' operation is invoked.<br>1.9 Return service processes the Employment Information.<br>1.10 Return service responds with confirmation that the Employment Information has been filed successfully; this response includes the unique Submission Key.<br>1.11 Use Case Ends. |
| <b>2. Exception Flow – User is not registered for service</b> | 2.1 User is not registered for 'Employment Activities' service.<br>2.2 Identity and Access service returns an error response to the third party payroll software. (Please see section 5.1 Response codes in Build Pack Return Service)<br>2.3 Use Case Ends.  |
| <b>3. Exception – User is not Authorised to use Service</b>   | 3.1 The user is valid, however doesn't have the correct permissions to use this service.<br>3.2 Return service fails to authorise the user and returns an error response to the accounting software (please refer section 5.1 'Response codes' in the Return service build pack)<br>3.3 Payroll software displays the error message   |

|   |   |
|---|---|
|   | <p>3.4 User views the error message</p> <p>3.5 Use case ends.</p>   |
| <b>4. Exception – Authentication token is expired</b> | <p>4.1 Identity and Access services validate and find authentication token expired (please refer section 2 in the 'Identity and Access Services' build pack)</p> <p>4.2 Identity and Access services validate credentials and generate new token</p> <p>4.3 Identity and Access services records new token generation request</p> <p>4.4 Use case ends.</p> |

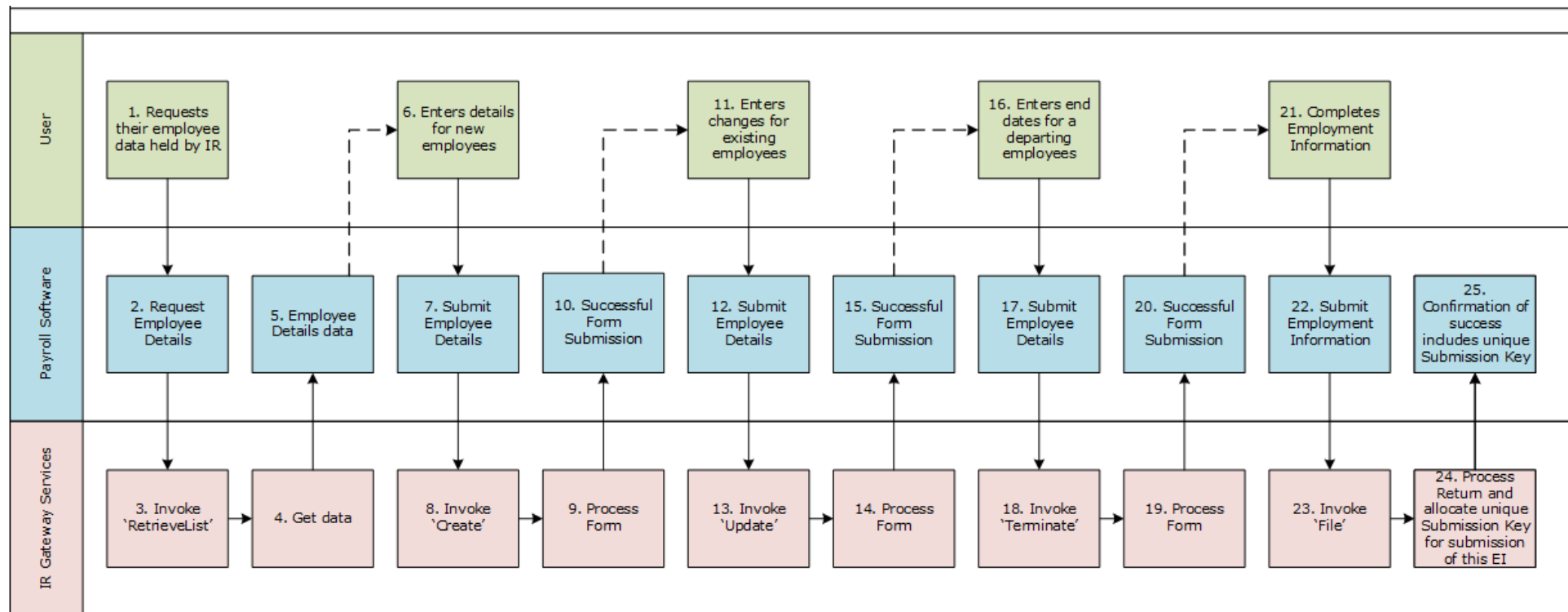
### 3.1.7 Submit KiwiSaver information for recently started employee, file Employment Information



| Use case:                |  |
|--------------------------|--|
| <b>User/Actor</b>        | User   |
| <b>Secondary Actor</b>   | Payroll software<br>Employment service<br>Return service   |
| <b>Description</b>       | An employer's paycycle is monthly on the 25 <sup>th</sup> of each month. A new employee starts employment on the 26 <sup>th</sup> May 2018. The employee decides to opt out of KiwiSaver two weeks after starting employment. The employer is required to file a KS1 and KS10 for that employee. The employer submits Employee Details and Employment Information.   |
| <b>Pre-Conditions</b>    | User is authenticated, authorised and logged-in to third party software<br>User is enrolled for "Employment Activities" service<br>User is registered for PAYE   |
| <b>Post-Conditions</b>   | User's request is accepted and responded to  |
| <b>Constraints</b>       | The request must be sent using a third party's payroll software<br>Requests received can only be for one employer IRD number at a time   |
| Use Case Scenarios       |  |
| <b>1. Normal Flow</b>    | <p>1.1 User completes the Employee Details including a KS1 for the recently joined employee.</p> <p>1.2 Payroll software submits the completed Employee Details.</p> <p>1.3 Employment service 'Create' operation is invoked.</p> <p>1.4 Employment service processes the Employee Details.</p> <p>1.5 Employment service responds with confirmation that the Employee Details has been filed successfully.</p> <p>1.6 User completes the Employee Details including a KS10 for the recently joined employee.</p> <p>1.7 Payroll software submits the completed Employee Details.</p> <p>1.8 Employment service 'Update' operation is invoked.</p> <p>1.9 Employment service processes the Employee Details.</p> <p>1.10 Employment service responds with confirmation that the Employee Details has been filed successfully.</p> <p>1.11 User completes the Employment Information.</p> <p>1.12 Payroll software submits the completed Employment Information.</p> <p>1.13 Return service 'File' operation is invoked.</p> <p>1.14 Return service processes the Employment Information.</p> <p>1.15 Return service responds with confirmation that the Employment Information has been filed successfully; this response includes the unique Submission Key.</p> <p>1.16 Use Case Ends.</p> |
| <b>2. Exception Flow</b> | 2.1 User is not registered for 'Employment Activities' service.  |

| <b>Use case:</b>  |  |
|---|--|
| <b>– User is not registered for service</b>   | <p>2.2 Identity and Access service returns an error response to the third party payroll software. (Please see section 5.1 Response codes in Build Pack Return Service)</p> <p>2.3 Use Case Ends.</p>   |
| <b>3. Exception Flow – paydate is not a date that exists</b>  | <p>3.1 The paydate is not a date that exists e.g. 31<sup>st</sup> September, 31<sup>st</sup> November etc.</p> <p>3.2 Return service returns an error message to third party payroll software.</p> <p>3.3 Use Case Ends.</p>   |
| <b>4. Exception – User is not Authorised to use Service</b>   | <p>4.1 The user is valid, however doesn't have the correct permissions to use this service.</p> <p>4.2 Return service fails to authorise the user and returns an error response to the accounting software (please refer section 5.1 'Response codes' in the Return service build pack)</p> <p>4.3 Payroll software displays the error message</p> <p>4.4 User views the error message</p> <p>4.5 Use case ends.</p> |
| <b>5. Exception – Authentication token is expired</b>   | <p>5.1 Identity and Access services validate and find authentication token expired (please refer section 2 in the 'Identity and Access Services' build pack)</p> <p>5.2 Identity and Access services validate credentials and generate new token</p> <p>5.3 Identity and Access services records new token generation request</p> <p>5.4 Use case ends.</p>  |
| <b>6. Exception – Employment start date not greater than 13 days ago at time of submitting KS10</b> | <p>6.1 Employment start date not &gt; 13 days ago when KS10 submitted.</p> <p>6.2 Employment service returns an error message to third party payroll software.</p> <p>6.3 Use Case Ends.</p>   |

### 3.1.8 Request previously submitted Employee Details, create, update, terminate, file Employment Information

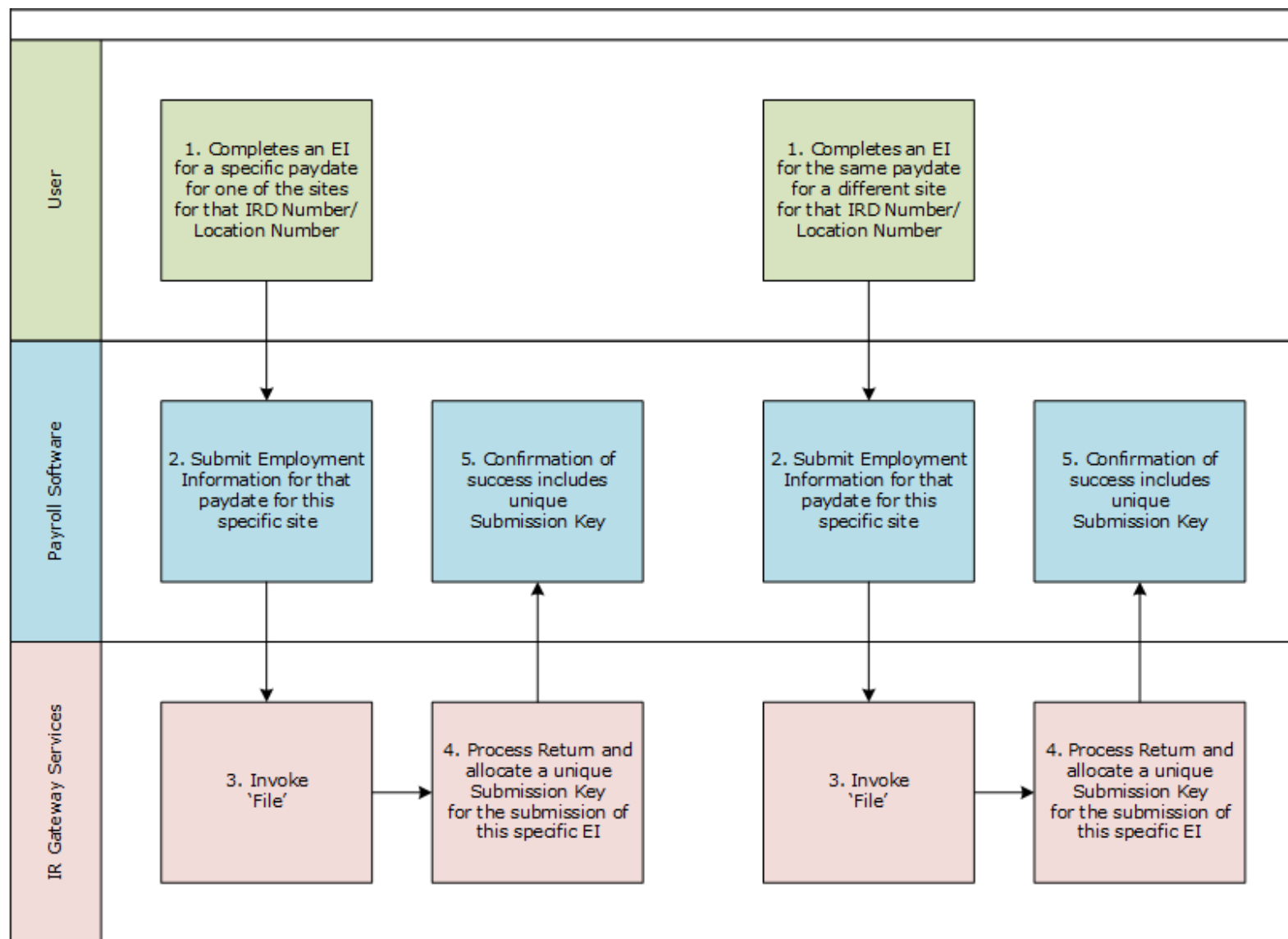




| Use case:              |   |
|------------------------|---|
| <b>User/Actor</b>      | User  |
| <b>Secondary Actor</b> | Payroll software<br>Employment service<br>Return service  |
| <b>Description</b>     | User requests previously filed Employee Details<br>User files Employee Details for new, changed and departing employees<br>User files Employment Information  |
| <b>Pre-Conditions</b>  | User is authenticated, authorised and logged-in to third party software<br>User is enrolled for "Employment Activities" service<br>User is registered for PAYE  |
| <b>Post-Conditions</b> | User's request is accepted and responded to   |
| <b>Constraints</b>     | The request must be sent using a third party's payroll software<br>Requests received can only be for one employer IRD number at a time<br>Only one <i>new</i> Employment Information per paydate per legal entity<br>(there is no limitation on the number of amendments)   |
| Use Case Scenarios     |   |
| <b>1. Normal Flow</b>  | <p>1.1 User requires employee data held by IR.</p> <p>1.2 Payroll software requests previously filed Employee Details.</p> <p>1.3 Employment service '<i>RetrieveList</i>' operation is invoked.</p> <p>1.4 Employment service retrieves the Employee Details data.</p> <p>1.5 Employment service responds with the Employee Details data.</p> <p>1.6 User completes the Employee Details for new employees.</p> <p>1.7 Payroll software submits the completed Employee Details.</p> <p>1.8 Employment service '<i>Create</i>' operation is invoked.</p> <p>1.9 Employment service processes the Employee Details.</p> <p>1.10 Employment service responds with confirmation that the Employee Details has been filed successfully.</p> <p>1.11 User completes the Employee Details for changes for existing employees.</p> <p>1.12 Payroll software submits the completed Employee Details.</p> <p>1.13 Employment service '<i>Update</i>' operation is invoked.</p> <p>1.14 Employment service processes the Employee Details.</p> <p>1.15 Employment service responds with confirmation that the Employee Details has been filed successfully.</p> <p>1.16 User completes the Employee Details for departing employees.</p> <p>1.17 Payroll software submits the completed Employee Details.</p> <p>1.18 Employment service '<i>Terminate</i>' operation is invoked.</p> <p>1.19 Employment service processes the Employee Details.</p> <p>1.20 Employment service responds with confirmation that the</p> |

| Use case:   |   |
|---|---|
|   | <p>Employee Details has been filed successfully.</p> <p>1.21 User completes the Employment Information.</p> <p>1.22 Payroll software submits the completed Employment Information.</p> <p>1.23 Return service 'File' operation is invoked.</p> <p>1.24 Return service processes the Employment Information.</p> <p>1.25 Return service responds with confirmation that the Employment Information has been filed successfully; this response includes the unique Submission Key.</p> <p>1.26 Use Case ends.</p> |
| <b>2. Exception Flow – User is not registered for service</b>                                       | <p>2.1 User is not registered for 'Employment Activities' service.</p> <p>2.2 Identity and Access service returns an error response to the third party payroll software. (Please see section 5.1 Response codes in Build Pack Return Service)</p> <p>2.3 Use Case Ends.</p>   |
| <b>3. Exception – User is not Authorised to use Service</b>   | <p>3.1 The user is valid, however doesn't have the correct permissions to use this service.</p> <p>3.2 Return service fails to authorise the user and returns an error response to the accounting software (please refer section 5.1 'Response codes' in the Return service build pack)</p> <p>3.3 Payroll software displays the error message</p> <p>3.4 User views the error message</p> <p>3.5 Use case ends.</p>  |
| <b>4. Exception – Authentication token is expired</b>   | <p>4.1 Identity and Access services validate and find authentication token expired (please refer section 2 in the 'Identity and Access Services' build pack)</p> <p>4.2 Identity and Access services validate credentials and generate new token</p> <p>4.3 Identity and Access services records new token generation request</p> <p>4.4 Use case ends.</p>   |
| <b>5. Exception – Employment start date not greater than 13 days ago at time of submitting KS10</b> | <p>5.1 Employment start date not &gt; 13 days ago when KS10 submitted.</p> <p>5.2 Employment service returns an error message to third party payroll software.</p> <p>6.3 Use Case Ends.</p>  |

### 3.1.9 Multiple sites for same IRD Number/Location Number submitting for same paydate on same day



| Use case:              |   |
|------------------------|---|
| <b>User/Actor</b>      | User  |
| <b>Secondary Actor</b> | Payroll software<br>Return service  |
| <b>Description</b>     | <p>The scenario for this use case is where a business runs operations for its Wellington location out of Petone and Eastbourne sites.</p> <p>Each site runs its own separate payroll, however the pay cycle and paydates are the same for each site.</p> <p>For both sites, the next Employment Information to be submitted is for the paydate 25/10/17.</p> <p>A separate Employment Information is submitted for each site for the 25/10/17 paydate on the same day.</p>  |
| <b>Pre-Conditions</b>  | <p>User is authenticated, authorised and logged-in to third party software</p> <p>User is enrolled for "Employment Activities" service</p> <p>User is registered for PAYE</p>   |
| <b>Post-Conditions</b> | User's request is accepted and responded to (one per submission for each site)  |
| <b>Constraints</b>     | <p>The request must be sent using a third party's payroll software</p> <p>Requests received can only be for one employer IRD number at a time</p>   |
| Use Case Scenarios     |   |
| <b>1. Normal Flow</b>  | <p><i>Petone site</i></p> <ol style="list-style-type: none"> <li>1.1 User completes the Employment Information for the Petone site for the paydate 25/10/17.</li> <li>1.2 Payroll software submits the completed Employment Information.</li> <li>1.3 Return service 'File' operation is invoked.</li> <li>1.4 Return service processes the Employment Information, recognising that it is new (not amended), it allocates a unique Submission Key for the Employment Information that has been submitted for the Petone site.</li> <li>1.5 Return service responds with confirmation that the Employment Information has been filed successfully; this response includes the unique Submission Key.</li> </ol> <p><i>Eastbourne site</i></p> <ol style="list-style-type: none"> <li>1.1 User completes the Employment Information for the Eastbourne site for the paydate 25/10/17.</li> <li>1.2 Payroll software submits the completed Employment Information.</li> <li>1.3 Return service 'File' operation is invoked.</li> <li>1.4 Return service processes the Employment Information, recognising that it is new (not amended), it allocates a unique Submission Key for the Employment Information that has been submitted for the Eastbourne site.</li> <li>1.5 Return service responds with confirmation that the Employment Information has been filed successfully; this response includes the unique Submission Key.</li> </ol> |

| Use case:   |  |
|---|--|
|   | 1.6 Use Case Ends.   |
| <b>2. Exception Flow – User is not registered for service</b> | <p>2.1 User is not registered for 'Employment Activities' service.</p> <p>2.2 Identity and Access service returns an error response to the third party payroll software. (Please see section 5.1 Response codes in Build Pack Return Service)</p> <p>2.3 Use Case Ends.</p>  |
| <b>3. Exception Flow – paydate is not a date that exists</b>  | <p>3.1 The paydate is not a date that exists e.g. 31<sup>st</sup> September, 31<sup>st</sup> November etc.</p> <p>3.2 Return service returns an error message to third party payroll software.</p> <p>3.3 Use Case Ends.</p>   |
| <b>4. Exception – User is not Authorised to use Service</b>   | <p>4.1 The user is valid, however doesn't have the correct permissions to use this service.</p> <p>4.2 Return service fails to authorise the user and returns an error response to the accounting software (please refer section 5.1 'Response codes' in the Return service build pack)</p> <p>4.3 Payroll software displays the error message</p> <p>4.4 User views the error message</p> <p>4.5 Use case ends.</p> |
| <b>5. Exception – Authentication token is expired</b>         | <p>5.1 Identity and Access services validate and find authentication token expired (please refer section 2 in the 'Identity and Access Services' build pack)</p> <p>5.2 Identity and Access services validate credentials and generate new token</p> <p>5.3 Identity and Access services records new token generation request</p> <p>5.4 Use case ends.</p>  |

## 4 Testing

### 4.1 Prerequisites

The Account Management team will ensure the following prerequisites are met:

- Test dates scheduled with Inland Revenue's Account Management team
- Environments will be booked for testing
- Test usernames and data received from Inland Revenue
- Connectivity test to end point achieved
- Relevant information exchanged, for example security certificates, whitelisting IP addresses.

### 4.2 Data management

|                       |   |
|-----------------------|---|
| <b>Data provision</b> | Test data will be provisioned into Inland Revenue systems to enable Partnership testing for Service Providers. An exclusive data set will be provided for partners to test. |
| <b>Data reset</b>     | Data will be refreshed at the Service Provider's request and provided by Inland Revenue at an agreed time.  |

**Table 2: Data management**

Inland Revenue is obliged to maintain the secrecy of any taxpayer-related information. This includes information shared between Inland Revenue and business partners during system testing.

All data used in a Test or Quality environment should be treated as if it were Production quality, with all appropriate controls in place to ensure:

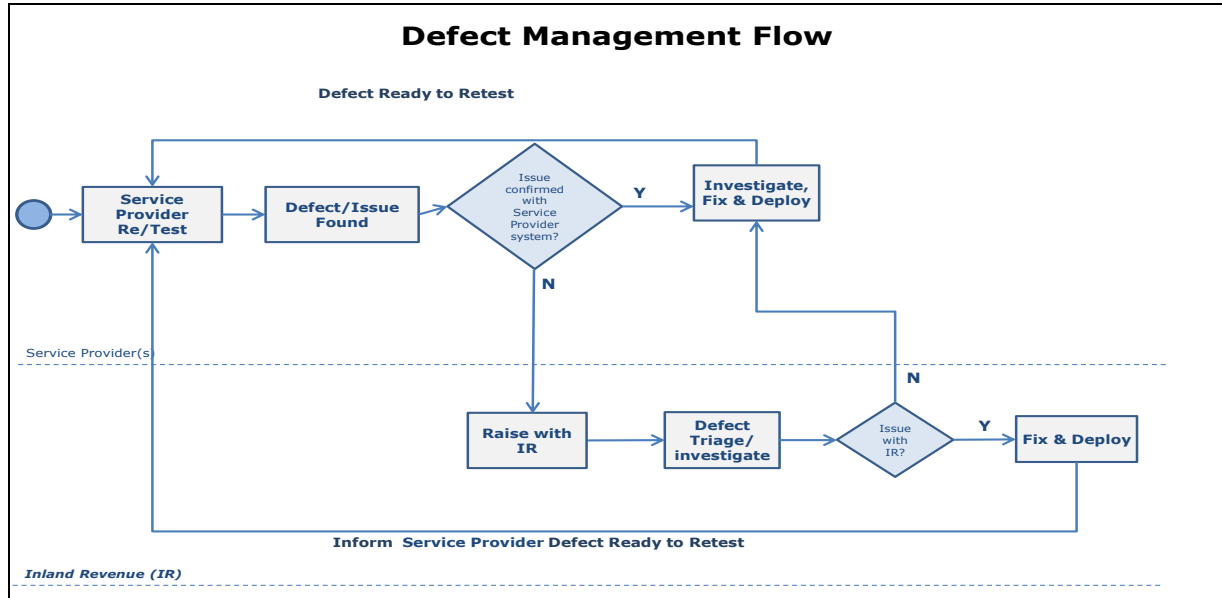
- The environment is controlled and no unauthorised individual can access the testing or staged environments
- Processes are in place to ensure that source copies of data are deleted once testing is completed
- The data used for testing is isolated to prevent accidental use
- Controls are in place to prevent contamination or accidental release to other environments.

### 4.3 Test execution

|                               |  |
|-------------------------------|--|
| <b>Test execution process</b> | Service providers will execute test scenarios as identified in section 2.3.2 with test data that will be provided by Inland Revenue. Test results will be documented for each of these scenarios and compared to the expected result associated with that test. In the event of issues, service providers can follow the issue management process.   |
| <b>Issue management</b>       | <p>Inland Revenue will execute an automated suite of tests daily to ensure the environment is available and functioning to support all external testing by service providers. The Account Management team will notify service providers of any disruptions to the service.</p> <ul style="list-style-type: none"> <li>• Service providers are responsible for triaging all identified issues to establish if the root cause resides in the system calling the Inland Revenue service. Any issue that requires resolution and retest that impacts the agreed test schedule will be notified to Inland Revenue Account Management.</li> <li>• Issues that are not manifested in the service provider's system</li> </ul> |

will be notified to Inland Revenue to triage. Inland Revenue will initiate the automated test suite on demand to isolate and resolve issues.

**Table 3: Test execution approach**



**Figure 3: Defect management flow**

#### 4.4 Test exit report

Service providers are required to provide evidence of the following to Inland Revenue:

- All tests have been executed with associated evidence
- Any tests that have not been executed and rationale
- All outstanding defects or issues in executing the tests.

## **5 Gateway Services production support**

### **5.1 Service hours**

These are Internet facing services and are generally available 24 hours a day, seven days a week, other than approved scheduled changes—these can normally be accommodated without taking the system down.

In the unlikely event of an unscheduled outage, the Relationship Manager will deal with this on a case-by-case basis.

### **5.2 Service provider support**

All support requests are to be directed to the following email address:

[SoftwareDevelopersLiaisonUnit@ird.govt.nz](mailto:SoftwareDevelopersLiaisonUnit@ird.govt.nz)

The requests will be picked up by the Relationship Manager to ensure visibility of the support query and that the query is directed at the appropriate support team.

The Relationship Manager will be in constant contact regarding the status of the request.

If it is a major incident, the Relationship Manager should be contacted directly.



## **6 Appendix A—Build pack references**

The following Gateway Services build packs complement this one.

### **6.1 Return service build pack**

The Return service build pack describes the operations provided under the Return service, which is one part of the Gateway Services suite. The operations offered to employers by this service include filing a return, pre-populating a return, querying the status of a return and retrieving a previous return.

This Employment Activities onboarding document was written using information from version 0.8 of the Return service build pack.

### **6.2 Employment service build pack**

The Employment service build pack describes the operations provided under the Employment web service, which forms part of the Gateway Services suite. The operations offered to employers by this service include the ability to create, update and terminate employment, as well as retrieve a list of employees.

This Employment Activities onboarding document was written using information from version 0.8 of the Employment build pack.

### **6.3 Identity and Access service build pack**

The Identity and Access build pack describes the operations provided under the Identity and Access services, which is another part of the Gateway Services suite. These services are used to authenticate access.

This Employment Activities onboarding document was written using information from version 1.5 of the Identity and Access service build pack.

[illegible]

## 8 Glossary

| Acronym/term                | Definition   |
|-----------------------------|--|
| Authentication              | The process that verifies the identity of the party attempting to access IR.   |
| Authorisation               | The process of determining whether a party is entitled to perform the function or access a resource.   |
| Employment Activities (EA)  | Umbrella term for employment activities performed using the Return service (submission of Employment Information) and/or Employment service (submission of Employee Details) operations.   |
| Employee Details (ED)       | Data submitted by an employer to IR relating to new, existing, or departing employees that is submitted via the Employment service.  |
| Employment Information (EI) | Data submitted by an employer relating to deductions made for their employees for a paydate.   |
| eServices                   | START's authenticated customer-facing portal.  |
| Gateway                     | START's web services gateway.  |
| GWS                         | GateWay Services—the brand name for the suite of web services that IR is providing. The Return Service is a Gateway Service.   |
| HTTP, HTTPS                 | Hyper Text Transmission Protocol (Secure)—the protocol by which web browsers and servers interact with each other. When implemented over TLS1.2 HTTP becomes HTTPS.  |
| IAMS                        | Identity and Access Management—a logical component that performs authentication and authorisation. Physically it is a set of discrete hardware and software products, plug-ins and protocols. Usually implemented as separate External IAMS (XIAMS) and Internal IAMS. |
| IP                          | Internet Protocol—the principal communication protocol in the Internet protocol suite for relaying datagrams across networks.  |
| NZISM                       | NZ Information Security Manual—the security standards and best practices for Government agencies. Maintained by the NZ Government Communications Security Bureau (GCSB).   |
| OAuth2                      | An HTTPS based protocol for authorising access to a resource, currently at version 2.  |
| SOAP                        | Simple Object Access Protocol—a set of standards for specifying web services. GWS uses SOAP version 1.2.   |
| SSL                         | Secure Sockets Layer certificates—used to establish an encrypted connection between a browser or user's computer and a service or website.   |
| START                       | Simplified Taxation and Revenue Technology—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.  |
| WSDL                        | Web Service Definition Language—an XML definition of a web service   |

| Acronym/term | Definition  |
|--------------|---|
|              | interface.  |
| 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—a language used to define a set of rules used for encoding documents in a format that can be read by humans and machines.                                |
| XSD          | XML Schema Definition—the current standard schema language for all XML data and documents.  |