

Integrating with the Shipping and Tracking APIs

Supplement to the Shipping and Tracking API Interface Specification

March 2017 Version 1.4





Table of Contents

1.	Introduction	3
	1.1 Audience	3
	1.2 Shipping and Tracking API Interface Specification	3
	1.3 Glossary	3
2.	Creating orders	5
	2.1 Two workflows	6
3.	API Credentials	7
	3.1 Entry	7
	3.2 Testing	
	3.1 Account numbers	7
4.	Addresses	8
	4.1 General	
	4.2 Origin (From) Address	
	4.3 Destination (To) Addresses	
	4.5 Parcel collection addresses	
	Postage products	
	5.1 Available products	
	5.2 Product features	
	5.3 Parcels	
	5.4 Authority to leave and Signature on Delivery	10
6.	Rates	11
7.	Labels	12
	7.1 Merchant label combinations	12
	7.2 Label layouts	12
	7.3 Branded flag settings	13
8.	Returns	14
	8.1 Key differences between a return shipment and an outbound shipment	
	8.2 Returns products	
	8.3 An example payload for Australia Post Returns	
	8.4 Return label layouts	
	Live versus Test	
	9.1 Developer Test Bed	
	. Tracking	
	. Error handling	
12	. Miscellaneous	21
13	Frequently asked questions	22





1. Introduction

This document provides helpful hints and ideas for you to consider when implementing Australia Post's Shipping and Tracking APIs into your own system.

1.1 Audience

This document is designed to be read in conjunction with the Shipping and Tracking API Interface Specification. Ideally, both technical (solution architects, software developers) and business (project managers/business analysts) staff should consider the contents of this document before undertaking the development of your software.

1.2 Shipping and Tracking API Interface Specification

We have supplied the Shipping and Tracking API Interface Specification in a number of forms, including online and as a PDF. Please use the PDF document as the most up-to-date source of Shipping and Tracking API Interface Specification.

If you have any confusion or concern regarding information in the Shipping and Tracking API Interface Specification, please contact customer_connectivity@auspost.com.au to obtain clarification.

1.3 Glossary

To assist in reading this document, please note the following terms and their use:

Term	Definition
API	Application Programming Interface
APIS	Application Programming Interfaces. Unless the context dictates otherwise, this means the Australia Post Shipping & Tracking API's.
Article	An article is an item (parcel) that has been lodged with Australia Post. (Article Id is the unique identification number for an article.)
Consignment	One or more items (parcels) sent using the same service to one address at the same time.
eCommerce Platform	Also known as a "shopping cart". Provides online store features for consumers to order goods from a merchant, including an online checkout for payment. Examples are: Magento, WooCommerce, Open Cart, and BigCommerce.
Item	One parcel regardless of product type. (Also known as an article.)
Lodge	To place shipments into the Australia Post network for delivery.





Term	Definition
Manifest	One or more consignments grouped together and lodged at the same time.
Order	One or more shipments grouped together and lodged with Australia Post at the same time.
Order Summaru	Provides a PDF of the Order Summary Report with a breakdown of all items in the order and their associated charges A physical copy of the Order Summary Report must be signed by the merchant
Report	and provided to Australia Post when the items are lodged.
	Another industry name for this document is "Manifest Report".
Platform	A system designed to provide a specific set of features to online merchants.
Product	A shipping service offered by Australia Post. A product has specific features (eg Standard/Regular Post and Express Post) and rates associated with it.
Shipment	One or more items (parcels) sent using any service to one address at the same time.
	Another industry name for Shipment is Consignment.
Shipping Platform	Assists merchants to determine the cost of shipping & produce a shipping label. Generally includes many other features, and provides one interface to allow for shipping with many carriers.





2. Creating orders

Australia Post's networks and systems are designed to accept one order per day from each merchant. In the case of very high volume merchants, we can accept two orders per day.

This means your system will only use the Create Order From Shipments or Create Order Including Shipments API calls once per day.

You need to design your implementation of our APIs according to this requirement and business process.

Once an Order is created, you can retrieve the Order Summary Report. This Order Summary Report is official Australia Post documentation that is to be included when the order is lodged with Australia Post. A physical copy of the Order Summary Report must be signed by the merchant and provided to Australia Post when the items are lodged. This means the driver or Australia Post staff that collect the parcels also collects the Order Summary Report.





2.1 Two workflows

When using our Shipping and Tracking APIs there are two alternative integration methods for printing labels, these are **Print as you go** and **Print as a batch**. The merchant should consider both methods and select the one that best suits their business processes. The questions below will help identify the suitable method to use.

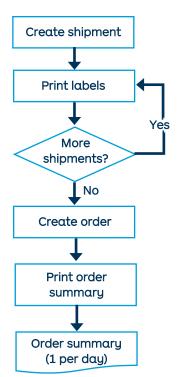
We recommend that shipping platforms support both workflows.

Print as you go is not available to all customers, if a customer thinks it is the best method for them their Account Manager should contact customer_connectivity@auspost.com.au to have their eligibility assessed.

Do you want to print labels throughout the day as you receive the parcel details & at the end of the day create an order that includes all of your shipments?

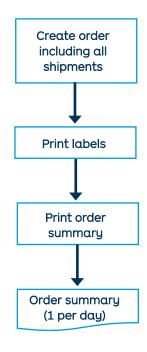
If yes, then you should use

Print as you go



Do you want to process everything in your own system, lodge all items (parcels) for the day in one bulk transaction and then print the labels in bulk for those items?

> If yes, then you should use Print as a batch



Or



3. API Credentials

3.1 Entry

In your system you will provide a way to enter the Australia Post API access credentials (keys, secret, and account number). We recommend that the Account Number and API key is left in clear text, and only the API secret is hidden. Ideally, there should be a way to reveal the API secret, even though the default display shows it hidden.

This helps avoid support issues due to incorrect copy-and-pasting or typographical errors.

3.2 Testing

We recommend that your system provides a mechanism to test the API access credentials at the time of entry. To do this, make a basic **Get Accounts** call and detect any error return.

3.1 Account numbers

A common source of problems is passing the account number in the incorrect format. Account numbers are typically 7 digits long, but they need to be passed to the API as 10 digits, padded on the left with zeros. For example, "7654321" must be passed as "0007654321".



4. Addresses

4.1 General

Please review the specification of addresses in the Shipping and Tracking API Interface Specification. Ensure your system adheres to the minimum and maximum number of address lines and the maximum length of these lines.

Australian addresses don't usually have a "city" component. If your system includes a field for city, you can use this value as the "suburb" field when communicating with the API.

4.2 Origin (From) Address

When the user enters a physical address (such as their ship-from address), use the API to check the validity of the address using the **Validate Suburb** API call. Australia Post accounts are linked to a location, so attempting to ship from a different location will result in errors during the label creation process.

When your system calls the API and provides the From address, this **must match** the address recorded on the merchant's Australia Post contract. The post code is the field that is matched against the merchant's contract; in other words, the From post code must match the post code in the merchant's contract.

4.3 Destination (To) Addresses

Your system may provide a way to manually enter a destination address. If so, we recommend that you validate the entered address at the time of entry using the **Validate Suburb** API call.

In the case of Shipping Platforms that import orders from an eCommerce platform, we recommend that you validate the address prior to attempting to create the shipment – either at the time of import or at the time of creating the label.

4.4 Post Office Boxes

Please ensure you accept "PO Box" and "GPO Box" and similar addresses, as these are valid and commonly-used addresses within Australia.

4.5 Parcel collection addresses

Australia Post offers Parcel Lockers and Parcel Collection services. These services are growing in popularity amongst merchants and consumers, so we recommend that you confirm that your system accepts these types of addresses.

The following examples show typical Parcel Locker and Parcel Collection addresses:

Parcel Locker 10012 78912 Parcel Collect 10012 78912 211 Tucker Road 2307 Point Nepean Road Rye VIC 3941

Note that Parcel Locker and Parcel Collect addresses sometimes exclude the 10 digit customer number as shown above.



5. Postage products

5.1 Available products

The **Get Accounts** API call retrieves the products that are available for the merchant's Australia Post account.

We recommend you provide a way to retrieve and store this product list. Also, please ensure you provide a way for the merchant to update this list from Australia Post at will.

Note, that the Australia Post product name may not be useful or meaningful to the merchant, so providing a way to assign a name of the merchant's choice can be beneficial.

Furthermore, if your system allows the postage product name to be displayed to the consumer this can be regarded as essential. For example, the merchant may want to show **Standard shipping 4-7 days** instead of the Australia Post product name **Parcel Post**.

5.2 Product features

Some products have additional optional features available. In the case of Shipping Platforms, we recommend that you support these features as many merchants will want to use them.

Currently, the API only presents the TRANSIT_COVER feature. Other features will be added in future versions of the API.

Transit cover provides you with cover for the specified value if it's lost or damaged while being carried by Australia Post.

5.3 Parcels

Some Australia Post products have volumetric pricing attached to them. This is indicated in the response to the **Get Accounts** API call. Volumetric pricing means a parcel's length / width / height must be provided in the **Get Item Prices** API call and when creating shipments.

For products that do not require length / width / height dimensions, you only need to provide the weight.

We recommend you adapt and test your systems to work with both types of products. In particular, we recommend that you do not force the user to enter length / width / height dimensions unless these are required for the postage product they are choosing to use.

For Shipping Platforms, if the merchant is using the **bulk** work flow, ensure you allow the merchant to change the packaging dimensions and weight prior to completion of the order. This means the merchant will change dimensions / weight on individual items (articles).



5.4 Authority to leave and Signature on Delivery

To avoid confusion in handling the **Get Accounts** options "authority_to_leave_option" and "signature_on_delivery_option" in relation to setting "authority_to_leave" in Create Shipments, please consider the following Boolean Truth Table:

Get Accounts API authority_to_leave option	Get Accounts API signature_on_delivery option	Create Shipments API authority_to_leave option
TRUE	TRUE	TRUE or FALSE*
TRUE	FALSE	TRUE
FALSE	TRUE	FALSE
FALSE	FALSE	(not possible)
	* determined by choice	e of consumer and / or merchant





6. Rates

One of the key benefits of using the Get Item Prices API is that you can provide real-time shipping rates.

- 1 The price given by the Get Item Prices API is indicative of the actual price charged to the merchant by Australia Post. The actual price is calculated when the parcel is processed through the Australia Post delivery network.
- 👔 Some merchants may choose to pass this pricing on to their customers directly or apply a discount or mark-up as they require. The displayed price must not be shown to the customer as the merchant's contracted pricing from Australia Post.





7. Labels

7.1 Merchant label combinations

Labels should be clearly marked Parcel Post or Express Post to allow us to stream the parcels effectively between the two different services.

The Create Labels API can generate this branding for use on plain paper stationery (branded = true). It can also exclude the branding for use on pre-printed stationery (branded = false).

Branded set to **true** - Used for plain paper stationery (Australia Post branding images added to the generated label)

Branded set to **false** = Used for pre-printed stationery (No branded images added to the label)

Ideally the product names will be colour coded - red for Parcel Post and yellow for Express Post. Australia Post can supply pre-printed stationery for this purpose, and some merchants will use this stationery. Pre-printed stationery must have no branded images added to the generated label.

Some merchants will use plain paper which needs branded images added to the generated label.

Some merchants will use a mixture of plain paper and pre-printed stationery.





Plain black and white labels are acceptable. However, for Express Post, black and white labels must be supplemented by yellow Express Post mini-labels or tape (provided by Australia Post). The yellow coding is important to ensure that these parcels are streamed to the Express Post network.

7.2 Label layouts

Labels are printable in various layouts. The printed shipping label layout specifies the number of labels per page and the size of the page. The layout must be one of the following valid layouts for the product types of the items in the shipment:

- A4-4pp (per page) for outbound Parcel Post, Return Parcel Post and Return Express Post
- A4-3pp (per page) for Express Post only
- A4-1pp (per page) for both Parcel Post and Express Post (A4-1pp Return labels include instructions)
- A6-1pp (per page) for outbound Parcel Post and Express Post (pre-printed stationery only), also available for Return Parcel Post or Return Express Post
- Outbound Express Post exception: Branded set to true is an invalid combination for outbound Express Post with the A6-1pp layout due to the dimension of the label. If customers use the A6 1pp layout for outbound Express Post they must use pre-printed label stationery (no branded images added to the generated label).

Therefore, outbound Express Post labels in A6-1pp layout must be printed with pre-printed stationery and **branded** must be set to **false**.





7.3 Branded flag settings

The table below shows the branded settings for the different combinations of Speed of delivery, stationery type and label layout for outbound parcels.

for information on Return labels go to 8.4 Return label layouts on page 16.

Speed of delivery (group field)	Stationery	Label Layouts	Branded setting
	Plain paper	A4-4pp	TRUE
		A4-1pp	
David Dock		A6-1pp	
Parcel Post	Pre-printed stationery	A4-4pp	FALSE
		A4-1pp	
		A6-1pp	
	Plain paper	A4-3pp	TRUE
		A4-1pp	
Express Post	Pre-printed stationery	A4-3pp	
		A4-1pp	FALSE
		A6-1pp	



8. Returns

The Shipping and Tracking APIs can be used to generate a return shipment and create a return label to be sent to your customer so they do not have to pay for the postage to return their goods.

8.1 Key differences between a return shipment and an outbound shipment

- 1) movement_type field is set to "RETURN"
- 2) The 'from' address indicates the person lodging the Return
- 3) The 'to' address is the merchant receiving the Return
- 4) The following fields are not applicable for Returns:
 - weight
 - length
 - width
 - height
 - allow_partial_delivery
- 5) Returns products only allow one item per shipment.

8.2 Returns products

The product IDs are consistent across all merchants:

PR - Post Return (Parcel Post network)

XPR - Express Post Return (Express Post network)

Product code	Signature on Delivery	Dangerous goods?
PR (Post Return)	Yes	Yes
XPR (Express Post Return)	Yes	No

Authority To Leave (ATL) – Neither PR or XPR are bundled products i.e. they DO NOT have SOD bundled. With these two products you have the ability to add SOD if you wish. Therefore, ATL is irrelevant and if a default value is required it should be FALSE.

Partial delivery – Neither PR or XPR products have an option for partial delivery. As returns have no subsequent pricing, each parcel is charged at the same returns rate. If a default value is required then it should be set to TRUE so that no return parcels are held at a facility.

Integrating with the Shipping and Tracking APIs

Page 14 | March 2017



8.3 An example payload for Australia Post Returns

```
{
   "shipments":[
         "shipment_reference": "My shipment ref",
         "customer_reference_1":"cb1234",
         "movement_type": "RETURN",
         "from":{
            "name": "Peter",
            "lines":[
               "111 Bourke St"
            "suburb": "Melbourne",
            "postcode": "3000",
            "state": "VIC"
         },
         "to":{
             "name": "Merchant & Co",
            "lines":[
               "PO Box 123"
            "suburb": "Rye",
            "state":"Vic",
            "postcode": "3941",
            "phone": "0356567567",
            "email":"merchant@gmail.com"
         },
         "items":[
            {
               "item_reference": "blocked",
               "product id":"PR",
               "authority_to_leave": true
            }
         ]
     }
   ]
}
```





8.4 Return label layouts

The table below shows the branded settings for the different combinations of Speed of delivery, stationery type and label layout for return labels.

Speed of delivery (group field)	Stationery	Label Layouts	Branded setting
	Plain paper	A4-4pp	
		A4-1pp (label with instructions)	TRUE
Parcel Post &		A6-1pp	
Express Post	Pre-printed stationery	A4-4pp	
		A4-1pp (label with instructions)	FALSE
		A6-1pp	

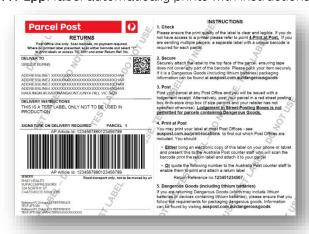
A6-1pp (per page): Standard Thermal layout (1 label prints on A6)



A6-4pp: 4 per page layout (same layout, four labels print on an A4)



A4-1pp: label automatically prints with instructions







9. Live versus Test

When starting with APIs you may want to perform a period of testing before running "live".

We recommend your system provides a way to choose between "live" and "test".

"Test" should access the Shipping and Tracking APIs via the test URL and "live" via the production URL. In your welcome pack, you will have received both these URLs. The test URL accesses the Developer Test Bed (see below).

If you wish to create test orders as part of verification testing against the **live** system, please let us know the order numbers within 24 hours so that they can be cancelled and not charged to the merchants account. Please email any test order numbers used for verification in the **live** system to customer_connectivity@auspost.com.au

9.1 Developer Test Bed

The Developer Test Bed enables developers to test their integration by generating requests to a test service and receiving responses.

9.1.1 How the Developer Test Bed works

The Shipping and Tracking APIs have been set up in a test environment that performs the same validation processes as the live environment.

The Developer Test Bed is not reliant on back-end Australia Post systems, it mimics backend system behaviour and responses. No data is sent to or from the back-end systems, consequently no actual transactions occur. Fictional customer data for a fictional company, ABC Pty Ltd, is used to provide responses to all requests made to the Test Bed.

The Developer Test Bed has stubbed services that are hosted in the cloud. It caches the details of previous requests made by each Merchant or Developer and uses this information when providing response to their future requests.

The Developer Test Bed always reflects the Shipping and Tracking APIs that are in production.

9.1.2 Business services available for test in the Developer Test Bed

Customers can test the following business services in the Developer Test Bed:

- Domestic parcels contract
- Domestic retail.



9.1.3 Live validations made in the Developer Test Bed (actual checks made)

The Developer Test Bed performs live validations for:

- Credentials (user id and password)
- Fields passed to Australia Post therefore if the wrong information is passed the same errors that are given in production are given in the Developer Test Bed
- Sequence of calls (this ensures that labels are requested at the right point).

9.1.4 Stubbed services in the Developer Test Bed (simulated checks)

The Developer Test Bed has locally hosted stubbed services with fictional company ABC Pty Ltd information for the following:

- Credit check (no credit block)
- Label Print Service (LPS) (there is one sample generic label provided if the correct calls are made for a label)
- Order Summary (one sample generic order summary is provided if the correct calls are made to create and lodge a parcel)
- Tracking (one of three sample responses is returned. The sample returned is dependent on the product type in the request call).



10. Tracking

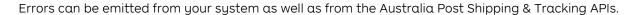
If you connect to an eCommerce platform and update the order status in that platform, we recommend that you provide:

- 1. The Australia Post tracking number for the shipment as a visible component of the order.
- 2. A hyperlink to the Australia Post tracking site that automatically shows the tracking data for that shipment.

Please note, the **Track Items** API is rate limited at 10 requests per minute. You may include up to 10 tracking IDs in each request.



11. Error handling

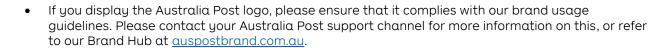


We recommend you clearly identify errors emitted from the Australia Post Shipping & Tracking APIs when displayed to the user. This will help avoid delays in providing support to your customers.

Ideally, all errors returned from our API should be logged on your servers and correlated with date / time and the shipment or order or activity that triggered the error.



12. Miscellaneous



•	Strip leading and trailing whitespace from data that you send to the API. For example, a space
	after a suburb / city name may cause the API to reject the address.





13. Frequently asked questions

Do the Shipping and Tracking API keys have to be approved to use in production?

You need to register your interest via the Developer Centre, if you meet the current eligibility criteria you will be provided test keys. Once you have provided a valid output from the create shipment call and completed the steps to receive a label URL, you contact Australia Post and we arrange for you to switch to production.

Will shipments created using the APIs appear in eParcel?

Yes, once labels are printed and the shipment is placed into an order, the order appears in eParcel as a manifest.

If I have multiple regular daily pickups, when should I create orders and should the order only contain shipments that are going in the next pickup?

Each pickup must have an order created that contains the shipment details for all included items. An Order Summary Report (manifest) is created for each order and must be printed, signed and handed to the pickup driver.

Usually there is only one Order Summary Report (manifest) per pickup, but a last-minute order might result in two orders going in one pick-up (with two signed Order Summary Reports). The Order Summary Reports must match the items given to the driver.

In the Australia Post Shipping and Tracking API Test Bed why does it return the same response every time even when I change the dimensions or postcode?

The Test bed does not use actual contract data, it only has small subset of test data. If the request call is successful currently the same standard response is returned.

The range of test data and corresponding responses provided will increase as the Test Bed data and functionality are reviewed and updated on a regular basis.

What is the difference between the Create Order from shipments API and the Create order including shipments API?

The Create order including shipments API allows you to include the shipment information in the same request as creating the order (Print as a batch).

The Create order from shipments API requires the shipments to be created in separate calls (Print as you go).

Can I create shipments using the APIs and then print the labels and dispatch in eParcel?

No, the labels must be printed using the API (or in your own system if you print your own labels) for a shipment to be valid.

When I create a shipment using the testbed URL I receive a \$20 shipping price but my contract prices are between \$7 and \$10. Why am I getting the wrong price?

The Shipping and Tracking Test Bed does not reflect actual contract pricing.

What are valid layouts for the printed shipping labels for the Australia Post Shipping and Tracking APIs?

The printed shipping label layout specifies the number of labels per page and the size of the page. The layout must be one of the following valid layouts for the product types of the items in the shipment:

- A4-4pp (Parcel Post)
- A4-3pp (Express Post)
- A4-1pp (Parcel Post & Express Post)
- A6-1pp (Parcel Post & Express Post)

If I cancel an order when using the Shipping and Tracking APIs in production?

An order cannot be cancelled, deleted or voided online. A shipment can be deleted before it is added to an order but once added to an order neither the shipment within the order nor the order can be deleted.