

# SF-LWR Extension Framework : Flat Shipping Rates

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## Functional Overview

This document provides details about configuring flat/internal rates and combining them with other external rates (if required).

For common details you can refer to parent doc [here](#).

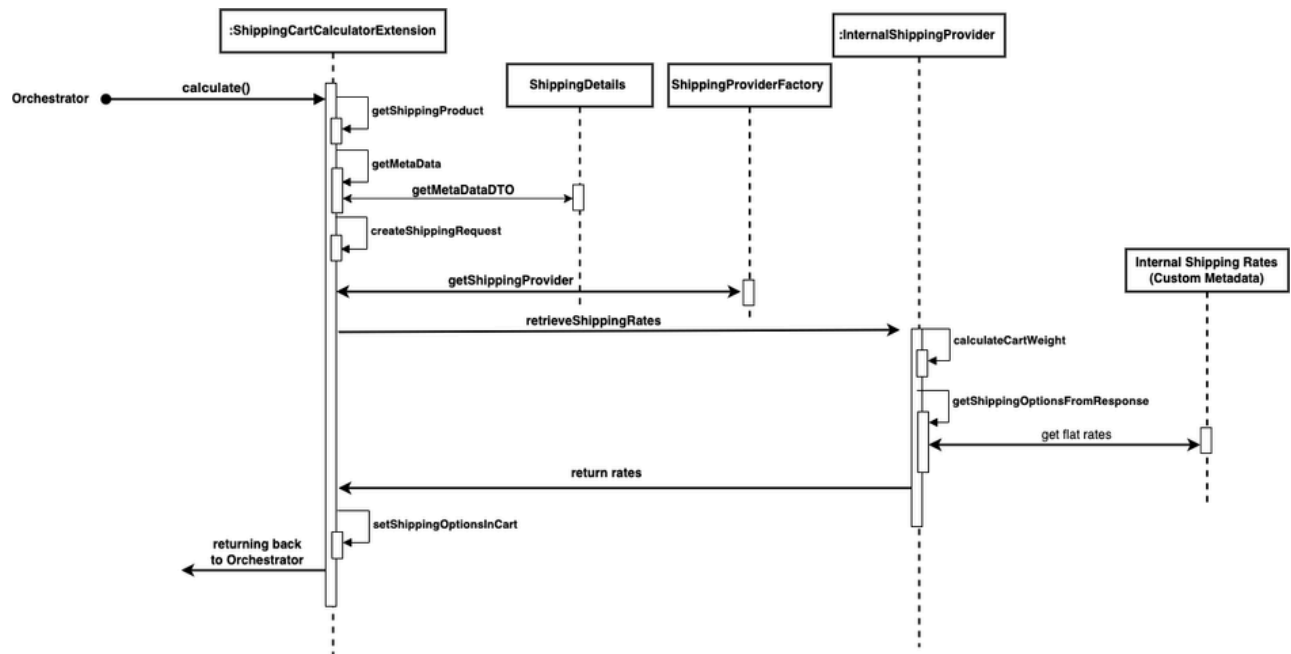
## Technical Details

This integration implementation has two parts :

- **Configuration**
  - Custom Meta Data Records
    - Internal Shipping Provider
  - Custom Metadata Type (used to store flat rates)
    - Internal Shipping Rates
- **Source Code**
  - InternalShippingProvider

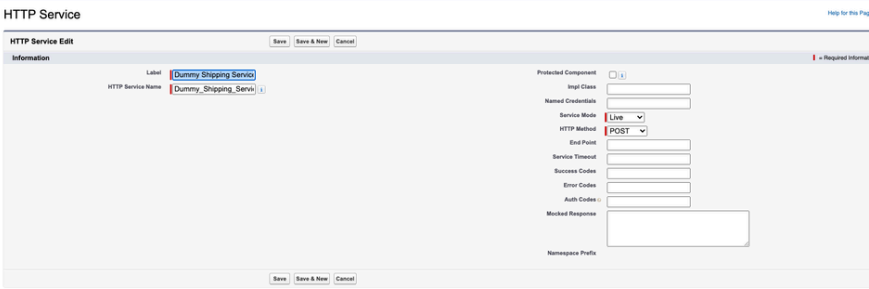
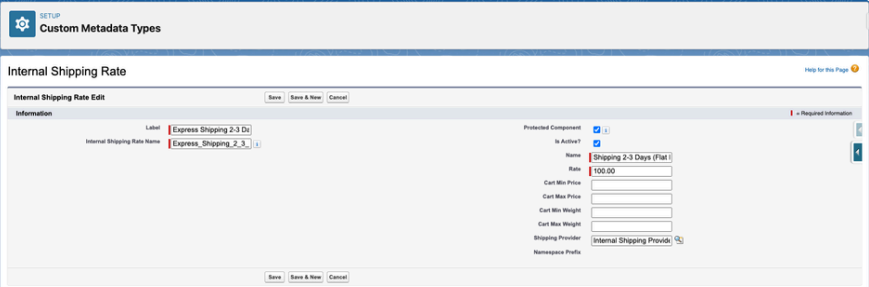
*Note : For configuring internal/flat rates, have created a new metadata type “**Internal Shipping Rates**”*

## Sequence Diagram



### Configuration details

	Section	Task	Details
1	Salesforce Org	<b>Shipping Provider</b> - Create a record for Flat shipping rates	<p>Create a record <b>Internal Shipping</b> Provider for Custom Meta Data Type Shipping Provider</p>
2	Salesforce Org	<b>HTTP Service</b> - Create a record for Flat shipping rates	<p>Create a record - Dummy Shipping Service of Custom Meta Data Type - HTTP Service</p> <p>Note : As in actual there will not be any callout , just creating a dummy service.</p>

			 <p>HTTP Service Edit</p> <p>Information</p> <p>Label: <b>Dummy Shipping Service</b></p> <p>HTTP Service Name: <b>Dummy_Shipping_Servi</b></p> <p>Protected Component: <input type="checkbox"/></p> <p>Impl Class: <input type="text"/></p> <p>Named Credentials: <input type="text"/></p> <p>Service Mode: <b>Live</b></p> <p>HTTP Method: <b>POST</b></p> <p>URL Prefix: <input type="text"/></p> <p>Service Timeout: <input type="text"/></p> <p>Success Codes: <input type="text"/></p> <p>Error Codes: <input type="text"/></p> <p>Auth Codes: <input type="text"/></p> <p>Mocked Responses: <input type="text"/></p> <p>Namespace Prefix: <input type="text"/></p> <p>Buttons: Save, Save &amp; New, Cancel</p>
3	Salesforce Org	<b>Internal Shipping Rates</b> - Create a record for Flat shipping rates	<p>Create a record for Custom Meta Data Type <b>Internal Shipping Rates</b></p> <p>Note : You can create multiple rates as per requirement</p>  <p>Internal Shipping Rate Edit</p> <p>Information</p> <p>Label: <b>Express Shipping 2-3 Days</b></p> <p>Internal Shipping Rate Name: <b>Express_Shipping_2_3</b></p> <p>Protected Component: <input checked="" type="checkbox"/></p> <p>Is Active? <input checked="" type="checkbox"/></p> <p>Name: <b>Shipping 2-3 Days (Flat)</b></p> <p>Rate: <b>100.00</b></p> <p>Cost Min Price: <input type="text"/></p> <p>Cost Max Price: <input type="text"/></p> <p>Cost Min Weight: <input type="text"/></p> <p>Cost Max Weight: <input type="text"/></p> <p>Shipping Provider: <b>Internal Shipping Provider</b></p> <p>Namespace Prefix: <input type="text"/></p> <p>Buttons: Save, Save &amp; New, Cancel</p>

### Record - Internal Shipping Provider(Shipping Provider )

Field Label	Field Value
Is Active?	true
Context Name	<Webstore name> e.g. R1Training
Context Locale	<locale> e.g. en_US
Impl Class	InternalShippingProvider
Max Weight Threshold	N/A
Min Weight Threshold	N/A
Service	Dummy Shipping Service
Account Number	N/A
Shipping Options	N/A
Request	N/A

### Custom Metadata Type - Internal Shipping Rates

Field Label	API Name	Data Type	Notes
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Cart Max Price	Cart_Max_Price__c	Number(16, 2)	To define a <b>price amount range</b> for which a particular shipping method will be used , this field stores Max cart/order amount value
Cart Max Weight	Cart_Max_Weight__c	Number(16, 2)	To define a <b>weight range</b> for which a particular shipping method will be used , this field stores Max cart/order weight
Cart Min Price	Cart_Min_Price__c	Number(16, 2)	To define a <b>price amount range</b> for which a particular shipping method will be used , this field stores Min cart/order amount value
Cart Min Weight	Cart_Min_Weight__c	Number(16, 2)	To define a <b>weight range</b> for which a particular shipping method will be used , this field stores Min cart/order weight
Is Active?	Is_Active__c	Checkbox	Make sure to activate a shipping method to be used
Name	Name__c	Text(255) (Unique Case Insensitive)	Name of a shipping method/option (it will be displayed on UI)
Rate	Rate__c	Number(16, 2)	Cost of a internal shipping method/option
Shipping Provider	Shipping_Provider__c	Metadata Relationship(Shipping Provider)	This associates rate record with corresponding Shipping Provider record

## Record (example)- Shipping 2-3 Days (Internal Shipping Rates )

Field Label	Field Value
Name	Shipping 2-3 Days
Rate	100
Is Active?	true
Shipping Provider	Internal Shipping Provider
Cart Max Price	
Cart Max Weight	
Cart Min Price	
Cart Min Weight	

## Source Code

Class	Details	Code
InternalShippingProvider	This class extends ShippingProvider class & implements following methods -	<pre> 1 public class InternalShippingProvider extends ShippingProvider 2     public InternalShippingProvider() { 3     } 4     public override Map&lt;String, ShippingProviderResponse&gt; retrieve 5         ShippingProviderRequest shippingRequest </pre>

prepareRequestBody

getShippingOptionsFromResponse

```
6    ) {
7        List<String> responseList = new List<String>();
8        Map<String, ShippingProviderResponse> shippingMethodsWithRate = new HashMap<>();
9        Decimal totalCartWeight = 0;
10       try {
11           List<Decimal> lstShippingWeight = calculateCartWeight(shippingRequest);
12           for (Decimal weight : lstShippingWeight) {
13               totalCartWeight += weight;
14           }
15           shippingRequest.packageWeight = totalCartWeight;
16           shippingMethodsWithRate = getShippingOptionsFromResponse(responseList, shippingRequest);
17       } catch (Exception expObj) {
18           System.debug(
19               'Exception due to error ==== ' +
20               expObj.getMessage() +
21               'at Line Number ==== ' +
22               expObj.getLineNumber()
23           );
24           // WK_Exception.log(expObj, applicationName, moduleName,
25           // methodName, supportData);
26       }
27       return shippingMethodsWithRate;
28   }
29
30   public override Map<String, ShippingProviderResponse> getShippingOptionsFromResponse(
31       List<String> responseList,
32       ShippingProviderRequest shippingRequest
33   ) {
34       Map<String, ShippingProviderResponse> shippingMethodsWithRate = new HashMap<>();
35       List<Internal_Shipping_Rate__mdt> shippingRates = [
36           SELECT
37               Id,
38               Name__c,
39               Rate__c,
40               Cart_Max_Price__c,
41               Cart_Max_Weight__c,
42               Cart_Min_Price__c,
43               Cart_Min_Weight__c,
44               Shipping_Provider__c
45           FROM Internal_Shipping_Rate__mdt
46           WHERE
47               Shipping_Provider__c = :shippingRequest.shippingMetaDatum.Shipping_Provider__c
48               AND Is_Active__c = TRUE
49       ];
50       ShippingProviderResponse shippingResponse;
51       if (shippingRates != null && shippingRates.size() > 0) {
52           for (Internal_Shipping_Rate__mdt rate : shippingRates) {
53               shippingResponse = new ShippingProviderResponse();
54               shippingResponse.serviceCode = rate.Name__c;
55               shippingResponse.cost = rate.Rate__c;
56               shippingResponse.carrier = shippingRequest.shippingMetaDatum.Carrier;
57               shippingResponse.displayOrder = shippingRequest.shippingMetaDatum.Display_Order;
58               shippingMethodsWithRate.put(
59                   shippingResponse.serviceCode,
60                   shippingResponse
61               );
62           }
63       }
64   }
```

```
66     }
67     return shippingMethodsWithRate;
68 }
69 public override void prepareRequestBody(
70     ShippingProviderRequest shippingRequest,
71     Map<String, String> callOutRequest
72 ) {
73 }
74 }
75
```