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Integrating Oracle Commerce Cloud Service and Oracle Retail Order Management System

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1 Introduction

The Oracle Retail Order Management System Cloud Service (OROMS) is an order management system that supports retail transactions, including fulfillment, warehousing/inventory control, customer service, merchandising, marketing and finance. Commerce Cloud and Oracle Retail Order Management can be used together to provide a robust commerce architecture.

Audience

This document is written for Commerce Cloud and Oracle Retail Order Management administrators who need to set up and configure the integration between these two systems. Readers of this document should have experience with both Commerce Cloud and Oracle Retail Order Management administration. This document does not provide instructions on configuring aspects other than integration for Commerce Cloud and Oracle Retail Order Management. For that information, refer to the product documentation.

Features

The integration between Commerce Cloud and Oracle Retail Order Management provides a solution that combines the capabilities of these two products. This integration provides the following features:

- Turning integration on and off using the Commerce Cloud administration interface
- Providing configuration based on your environment
- Pushing completed Commerce Cloud orders to Oracle Retail Order Management for fulfillment
- Retrieving and displaying Oracle Retail Order Management order status in Commerce Cloud

This integration provides retailers with an opportunity to manage order and fulfillment information.

Architectural Overview

Shoppers use the Commerce Cloud storefront to place an order. When a retailer enables integration, the order created in the storefront is sent to Oracle Retail Order Management where it is fulfilled. Commerce Cloud can

obtain the details of the order from Oracle Retail Order Management and display the status in the customer storefront or the Agent Console of Commerce Cloud.

Commerce Cloud manages the promotions and discounts for the order and passes the final price of the order to Oracle Retail Order Management. The shipping methods in both systems are synchronized, ensuring that the customer is choosing from shipping methods that are available from Oracle Retail Order Management.

To perform data synchronization, Commerce Cloud communicates with Oracle Retail Order Management using REST. Commerce Cloud provides data output in JSON, while Oracle Retail Order Management exposes REST services that accept XML. Integration services take the JSON data from Commerce Cloud, convert it to XML using XSLT transformers, and send it to all Oracle Retail Order Management systems. In turn, XML data sent from Oracle Retail Order Management is read by the integration service and converted to JSON. The webhook target that communicates with Oracle Retail Order Management is set using the administration interface. If the integration is disabled, the transformation logic is skipped and the webhook behaves as a standard webhook.

Webhooks submit JSON, however, Serenade accepts only XML. When an order is submit, it is converted from JSON to XML. Webhooks support multiple target orders, and if the target contains

The integration services are shipped as part of the standard EAR, with the integration module loaded by default. Integration services are configured using the Commerce Cloud administration interface.

When an order or order detail is queried in Commerce Cloud, a service call is made to Oracle Retail Order Management to get the latest status for that order. Orders that are created in Commerce Cloud are synchronized to Oracle Retail Order Management, and order status updates regarding fulfillment from Oracle Retail Order Management are requested by Commerce Cloud on demand.

Additional Documentation

For additional information on Commerce Cloud Service, refer to *Using Oracle Commerce Cloud Service*. For information on customizing Commerce Cloud Service, refer to *Extending Oracle Commerce Cloud Service*.

2 Prerequisites

This section contains information on prerequisites needed before configuring the integration.

Access Rights

To configure integration, you need to have administrator access to Commerce Cloud Service. This allows you to configure the integration settings using the administration interface.

Data Configuration

The product and SKU information should be in sync on both the Commerce Cloud and Oracle Retail Order Management servers. The following describes the Item and SKU fields and the mapping between them:

Item Configuration

Oracle Retail Order Management allows the `ITEM_ID` field to contain a maximum of 12 alphanumeric characters. Therefore, items created with Commerce Cloud should contain no more than 12 alphanumeric characters, for example, `Item001`, `wallet`, etc.

SKU ID Configuration

The Oracle Retail Order Management system generated `short_sku_number` number is unique for a company as well as a site. As such, the Commerce Cloud SKU ID should also have a unique ID for the site. Note that the SKU ID must be numeric and limited to 7 characters.

Variant Configuration

Oracle Retail Order Management allows a maximum of three SKU attributes, for example, `color`, `size` and `collar`. Note that all items will have the same elements. For example, both the shirts and the shoe SKUs will contain the same variants, for example, `color`, `size`, and `collar`.

Commerce Cloud allows more than three variants, for example, `color`, `size`, `collar`, and `sleeve`. However, Oracle Retail Order Management cannot recognize more than three variants. If the SKU attribute in Oracle Retail Order Management and the SKU variant in Commerce Cloud both contain fewer than three entries, the SKU attribute will be the same.

While creating items and SKUs in Commerce Cloud and Oracle Retail Order Management, consider the following:

- When creating SKUs, limit variants to less than three
- Create SKUS in Oracle Retail Order Management. The same SKUs with the `short_sku_number` field can be manually exported and created in Commerce Cloud
- Create variants that are as general as possible so that they can be shared across items
- Before the integration process begins, the Commerce Cloud and Oracle Retail Order Management inventories should be synchronized

For detailed information on configuring and managing catalogs and SKUs, refer to *Using Oracle Commerce Cloud Service*.

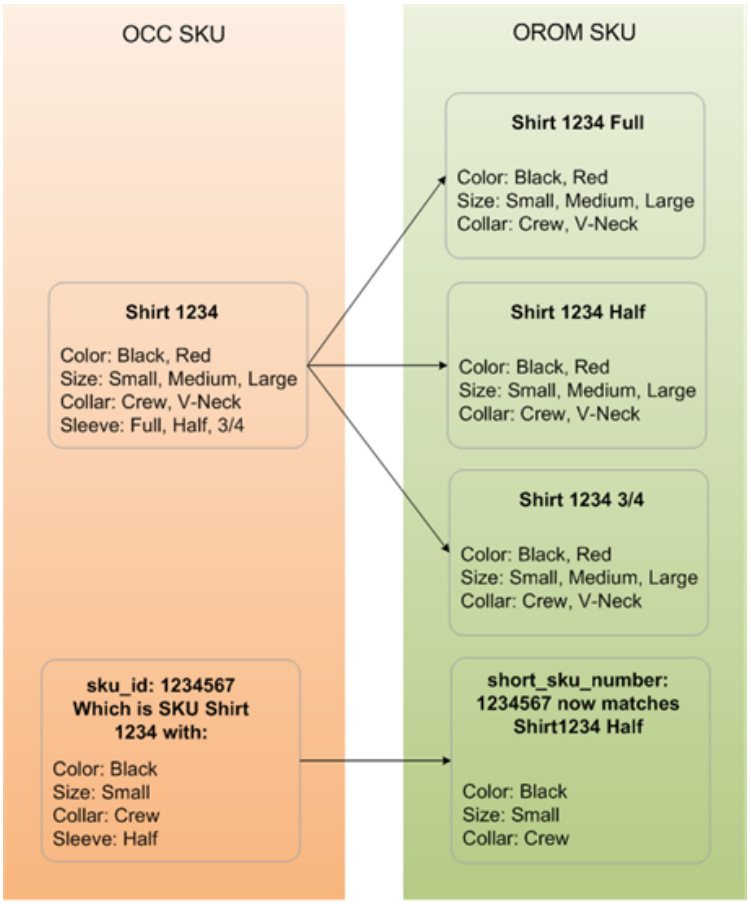
Working with More Than Three Variants

Commerce Cloud allows you to configure SKUs so that they contain variants, such as color, size, collar, etc. However, Oracle Retail Order Management can accept only up to three of these variants. In the following example, the SKU for a shirt, as it is defined in Commerce Cloud, contains the variants for color, size, sleeve and collar. Because Oracle Retail Order Management can only accept three of these variants to be part of the SKU, the SKU is could be modified.

Note: If a Commerce Cloud SKU contains three or less variants, it is converted into the Oracle Retail Order Management system without any changes.

In the following example, the Commerce Cloud Shirt 1234 item contains the following variants: `color`, `size`, `collar`, and `sleeve`. A SKU with the `sku_id` 1234567 is a Shirt1234 item that has the variants values of `black`, `small`, `crew`, `half`.

Because the Commerce Cloud SKU has more variants than Oracle Retail Order Management can accept, you might configure your SKU so that the last variant, `sleeve`, is removed, creating three separate items: Shirt1234 Full, Shirt 1234 Half and Shirt 1234 3/4. The Commerce Cloud SKU now matches the Oracle Retail Order Management Shirt1234 Half item. The SKU with the Commerce Cloud `sku_id` 1234567 receives the system-generated `short_sku_number` 1234567.



The above diagram shows how the Commerce Cloud item Shirt 1234 can be converted into three separate Oracle Retail Order Management items based on the fourth variant, `sleeve`. The diagram also shows how the Commerce Cloud SKU Shirt1234 relates to the Oracle Retail Order Management SKU 1234567.

3 Setting Up the Integration

The following section provides information on configuring and accessing integration.

Commerce Cloud Service Configuration

Before you set up Oracle Retail Order Management integration, ensure that the Integration module is running on your server. The Integration module is shipped as part of the standard EAR and is loaded by default.

Configuring Webhooks

As described in the Architectural Overview (page 1) section, the integration service is based on the Web API settings in the Commerce Cloud.

Web APIs allow you to subscribe to events for your products and orders by creating webhooks that push JSON notifications to a URL you specify. For additional information on webhooks, refer to the *Use Webhooks* section of *Extending Oracle Commerce Cloud Service*.

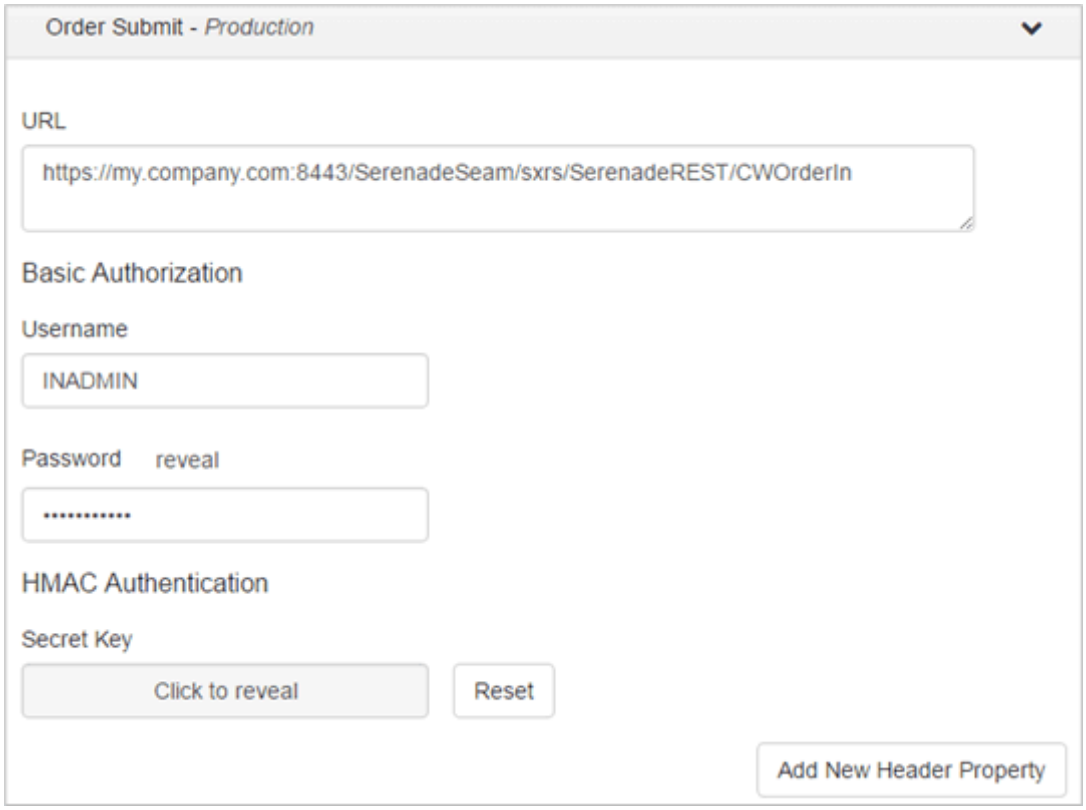
Before you can configure the integration settings, the webhook must be configured. To do this, ensure that the Order Submit Event API has been configured with the URL necessary to connect to the Oracle Retail Order Management server.

To Configure the Order Submit Event API

1. From the Commerce Cloud administration interface, select the Settings tab.

2. Open the Web API page and select the Webhook tab.

3. Open the Order Submit Event API. The following screen is displayed:



4. Provide the URL of the server that will be accepting the order, including the server name and port used for the `CWOrderIn` service. For example:

   `https://my.company.com:8443/SerenadeSeam/sxrs/SerenadeREST/CWOrderIn`

5. Provide a user name and password for accessing the server.

6. If you are using HMAC authentication, you can view or reset the key.

7. Click Save to save your changes.

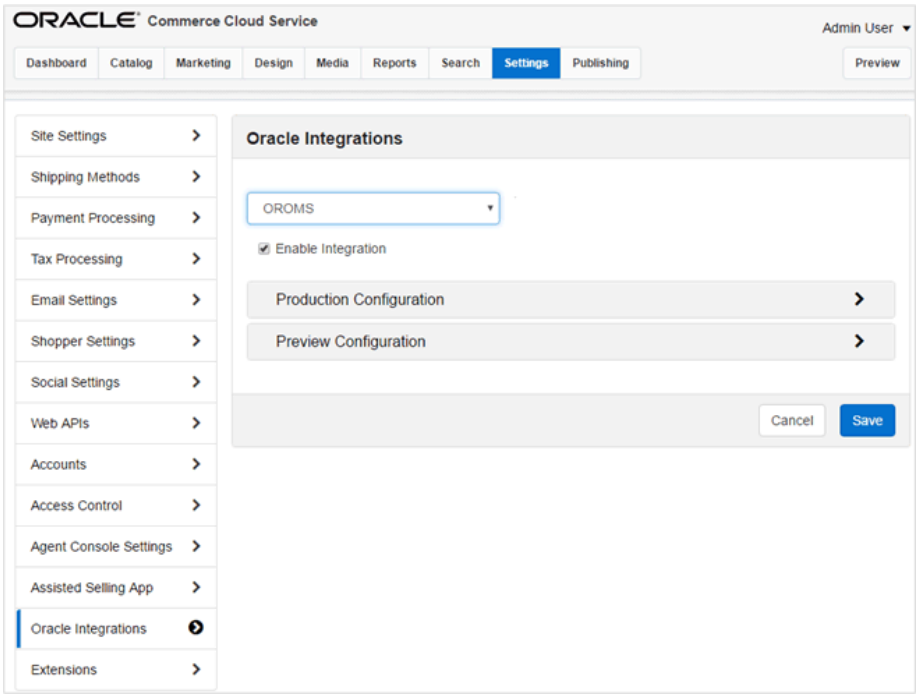
Accessing the Oracle Integrations Console

The Oracle Integrations page is managed using the Commerce Cloud administration interface.

1. From the Commerce Cloud administration interface, select the Settings tab.

2. Click on Oracle Integrations on the left navigation.

3. Select Oracle Retail Order Management in the Oracle Integration tab. The following page is displayed:



By default the Enable integration field is unchecked, indicating that integration is disabled. If the check box is selected, integration is enabled.

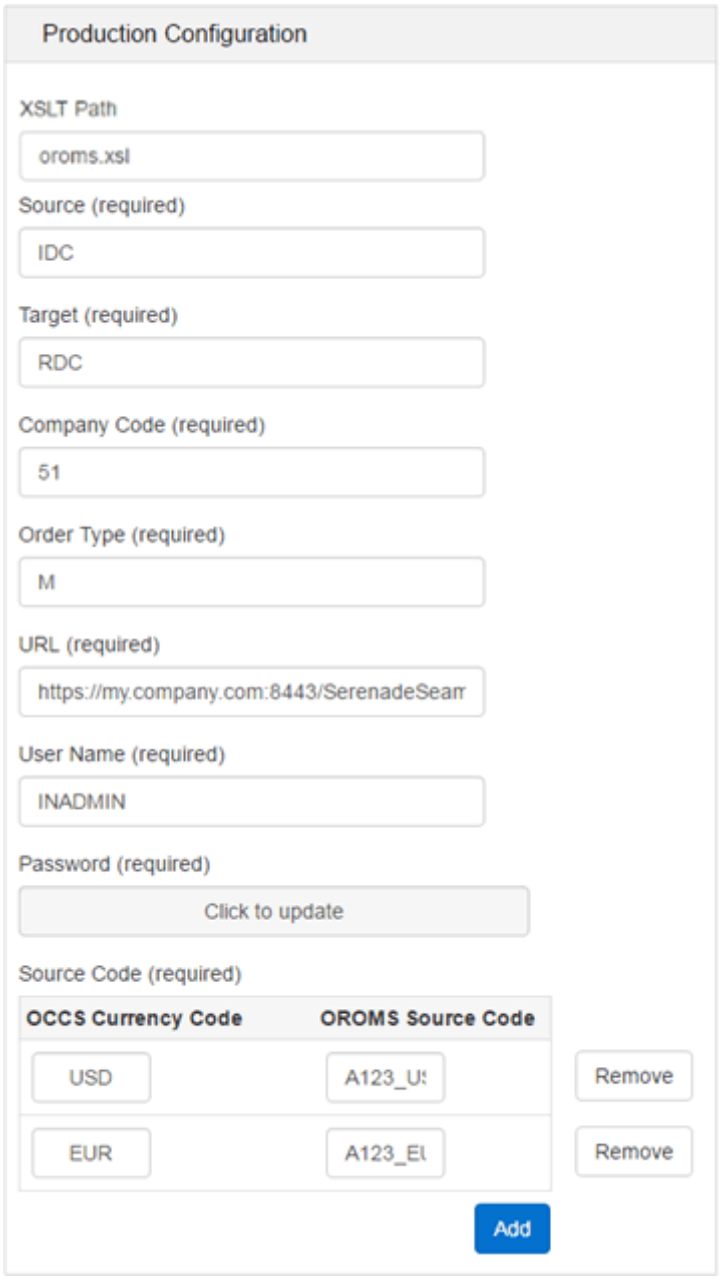
Configuring the Integration

The following sections describe how to configure components of the integration procedure.

Production Configuration

The Production Configuration section configures a number of details as well as the mappings for payment types and shipping methods. These values are passed to Oracle Retail Order Management allowing the orders to be identified.

Note: These settings are duplicated in the other Oracle Retail Order Management Integration setting, Preview Configuration.



The following properties are set using the Production Configuration page. Note that all fields are required unless otherwise noted:

Field	Description
XSLT Path	Name of the custom XSLT file to load.
Source	Identifies the source of the XML message. The source should default to IDC.

Field	Description
Target	Identifies the target of the XML message. The target should default to RDC. If multiple webhooks are specified in the Target field, all of the systems receive the same data. Transformation for specific URLs can be performed by adding the URLs to both the webhook and integration settings.
Company Code	Identifies the company for the order. The company code is validated against the Company table.
Source Code	Updates the source code field in the Order Header table. The source code provides information about the currency code. You must provide the Commerce Cloud currency code to the Oracle Retail Order Management System source code mapping using the Currency Code mapping table.
Order Type	Updates the order type field in the Order Header table.
URL	The URL path to the Oracle Retail Order Management Web Service `CWMessageIn`. For example: `https://my.company.com:8443/SerenadeSeam/sxrs/SerenadeREST/CWMessageIn` **Note:** Use the same hostname and port number that you provided for the Order Submit URL on the Web APIs Webhook page. Refer to the Configuring Webhooks (page 7) section.
User Name	The name of the user who should have access to the Web Service.
Password	The password associated with the user name. To see the password, click the Reveal button to display the password.

Using XSLT

You can use the customized XSLT capability to extend the default integration. The system contains an internal XSLT file that maps all attributes. The merchant does not have access to this XSLT file; however, you can provide a path to the XSLT. The XSLT should contain the logic that customizes the Oracle Retail Order Management `createOrder` payload so that it includes dynamic properties or makes mapping changes.

This XSLT workflow is active only when the Oracle Retail Order Management integration is enabled. The merchant must upload the XSLT using Oracle Commerce Cloud's file upload endpoints. If no customized XSLT file is uploaded, the system uses the default XSLT file to pass orders, ignoring any custom attributes.

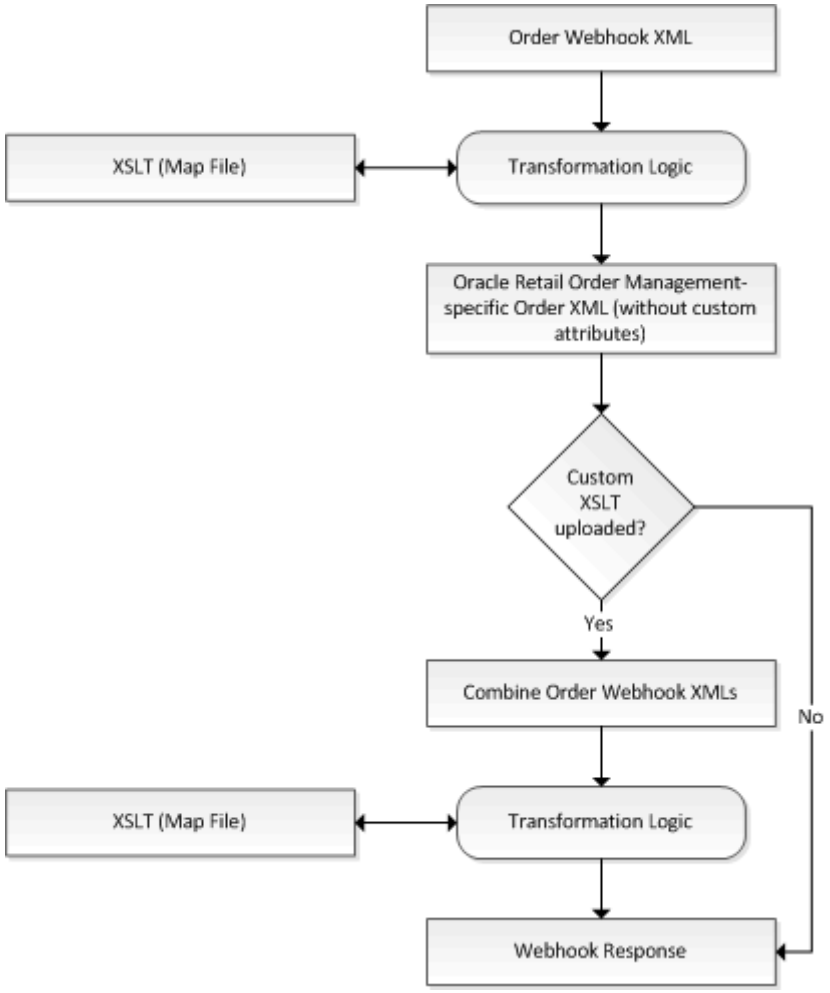
When creating a custom XSLT file:

- The default mapping can be overridden and mapped to other attributes as necessary.
- The merchant can use dynamic attributes created with Oracle Commerce Cloud to map attributes of the Oracle Retail Order Management.
- Because mapping is configured in the customized XSLT file, the merchant can map custom attributes that were created for an Order header level in Oracle Commerce Cloud to an order header or order line status in Oracle Retail Order Management.

To use a customized XSLT file, do the following:

1. Create a new XSLT file mapping.
2. Upload the XSLT file to Oracle Commerce Cloud using the file endpoints.
3. Use the Oracle Retail Order Management Integration Settings to provide the name of the uploaded XSLT.

The following illustration defines the way that the merchant's transformation is applied when the XSLT path is provided.



XSLT Example

The following is an example of an XSLT file:

```
<?xml version="1.0" encoding="UTF-8"?>
<xsl:stylesheet xmlns:xsl="http://www.w3.org/1999/XSL/Transform" version="2.0"
    xmlns:str="http://exslt.org/strings" xmlns:exsl="http://exslt.org/common"
    exclude-result-prefixes="str exsl">
  <xsl:output indent="yes" method="xml" omit-xml-declaration="yes" />
    <xsl:template match="/">
      <xsl:variable name="vOrder" select="request/atgResponse/order" />
      <Message>
        <xsl:copy-of select="request/Message/@*" />
        <Header>
```

```
          <xsl:copy-of select="request/Message/Header/@*" />
        <Payments>
          <xsl:for-each select="request/Message/Header/Payments/Payment">
            <Payment>
              <xsl:copy-of select="@*" />
            </Payment>
          </xsl:for-each>
        </Payments>
        <ShipTos>
          <xsl:for-each select="request/Message/Header/ShipTos/ShipTo">
            <ShipTo>
              <xsl:copy-of select="@*" />
                <Items>
                  <xsl:for-each select="Items/Item">
                    <Item>
                      <xsl:copy-of select="@*" />
<!-- ****************************************************
      Updating an existing mapping
******************************************************** -->
<!-- To change the mapping of an existing OROMS attribute, comment the line
(<xsl:copy-of select="@*" />) and uncomment below line and replace
<oroms_attribute> with the attribute name required in output and <occ_attribute>
with attribute name in occ XML map an attribute in oroms XML to a different value,
comment the above line and uncomment below line and replace <oroms_attribute> with
the attribute name required in output and the <occ_attribute> with attribute name
in occ XML -->

<!-- <xsl:copy-of select="@*[name()!='<oroms_attribute>']" /> <xsl:attribute
name="tax_override"> <xsl:value-of select="//request/atgResponse/order/
<occ_attribute>" /> </xsl:attribute> -->

<!-- ********************************************************
Mapping a dynamic attribute of OCC to a new attribute in OROMS
********************************************************** -->
<!-- To add a new attribute "category" at item level in oroms XML, which reads the
data from the dynamic attribute shopperCategory. Replace <occ_attribute> with the
dynamic attribute name in occ. -->

<!-- <xsl:attribute name="category"> <xsl:value-of select="//request/atgResponse/
order/<occ_attribute>" /> </xsl:attribute> -->

<!-- ********************************************************
Mapping a dynamic attribute of OCC with comma separated item level
data to a new attribute in OROMS
************************************************************* -->
<!-- To map a dynamic attribute in occ in format skuId1-value1,skuId2-value2.
Replace <occ_attribute> with the dynamic attribute name in occ and
<oroms_attribute> with oroms attribute name. -->

<!-- <xsl:variable name="vOromsAttribute" select="@short_sku_number"/>

<xsl:for-each select="str:tokenize($vOrder/<occ_attribute>,',')">
<xsl:variable name="temp" select="str:tokenize(.,'-')"/>
<xsl:if test="$temp[1]=$vOromsAttribute">
<xsl:attribute name="<oroms_attribute>"> <xsl:value-of select="$temp[2]" />
</xsl:attribute>
</xsl:if>

</xsl:for-each> -->
```

```
<!-- ********************************************************************
Mapping a dynamic attribute of OCC in JSON with a new attribute in OROMS
********************************************************************* -->
<!-- To map a dynamic attribute in occ in json format (sample json format is given
below ). Replace <occ_attribute> with the dynamic attribute name in occ,
<oroms_attribute> with oroms attribute name and <dynamicAttributeFieldName> with
specific field name in the dynamic attribute json -->

<!--  Sample JSON:
  [
    {
      "giftwraplineId":"gift-wrap-item-gwprod1001-834215",
      "giftWrapSkuId":"gwprod1001",
      "giftWrapSkuDescription":"Gift Wrap Product",
      "giftWrapSkuPrice":5,
      "skuId":"834215",
      "skuDescription":"Opal Innocence Silver 8\" Salad Plate",
      "quantity":1
    },
    {
      "giftwraplineId":"gift-wrap-item-gwprod1001-845353",
      "giftWrapSkuId":"gwprod1001",
      "giftWrapSkuDescription":"Gift Wrap Product",
      "giftWrapSkuPrice":5,
      "skuId":"845353",
      "skuDescription":"Bald Eagle Figurine",
      "quantity":1
    }
  ]
 -->

<!-- <xsl:variable name="vOromsAttribute" select="@short_sku_number" />
<xsl:attribute name="<oroms_attribute>">
  <xsl:call-template name="readCustomProperty">
    <xsl:with-param name="json" select="$vOrder/<occ_attribute>" />
    <xsl:with-param name="skuId" select="$vOromsAttribute" />
    <xsl:with-param name="dynamicAttributeName" select="
        <dynamicAttributeFieldName>" />
  </xsl:call-template>
</xsl:attribute>
 -->
                    </Item>
                  </xsl:for-each>
                </Items>
              </ShipTo>
            </xsl:for-each>
        </ShipTos>
        </Header>
      </Message>
    </xsl:template>

    <xsl:variable name="quot" select="'&amp;quot;'" />
    <xsl:variable name="skuIdWithQuots" select="concat('skuId\', $quot, ':\'
        $quot)" />

    <xsl:template name="readCustomProperty">
      <xsl:param name="json" />
      <xsl:param name="skuId" />
      <xsl:param name="dynamicAttributeName" />
```

```
    <xsl:variable name="temp" select="normalize-space
        (substring-after($json,'{'))" />
    <xsl:variable name="fullSkuJson" select="normalize-space
        (substring-before($temp,'}'))" />
    <xsl:variable name="remainingJson" select="normalize-space
        (substring-after($temp,'}'))" />

    <xsl:call-template name="readCustomPropertyBySkuId">
      <xsl:with-param name="fullSkuJson" select="$fullSkuJson" />
      <xsl:with-param name="remainingJson" select="$remainingJson" />
      <xsl:with-param name="skuId" select="$skuId" />
      <xsl:with-param name="dynamicAttributeName" select=
        "$dynamicAttributeName" />
    </xsl:call-template>
  </xsl:template>

  <xsl:template name="readCustomPropertyBySkuId">
    <xsl:param name="fullSkuJson" />
    <xsl:param name="remainingJson" />
    <xsl:param name="dynamicAttributeName" />
    <xsl:param name="skuId" />
    <xsl:variable name="temp" select="normalize-space
        (substring-after($fullSkuJson,$skuIdWithQuots))" />
    <xsl:variable name="skuIdValue" select="normalize-space
      (substring-before($temp,'\'))" />

    <xsl:if test='$remainingJson'>
      <xsl:variable name="temp1" select="normalize-space
        (substring-after($remainingJson,'{'))" />
      <xsl:variable name="fullSkuJson1" select="normalize-space
        (substring-before($temp1,'}'))" />
      <xsl:variable name="remainingJson1" select="normalize-space
        (substring-after($temp1,'}'))" />
      <xsl:call-template name="readCustomPropertyBySkuId">
        <xsl:with-param name="fullSkuJson" select="$fullSkuJson1" />
        <xsl:with-param name="remainingJson" select="$remainingJson1" />
        <xsl:with-param name="skuId" select="$skuId" />
        <xsl:with-param name="dynamicAttributeName"
          select="$dynamicAttributeName" />
      </xsl:call-template>
    </xsl:if>

    <xsl:if test='$skuId = $skuIdValue'>
      <xsl:variable name="attributeNameWithQuots"
          select="concat($dynamicAttributeName, '\', $quot, ':\' , $quot)" />
      <xsl:variable name="temp2" select="normalize-space
          (substring-after($fullSkuJson,$attributeNameWithQuots))" />
      <xsl:variable name="attributeValue" select="normalize-space
          (substring-before($temp2,'\'))" />
      <xsl:value-of select="$attributeValue" />
    </xsl:if>
  </xsl:template>
</xsl:stylesheet>
```

Order Creation

Orders created in Commerce Cloud are sent to Oracle Retail Order Management using the Submit Order webhook.

Note that the Oracle Retail Order Management webhook overrides the Submit Order Webhook to send XML messages that contain the entire XML payload. If the webhook is configured to send to multiple destinations, all of the destinations will receive this XML payload.

The following is an XML example of an order creation message received by Oracle Retail Order Management.

Sample Order Creation Message

```
<Message source="IDC" target="RDC" type="CWOrderIn">
  <Header order_number="o60412" order_type="Y" company_code="51" order_channel="I"
    source_code="A123_USD" payment_only="N" response_type="E"
        order_date="08222016"
    sold_to_prefix=""sold_to_fname="Kim" sold_to_lname="Anderson"
 sold_to_suffix=""sold_to_busres="R" sold_to_address1="21 Cedar Ave"
    sold_to_address2=""sold_to_address3="" sold_to_address4=""
    sold_to_city="Syracuse" sold_to_state="NY" sold_to_zip="13202"
    sold_to_country="US"sold_to_email_update="N" sold_to_day_phone="212-555-977"
    sold_to_eve_phone="212-555-1977"sold_to_address_update="Y" pay_incl="Y"
    bill_to_prefix=""bill_to_fname="Kim" bill_to_lname="Anderson"
    bill_to_suffix=""bill_to_address1="21 Cedar Ave" bill_to_address2=""
    bill_to_address3=""bill_to_address4="" bill_to_city="Syracuse"
    bill_to_state="NY"bill_to_zip="13202" bill_to_country="US"
    bill_to_day_phone="212-555-1977" bill_to_eve_phone="212-555-1977"
    bill_to_fax_phone=""bill_to_email="kim@example.com" bill_to_company_name=""
    ind_number=""order_email="kim@example.com" alternate_sold_to_id="se-570031">
  <Payments>
    <Payment payment_type=""cc_number="9997000108950573" cc_exp_month="03"
      cc_exp_year="2018" auth_amount="75.88" auth_date="01011970"
      ecommerce_indicator="Y" already_tokenized="Y"
      transaction_id="1ni4eg211lj6iqt6097hopidv7" vendor_response="100"/>
  </Payments>
  <ShipTos>
    <ShipTo shipping_method="01" freight_tax_override="Y"
      freight_tax_amount="4.22" calc_frt="N" ship_to_fax_phone=""
      ship_to_evening_phone="212-555-1977" ship_to_day_phone="212-555-1977"
      ship_to_email=kim@example.com ship_to_zip="13202" ship_to_state="NY"
      ship_to_country="US" ship_to_city="Syracuse" ship_to_address3=""
      ship_to_address2="" ship_to_address1="21 Cedar Ave" ship_to_company=""
      ship_to_suffix=""ship_to_lname="Anderson" ship_to_fname="Kim"
      ship_to_prefix="" freight="50"contact_name="KimAnderson">
        <Items>
          <Item tax_override="Y" price_override="Y" short_sku_number="130"
            item_id="LAPTOP" actual_price="6.67" tax_amount="1.11" quantity="2"/>
          <Item tax_override="Y" price_override="Y" short_sku_number="130"
            item_id="LAPTOP" actual_price="6.66" tax_amount="0.55" quantity="1"/>
        </Items>
      <ShipTo>
    <ShipTos>
  </Header>
</Message>
```

Order Status Updates

Commerce Cloud retrieves the order status and tracking information from the Oracle Retail Order Management System to display in the client. The status, which is obtained when an order detail is queried, will not be persisted or updated in the repository.

Promotions

Promotions and offers are handled by Commerce Cloud with the corresponding discount price sent as part of the order.

Returns and Exchanges

By default, the Oracle Retail Order Management integration does not support returns and exchanges.

Configurable Product Support

By default, the Oracle Retail Order Management integration does not support configurable products.

Payment Methods

Oracle Retail Order Management uses payment methods that are identified with unique integers. For integration, Commerce Cloud Payment Methods are mapped to Oracle Retail Order Management numeric payment methods.

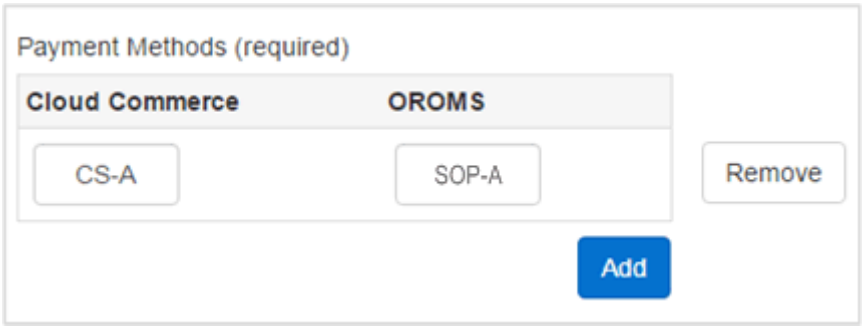
You can obtain a list of the payment methods available by calling the following endpoint:

```
GET /ccadmin/v1/merchant/paymentGateways
```

This returns a list of available payment methods. The response also includes the ID of the merchant, whether the method has been enabled, and the repository ID of the payment method. The repository ID identifies the payment method code to use. The following example displays a partial response that identifies a CyberSource payment method:

```
{
  "paymentGateways": [
  {
    "sopCredentials": {
      "storefront": {
      "sopURL": "http://10.101.101.101:8080/ccstoreui/v1/PM/cybersourceSOP",
      "expirationDate": "2019-01-28T11:54:30.207Z",
      "profileId": "Admin",
      "applicationName": "storefront",
      "hasSecretKey": true,
      "hasAccessKey": true,
      "repositoryId": "SOP-A"
  },
```

Once you have obtained the repository ID, use it to map the payment method:



As orders are created in Commerce Cloud and passed to Oracle Retail Order Management, the payment mappings are passed to Oracle Retail Order Management for fulfillment and settlement with the required payment gateways.

Note: To ensure PCI compliance, no credit card or gift card numbers are sent to Oracle Retail Order Management. The transaction reference and the authorization ID are sent with the order.

Payment Gateways

Commerce Cloud has preconfigured integration with Chase and CyberSource payment gateways. By default, the CyberSource payment gateway is selected for the integration. The Oracle Retail Order Management System requires credit card or gift cart numbers to be provided when using the Chase gateway, however, Commerce Cloud does not store credit cards and cannot provide them. As such, Chase credit cards and gift cards are not supported with this integration. Oracle Retail Order Management supports CyberSource and PayPal gateways by default.

Note: When using the CyberSource payment gateway, you must provide the `AuthNumber` for reauthorization and settlement. Because Commerce Cloud does not store the `AuthNumber`, the field is set to `NA` by default. You must update this field with the `AuthNumber` values for the CyberSource gateway.

To configure integrations with other order processing systems, use the Generic Payment Framework, as described in *Extending Oracle Commerce Cloud Service*. Generic payment is not supported by default; however, Oracle Retail Order Management APIs can support sending payment details separately for an order. Whenever a generic payment is used in Commerce Cloud, payment details are not sent and the order is put into an error state. Once you update the payment details for the order, the Oracle Retail Order Management System changes the order to an open state.

External Pricing

Note that this integration does not support external pricing. If you are using a combination of external prices and sale prices from Commerce Cloud, this integration will average the prices of items of the same SKU. For example, a customer qualifies for a promotion in Commerce Cloud that enables him to purchase 5 hats for the sales price of $5 each, instead of the list price of $6. If the customer wants to buy 10 hats, in Commerce Cloud, 5 of the hats would be sold at $5 and 5 of the hats would be sold at $6 for a total of $55. Oracle Retail Order Management does not differentiate between the price lists. Instead, it averages the final price between all of the hats, therefore all 10 hats are priced at $5.50 each for a total of $55. This may impact return processes, as in the above example, the return price of a hat would be $5.50 and not $5 or $6.

Payment Types

Payment Types are set up and configured using the Payment Processing setting and the Payment Types tab, which is described in the *Using Oracle Commerce Cloud Service* documentation. For information on Oracle Retail Order Management payment types, refer to the Oracle Retail Order Management documentation.

Shipping Methods

Oracle Retail Order Management uses shipping methods that are identified by unique integers. You can configure multiple shipping methods. For integration, Commerce Cloud shipping methods are mapped to Oracle Retail Order Management numeric shipping methods.

The shipping methods are sent to Oracle Retail Order Management during fulfillment. Commerce Cloud and Oracle Retail Order Management shipping methods should be synchronized. These mapping ensure that the orders created on Commerce Cloud refer to and use similar shipping method chosen by the customer for shipping.

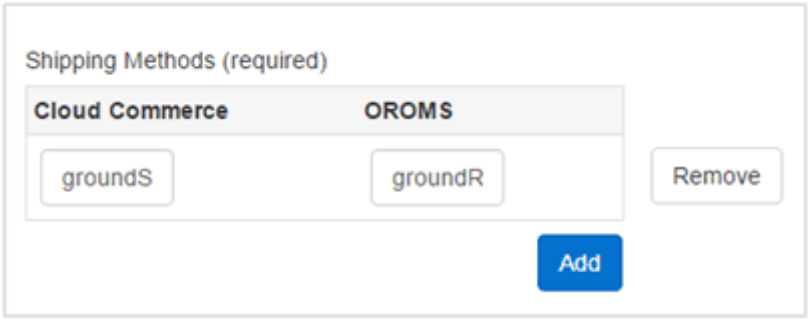
You can obtain a list of the shipping methods available by calling the following endpoint:

```
GET /ccadmin/v1/merchant/shippingMethods
```

This returns a list of available shipping methods. The response also includes information on each shipping method, and the repository ID of the shipping method. The repository ID identifies the shipping method code to use. The following example displays a partial response that identifies a ground shipping method:

```
"enabled": true,
"displaySequence": 0,
"eligibleForProductWithSurcharges": false,
"ranges": [
  {
    "amount": 4.75,
    "high": 14.99,
    "low": 0,
    "repositoryId": "groundRange1"
  }
```

Once you have obtained the repository ID, use it to map the shipping method:



Shipping methods are set up and configured using the Shipping Methods setting, which is described in *Using Oracle Commerce Cloud Service*. For information for integrating with external shipping systems, refer to *Extending Oracle Commerce Cloud Service*. For information on Oracle Retail Order Management shipping methods, refer to the Oracle Retail Order Management documentation.

External Shipping Methods

Commerce Cloud supports external shipping methods. However, these shipping methods may not be available in the list of shipping methods displayed in the administration interface when configuring your Oracle Retail Order Management integration. To use the shipping methods for your external system you must add them to the Shipping Methods mapping table.

Once all of the integration parameters have been configured and saved, the integration process can occur.