Integrating Oracle CX Commerce and Oracle Order Management Cloud





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Introduction

Oracle CX Commerce and Oracle Order Management Cloud can be combined through Oracle Integration Cloud to provide a robust architecture for capturing and fulfilling orders placed in your online store.

Oracle CX Commerce is an industry-leading commerce platform re-designed for the modern cloud. Oracle Order Management Cloud is tightly integrated with Oracle Global Order Promising Cloud. It can improve order handling across the order-to-cash process. Pre-integration, centrally-managed orchestration policies, global availability, and fulfillment monitoring can lead to increased customer satisfaction and order profitability.

This document describes how to integrate these two services.

Audience

This document is written for Commerce and Order Management Cloud administrators who are setting up and configuring the integration between these two systems.

Readers of this document should have experience with both Commerce and Order Management Cloud. See Additional documentation for links to comprehensive information on these services.

Features

The integration of Commerce with Order Management Cloud combines the capabilities of these two services into a single solution.

This solution provides support for the following:

- Pushing completed Commerce orders to Order Management Cloud for fulfillment.
- Retrieving and updating the status of the order from Oracle Order Management in Commerce real time for the orders created using Commerce.
- Furnishing returns and exchanges created on Commerce to Order Management Cloud for fulfillment.
- Retrieving the status of the returns from Order Management into Commerce.

The default integration assumes that the orders and returns are created using Commerce channels.

Architectural overview

The message flow of business entities from Commerce to Order Management Cloud happens through Oracle Integration Cloud.

Commerce includes an Oracle Integration Cloud adapter (the Commerce adapter) that is used for the integration. The Order Management Cloud part of the integration uses

the generic SOAP adapter of Oracle Integration Cloud to manage the integration. Data from the Commerce store is transmitted using webhooks through Oracle Integration Cloud to reach Order Management Cloud. The data from Order Management Cloud reaches Commerce through Oracle Integration Cloud as well.

Additional documentation

For information about Commerce, and the Oracle Order Management Cloud, refer to the following Oracle Help Center pages:

Oracle CX Commerce documentation: First Steps.

Documentation of Oracle Order Management Cloud is available through Oracle Applications Help: Oracle Order Management Cloud documentation.

For information about Oracle Integration Cloud and the Commerce adapter, refer to Using the Oracle CX Commerce Adapter in the Oracle Help Center at this URL: Getting Started with the Oracle CX Commerce Adapter.



Prerequisites

Prerequisites for a successful integration include specific access rights to both systems. In addition, certain assumptions exist about the way each service is used.

This section provides details about the prerequisites.

Access rights

To configure this integration, you need administrator access to the following systems:

- The Oracle CX Commerce administration interface, which enables you to configure the webhook settings.
- Oracle Integration Cloud, which enables you to map the attributes between Commerce and Order Management Cloud. Note that in earlier releases, Oracle Integration Cloud is referred to as Integration Cloud Service (ICS). The instructions in this guide, as well as the integration itself, apply to both cases.
- Order Management Cloud, which enables you to set up the fulfillment and configure the products and the activities associated with fulfillment.

Assumptions

This integration makes the following functional assumptions:

- Orders can be created only on Commerce channels. Orders created on noncommerce channels are not within the scope of this integration.
- The Returns and exchange orders are initiated from Commerce. The cases where the returns and exchanges are created on Order Management Cloud are not synched back to Commerce.
- Commerce does not capture any credit card settlement information. It is assumed that the merchant updates the card settlement information about Commerce.
- Purchase Order status payment groups are updated as settled/No Pending Action after the payment processing is complete.
- The inventory and product SKU information is assumed to be in synch across both the systems.
- Commerce acts as the pricing and the promotions engine.
- The tax calculation for an order is performed in Commerce.
- The scope of this integration is restricted to simple products. Configurable products are out of its scope.

This integration is extensible: additional attributes can be mapped on both systems without interfering with the merchant's use cases.



Configure Oracle CX Commerce

The integration is configured on the Commerce side by setting up specific web APIs to use Oracle Integration Cloud endpoints.

Web APIs enable you to subscribe to events for your products and orders by creating webhooks that push notifications to a specified URL. (For additional information about webhooks, see Use Webhooks.)

You update the Commerce web APIs through the administration interface to use the appropriate Oracle Integration Cloud endpoints. The web APIs send order information to Oracle Integration Cloud, and the orders go to Order Management for fulfillment.

To ensure compliance with PCI requirements, Commerce uses a webhook for order submission (Order Submit without Payment Details) that discards credit card information and sends the rest of the Order to external systems. Use of the Order Submit without Payment Details webhook is recommended in cases where the merchant wants to send the token details of the credit card.

The topics in this section describe how to make the necessary changes to the Commerce web APIs.

Submit Order webhook

Configuring the Order Submission webhook makes the order information created in Commerce available to the Oracle Integration Cloud system.

To configure the Order Submit for Non-PCI Compliant Target Systems Event API, follow these steps:

- 1. In the Commerce administration interface, display the **Settings** page.
- 2. Select Web APIs and display the Webhook tab.
- Select the Order Submit without Payment Details event API.
- **4.** Provide the Oracle Integration Cloud URL that receives the order message. Include the server name and port used.
- 5. Provide a user name and password for accessing the server.
- 6. Click Save.

Return Order webhook

Configuring the Return Request Update for Non-PCI Compliant Target Systems event API displays the returns workflow.

To configure the Return Request Update for Non-PCI Compliant Target Systems event API, follow these steps:

- 1. In the Commerce administration interface, display the **Settings** page.
- 2. Select **Web APIs** and display the **Webhook** tab.



- 3. Select the Return Request Update without Payment Details event API.
- **4.** Provide the Oracle Integration Cloud URL that receives the order message. Include the server name and port used.
- **5**. Provide a user name and password for accessing the server.
- 6. Click Save.



Configure the Oracle Integration Cloud Adapter

The integration mappings and the associated files you configure for Oracle Integration Cloud are available in the form of packages. These packages are ready for you to use as soon as they are imported into the Oracle Integration Cloud infrastructure.

The Commerce team already has a Commerce adapter available for Oracle Integration Cloud. The generic SOAP adapter is a generic adapter provided by Oracle Integration Cloud for processing the SOAP-based messages. This adapter is used when Order Management Cloud sends messages in SOAP format.

The integration package, OracleCommerce-

OrderManagementIntegration.par, is available on My Oracle Support. The contents of this package are described in the sections that follow.

Connections

The integration package includes the required connections for the servers and events used by the integration.

- Oracle CX Commerce: The connection to the Commerce admin server
- Oracle CX Commerce Agent: The connection to Commerce agent server
- Oracle Order Management Cloud: The connection to Order Management Order synch service
- Oracle Order Management Cloud Events: The connection to Order Management events
- Oracle Order Management Cloud Order Information Service: The connection to the Order Management order retrieval service

Lookup configuration

The mappings for the return status, carrier information, and shipping information are updated as part of the lookup configuration.

You should modify these as required and as configured in your order management system. Refer to the integration settings to view the lookups used.

Integrations

The package includes integrations for order synch, return synch, and order and return status synch.

- Order synch from Commerceto Order Management
- Return synch from Commerce to Order Management

Order and Return status synch from Order Management to Commerce

Unpack the OracleCommerce-OrderManagementIntegration.par package. It unpacks into three inventory archives (IARs). Unpack each IAR and update the constants as shown in the following sections. Update the following constants for order synch from Commerce to the Order Management flow and import using the Oracle Integration Cloud mapper in Oracle Integration Cloud.

XSL location

XSL location is described in the following section.

Update the following constant for the return synch from Commerce to the Order Management flow and import using the Oracle Integration Cloud mapper in Oracle Integration Cloud.

```
<Unpacked
```



Note: The connection details that come as part of the integration package are empty. You provide the details of the connections and test them. You can then enable the integration.



Configure Order Management Cloud

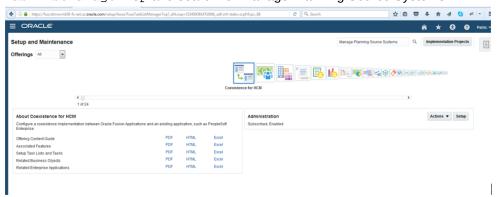
Configuring Order Management Cloud for the integration involves creating the source system, the default rules, the orchestration process, and the required connectors.

The topics in this section describe how to perform these Order Management Cloud configuration tasks.

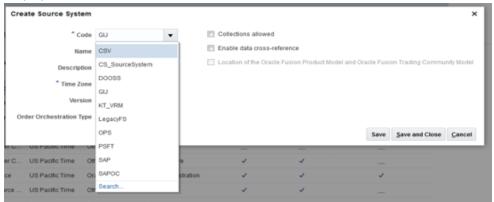
Create the source system

This section describes the steps you follow to create a source system for the integration.

1. Go to the FSM link https://example.com/setup/faces/ TaskListManagerTop and search for Manage Planning Source Systems.

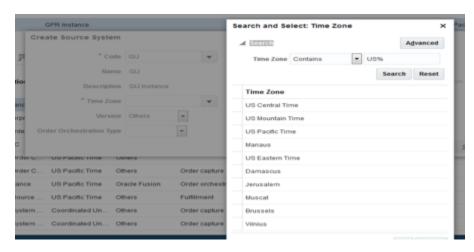


2. Display the Actions tab.

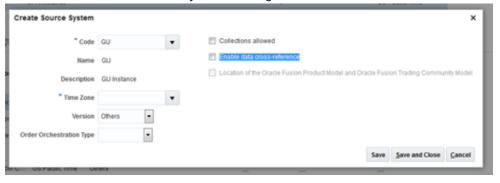


- Create a source system for Commerce. If necessary, create a new code entry for Commerce.
- 4. Select the time zone as required.

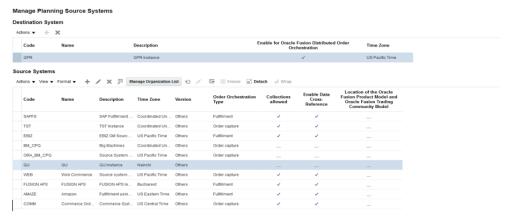




Disable the cross-references between Commerce and Order Management as the cross-references are handled by Oracle Integration Cloud.



6. When you have finished entering the setup details, the final screen for the source system appears:



Create defaulting rules

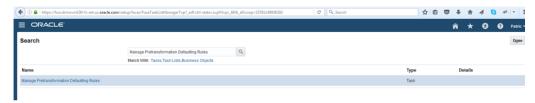
Defaulting rules must be created for this integration in the Order Management system to ensure that the shipping and scheduling rules cover Commerce as a channel.

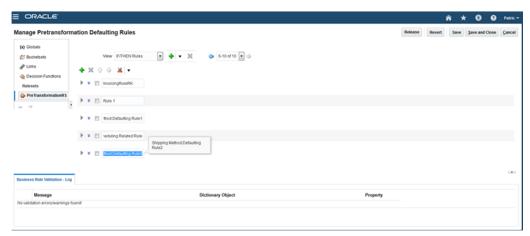
The following rules must be defined:

- Shipping Method Defaulting Rule1
- Scheduling Related Rule



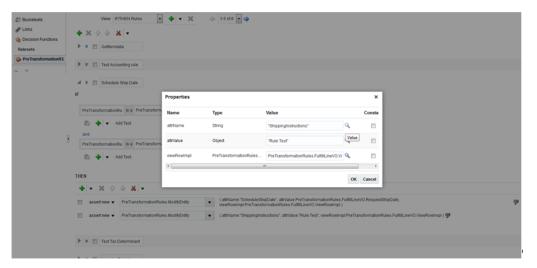
Shipping Method Defaulting Rule2





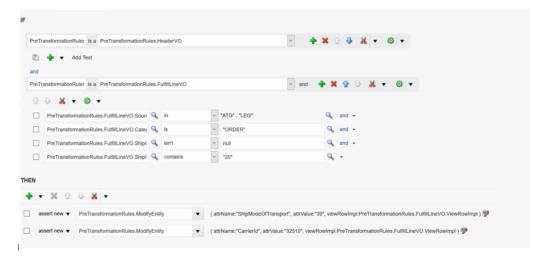
Note: Ideas for rules to create are provided here; you can configure these as necessary for your business requirements.

This process ensures that the shipping and scheduling rules cover Commerce as a channel.





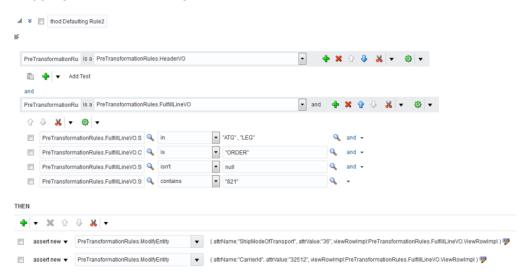
Shipping Method Defaulting Rule1



Scheduling Related Rule



Shipping Method Defaulting Rule2



Create the orchestration process

This topic describes how to create the orchestration process for the integration.

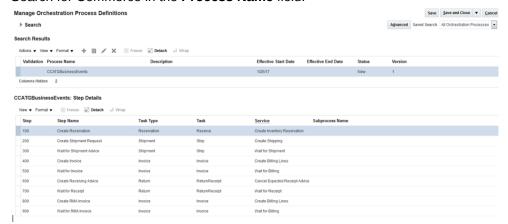


1. Go to the FSM link https://example.com/setup/faces/ TaskListManagerTop and create the orchestration process:





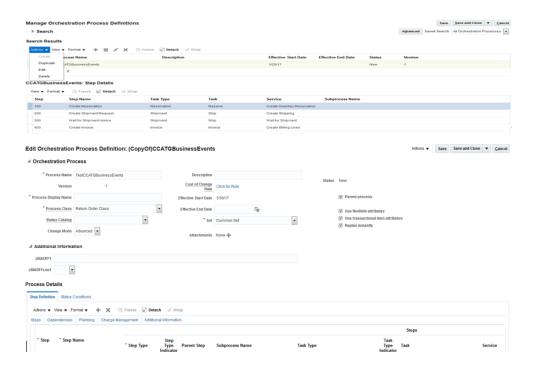
2. Search for Commerce in the Process Name field.



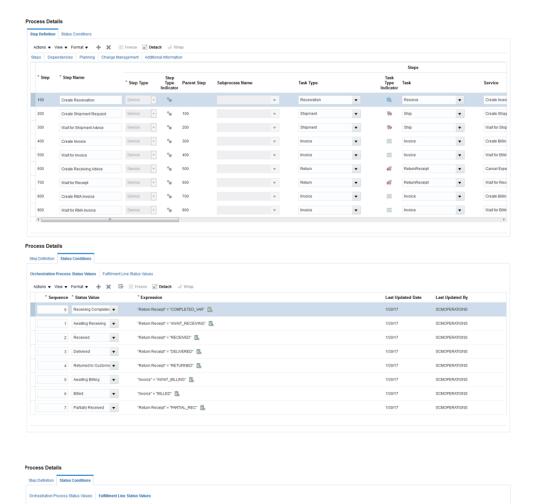
A predefined process, CCATGBusinessEvents, appears.

The process can be created if necessary.

The following screens show the orchestration details:







3. Click Edit Status Rule Set.

* Fulfillment Line Status
Category

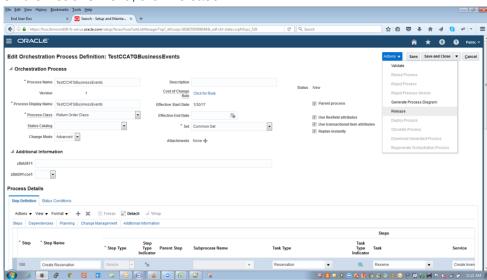
* Description



Status Rule Set

Edit Status Rule Set

4. Save the details.

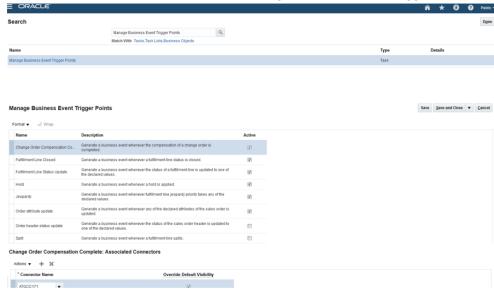


On the Actions menu, click Release.

Create the connector

Creating a connector with the Oracle Integration Cloud URL is a required step for the integration.

 Go to the FSM link https://example.com/setup/faces/ TaskListManagerTop and search for Manage Business Event Trigger Points.



2. Ensure that the fulfillment tabs are enabled.

Change Order Compensation Complete: Associated Connectors

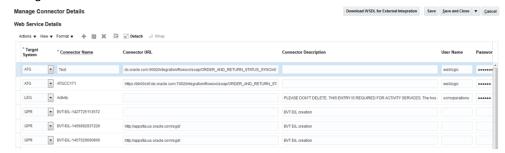




3. Pick the connector to enable.



4. Create a name for the connector and provide the Oracle Integration Cloud integration details in the connector URL.



5. Verify.





Order creation

Order creation in Commerce requires no change in the functional flow with respect to this integration. In general, orders created in Commerce are sent to Order Management Cloud for fulfillment. Several special cases are listed in this section.

The mechanism used to send the orders created in Commerce is webhooks.

Note: Commerce provides a remorse period during which shoppers can edit their orders. The orders are sent to Order Management Cloud for fulfillment as soon as the remorse period ends.

SKUs

Commerce supports simple SKUs. It can also support configurable SKUs through an integration with Oracle CPQ.

As part of this integration, simple SKUs are sent to the fulfillment system. Configurable SKUs are not sent to the integration workflows. However, configurable SKUs are available to the webhook and can map to Order Management Cloud attributes if required. A separate integration exists for Oracle CPQ and Order Management Cloud.

Payment

Order pricing and payment authorization happen in Oracle CX Commerce. The payment attributes are not mapped to any attribute in Order Management Cloud because the order management system does not need the payment information for fulfillment. With account-based (B2B) shopping, the order does have a purchase order number that is passed on to the order management system.

Note: The scope of this integration is restricted to Order Management Cloud. Other Oracle services can perform additional order processing. For example, Order Management Cloud can integrate with Account Receivables post fulfillment; this functionality is outside the scope of this integration.

Commerce currently expects the payment capture information to be updated by an external system. This assumption holds true for this integration as well. The order payment is authorized by Commerce via the payment gateways before the order is sent to Order Management for fulfillment.

It is recommended that you verify that the order is ready to be shipped in Order Management and capture the money against the authorization. This can be done by integrating with the payment gateways and sending the updated status back to Commerce as captured/settled. The payment group status would have to be updated once the transaction is captured in the Commerce repository. This status unavailability hinders return processing against an order.



Order types

Orders in Commerce can be placed for consumer-based (B2C) and account-based (B2B) shopping.

These orders, when triggered from Commerce, need to be fed to the order management system. This integration handles both types of order and maps the attributes of Commerce and Order Management Cloud accordingly.

Pricing and tax

Pricing and tax calculations are done in Commerce and the order is passed to the order management system. The orders created in Order Management Cloud are not synched into Commerce.

The order creation integration workflow can pass the order created in Commerce to Order Management Cloud for fulfillment using the Order Submit without Payment Details webhook, which is triggered after the remorse period in Commerce.

Shipping methods

Commerce shipping methods are mapped to Oracle Order Management Cloud shipping methods. The mappings are made using the Lookup service of Oracle Integration Cloud.

The shipping methods are sent to Order Management Cloud as part of order creation. If you create a new shipping method in Commerce, map it to a shipping method in Order Management Cloud. These mappings ensure that the orders created in Oracle CX Commerce always use the shipping method chosen by the customer.

Shipping methods are creating in the Shipping Methods tab, which is described in Work with accounts. For information about Order Management Cloud shipping methods, refer to the Oracle Order Management Cloud documentation.

Mapping of attributes

The attribute mapping of Commerce and Order Management Cloud is done through Oracle Integration Cloud. There could be some additional processing that is needed on the attributes before pushing the order to Order Management Cloud.

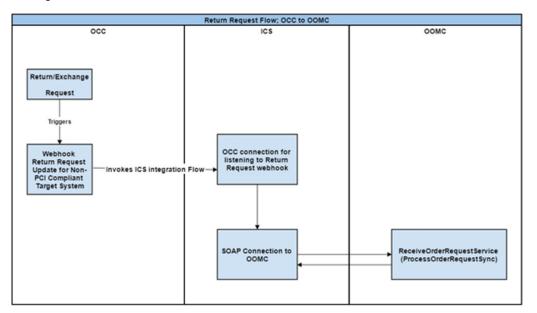
This additional processing of attributes can be can be built into the integration layer without a need to modify Commerce. You can build an XSLT which acts on top of the Oracle Integration Cloud UI and provides additional flexibility. A sample XSLT is also provided as part of the integration package. The XSLT can be uploaded into any integration in Oracle Integration Cloud as soon as the integration has been deactivated.

The location of the XSLT for order

creation is ICSpackage9a47f2ae-5f90-4cf7-a87f-cb612dda70d1.iar/ icspackage/project/ORDE_SYNC_FROM_COMM_TO_ORDE_MGMT_01.00.0000/ resources/processor_859/resourcegroup_755/ req_19fd482efc0a4728b838273aec72b649.xsl.



The following figure illustrates the order creation workflow from Commerce to Order Management Cloud:





Order Status

The status of an order is updated in Commerce by Order Management Cloud. Order Management Cloud provides notifications on the status changes of the order.

As part of this integration, the shipment group status is updated for the order as No Pending Action as soon as the shipment is closed in Order Management. The tracking details of the order are also updated in Commerce as and when they are available in Order Management. The payment group status for the order is set to Authorized.

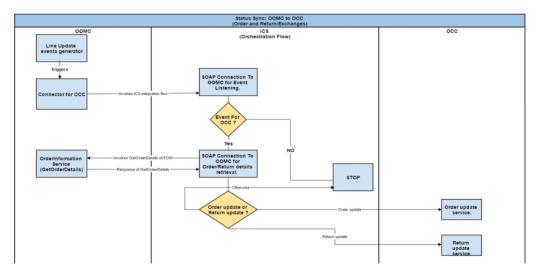
The order in Commerce is set to Submitted for fulfillment. You should update the payment group status details based on your integrations with payment gateways or using the capabilities of products such as Oracle Fusion Payments.

Map attributes for order status

The following is the location of the XSL

transformation: icspackage58e6510b-1e7f-491e-903c-bc59e1062bfc.iar/
icspackage/project/ORDER_AND_RETURN_STATUS_SYNC_01.00.0000/
resources/processor_837/resourcegroup_173/
req f7ald4886a4b4ca3935231d5421b27ec.xs1

The following diagram illustrates the status workflow:



Returns

The returns created in Commerce are passed to Order Management Cloud for fulfillment.

Note: All the prerequisites needed for submitting a return on Commerce are valid for this integration.

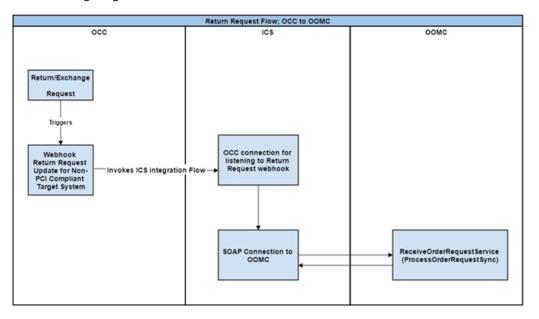
As soon as a return is created by Commerce, a new endpoint is created for processing the return and submitting the return order to Order Management Cloud. Because the reason code is mandatory when the return is created in Order Management Cloud, as part of the return submission process, the disposition code of Commerce is mapped to Return with Refund.

As soon as the return is processed by the Order Management Cloud, the disposition code is updated with the correct value as sent by Order Management Cloud.

Map attributes for returns

The following is the location of the XSL transformation for order returns: icspackage58e6510b-1e7f-491e-903c-bc59e1062bfc.iar/icspackage/project/ORDER_AND_RETURN_STATUS_SYNC_01.00.0000/resources/processor_943/resourcegroup_124/req_52e0e60451ef4c66931157e8ea6172ad.xsl

The following diagram illustrates the workflow for returns:





Exchanges

This topic describes exchange processing for this integration.

- The exchange request is created along with a new order for the exchange.
- The exchange and the order are submitted to Order Management Cloud as part of this integration.
- The exchange request is submitted to Order Management Cloud for receiving the goods.
- When the status of the exchange is set to Received, the new order created as part of the exchange is submitted to Order Management Cloud for fulfillment.

The flows for the return and the order creation are the same as described in the previous sections. The order is submitted to Order Management only when the return information is available in Commerce. The flows for the exchange are the same as previously described.



Glossary



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