

**Oracle® Communications Order and Service  
Management**

Order Management Web Client User's Guide

Release 7.3

**E49160-02**

July 2016

Oracle Communications Order and Service Management Order Management Web Client User's Guide,  
Release 7.3

E49160-02

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# Preface

This document provides information about using the Oracle Communications Order and Service Management (OSM) Order Management web client. The Order Management web client is one of two OSM client applications that you use for different purposes:

- Use the Order Management web client (this application) do the following:
  - Display an order’s orchestration plan, including dependencies, orchestration stages, order components, order items, and processes. Displaying the orchestration plan is useful for developers who are modeling orders and need to see relationships between order items. You can also perform some order management tasks, such as suspending and resuming orders, cancelling orders, and managing fallout
  - Administer workgroups, manage notifications and system errors, and refresh the server cache.
- Use the Task web client to monitor and manage the tasks in an order. This application is typically used by order processing personnel to ensure that all the tasks are completed. It is also used by order fallout managers. You can also suspend and resume orders, cancel orders, and create orders manually. See *OSM Task Web Client User’s Guide* for information about using that application.

See *OSM Concepts* for more information about OSM in general and about the purposes of the two clients.

## Audience

This document is intended for the following audiences:

- Fallout administrators responsible for locating orders with errors, determining the causes of failures, and taking the necessary corrective actions.
- Operations and management personnel who monitor the progress of orders.
- Orchestration plan designers. Designers can use this application to test and validate orchestration-based orders during the planning and implementation of OSM solutions.
- System administrators who are responsible for managing workgroups, notifications, and system errors.

## Related Documents

See the following related documents:

- *OSM Concepts*
- *OSM Task Web Client User's Guide*

## Accessing Oracle Communications Documentation

OSM documentation and additional Oracle documentation (such as database and WebLogic Server documentation) is available from the Oracle Help Center website:

<http://docs.oracle.com>

## Documentation Accessibility

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<http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>.

### Access to Oracle Support

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<http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info> or visit

<http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs> if you are hearing impaired.

## Document Revision History

The following table lists the revision history for this guide.

Version	Date	Description
E49160-02	June 2016	Added content for OSM 7.3.0.1 to <a href="#">Chapter 7</a> . Made minor edits to other chapters.
E49160-01	July 2015	Initial version.

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# Getting Started

This chapter introduces the Oracle Communications Order and Service Management (OSM) Order Management web client. It provides an overview, instructions about starting the application, and information about user interface features.

## About the Order Management Web Client

The Order Management web client enables you to perform both order management and administration tasks.

You can perform the following order management tasks:

- **Manage Orders:** Links to the order management capabilities of the application. See "[About Managing Orders](#)" for more information.
- **View Faults:** Links to the fault viewing capabilities. See "[Finding Faults](#)" for more information.
- **Manage Tasks:** Opens the OSM Task web client. See *OSM Task Web Client User's Guide* for more information.

You can also perform the following administration tasks:

- **Administer Workgroups:** Links to workgroup administration capabilities. For more information, see the following sections:
  - [Managing Workgroups](#)
  - [Defining Workgroup Calendars](#)
- **Administer Users:** Links to user administration capabilities. See "[Managing Users](#)" for more information.
- **Manage Notifications:** Links to notification management capabilities. See "[Managing Notifications](#)" for more information.
- **Manage System Errors:** Links to notification management capabilities. See "[Managing System Errors](#)" for more information.
- **Refresh Server Cache:** Provides the ability to refresh the OSM server metadata cache. See "[Refreshing the Server Cache](#)" for more information.

The tasks to which you have access are determined by the permissions you have been granted. If you do not have access to a task you need, see your system administrator.

## About Managing Orders

You can perform many order management tasks in the Order Management web client. These include:

- Viewing information about the order, order items, and order components to see their progress and status. Included in this information are the orchestration plan and dependency graph, which is useful for seeing the relationships between order items and order components. See "[Viewing Order Details](#)" for more information.
- Changing the processing of an order, for example, suspending and resuming orders, canceling orders, and managing fallout. See "[Managing Orders](#)" for more information.
- Retrying or resolving failed tasks and viewing information about the relationships between original order items, transformed order items, and order components. See "[Managing Order Items and Order Components](#)" for more information.

For more information about orders, order states, order items, and order components, see *OSM Concepts*.

## Logging In to and Out of the Order Management Web Client

The Order Management web client is a web-based application that you open in a browser. For browser and version compatibility with the Order Management web client, see the discussion of software requirements in *OSM Installation Guide*.

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**Note:** If you try to open the Order Management web client in an unsupported browser, you may see an error message that incorrectly indicates support for a variety of browsers.

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For access to the Order Management web client, you need a user name and password provided by an OSM system administrator. The user name must be a member of the **OMS\_client** WebLogic group. To modify an order's priority or reference number, the user name must also be a member of a group associated with those functions. Order priority and reference number information is displayed as read-only if you are not a member of the appropriate group. See *OSM System Administrator's Guide* for information about setting up users and groups.

Ensure that your browser is *not* set to display the client using Compatibility View. For more information about Compatibility View, consult the documentation for your browser.

To avoid errors when accessing the Order Management web client:

- Clear your Internet cache before accessing the Order Management web client for the first time after an OSM upgrade
- Configure your browser to automatically check for newer versions of stored pages

## Logging In to the Order Management Web Client

To log into the Order Management web client:

1. In your web browser, enter the following URL:

```
http[s]://host:port/OrderManagement/orchestration
```

where:

- *host* is the IP address of the Oracle WebLogic server that hosts the Order Management web client
  - *port* is the Oracle WebLogic server's port number
2. In the **Username** field, enter your user name.
  3. In the **Password** field, enter your password.
  4. Click **Login**.

The Order Management web client opens, displaying the Search page.

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**Note:** To log in to the Order Management web client with multiple user accounts from the same browser, you must establish a new browser session for each user account. See the browser documentation for information about how to establish a new session.

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## Logging Out of the Order Management Web Client

To log out of the Order Management web client:

1. Click **Sign Out**.

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**Note:** Closing your browser or navigating to another URL does not log you out of the Order Management web client. However, after the predefined session timeout interval has passed, you are logged out automatically and any unsaved updates are lost. The default value for the session timeout interval is 45 minutes, but it can be set to a different value at installation or changed after installation by a system administrator.

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## Working with the Order Management Web Client Interface

When you open the Order Management web client, you see the Order Search page. You use this page to find orders based on criteria that you select. You can use predefined searches or create and save your own.

Orders that match your search criteria are displayed in the Results table below the Search area. In the Results table, you can select an order and open its Order Details page. See "[Finding Orders](#)" for detailed information.

The Order Details page provides comprehensive information about an order, including its structure, data, orchestration plan, dependencies, amendments, and activity. The page includes an Order Info area containing a hierarchical tree view of the order's structure and the Order Details page, containing tabs with information about the order. You can select entities in the Order Info tree to determine what information is displayed in the main area of the Order Details page. You can select the order itself to see information about the order as a whole, or you can select an order item or order component to see information about that specific entity. See "[Viewing Order Details](#)" for more information.

## Working with Different Kinds of Areas

The Order Management web client pages and tabs have different kinds of areas. Areas display a particular features or sets of data, often contained in a table. In many cases, areas include toolbars that you use to work with their content.

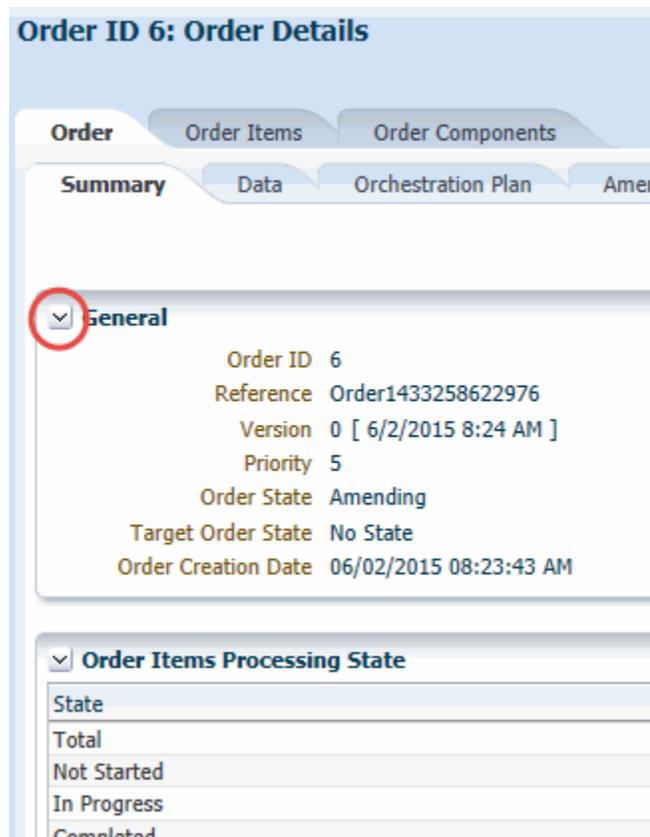
The primary difference between the types of areas is the method you use to change how much of the window they use. Most areas are expanded by default, but you can collapse them to save space. Following is the difference between the two types of areas:

- Type 1: The name of this type of area has an arrow before its name. For example, the **Order** tab, **Summary** subtab in the Order Details page includes a number of this type of areas. You can collapse some of them to make it possible to see others without scrolling.
- Type 2: This type of area has **Collapse Pane** and **Restore Pane** buttons (which are small arrow buttons) on one or more of its sides, which you can use to expand or collapse the area. You can also resize this type of area. For example, the **Order Items** tab has an area at the top that contains the order item hierarchy, and the **Details** area at the bottom that contains a set of subtabs.

### Collapsing and Expanding Areas with Arrows Before Their Names

To collapse this type of area, click the down arrow button next to the area name. The arrow to collapse the General area is circled in [Figure 1-1](#).

**Figure 1-1** Collapse Button for General Area



To expand this type of area, click the right arrow next to the area name of a collapsed area.

## Collapsing, Expanding, and Resizing Areas with Collapse Pane and Restore Pane Buttons

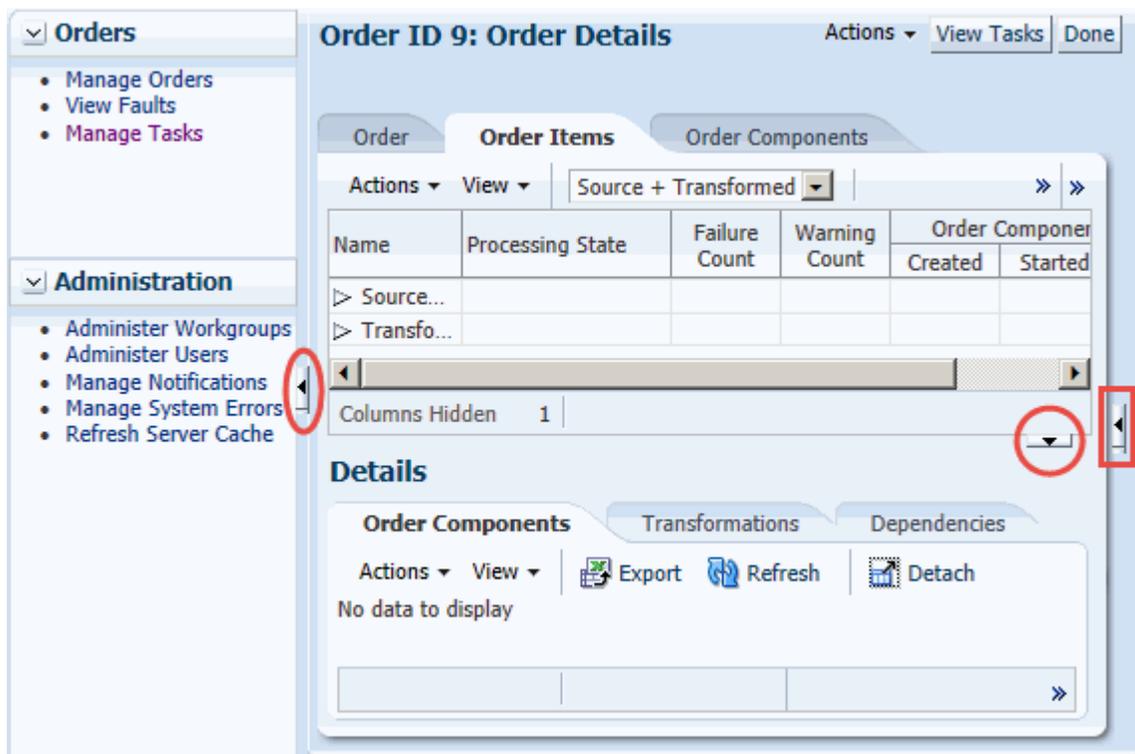
You can collapse (hide), expand (show), and resize these types of areas.

To expand or collapse an area of this type, click the area's **Collapse Pane** or **Restore Pane** button. The buttons look the same, with a small rectangle enclosing a triangle or arrow. If you hover over the button with your mouse, it will show you whether it is a **Collapse Pane** or a **Restore Pane** button. For vertically-oriented areas, the button is the middle of the vertical line that separates the area from other areas. For horizontally-oriented areas, the button is near the upper-right corner of the area. The direction of the arrow shows what the button will do.

In [Figure 1-2](#), the following **Collapse Pane** and **Restore Pane** buttons are marked:

- The **Collapse Pane** button on the left, enclosed in an oval, will collapse the left-most area if you click it, because the arrow is pointing left.
- The **Collapse Pane** button toward the right, enclosed in a circle, will collapse the Details area if you click it, because the arrow is pointing down.
- The **Restore Pane** button farthest on the right, enclosed in a rectangle, will expand an area that is currently hidden (the **Activity** area), because the arrow is pointing left and there is no area currently displayed to the right of the button.

**Figure 1-2** Order Details Window with Collapse Pane and Restore Pane Buttons



To resize an area of this type, click somewhere on the bar that contains the **Collapse Pane** or **Restore Pane** button (but not on the button itself), and drag the bar in the direction you would like.

## Working with Tables

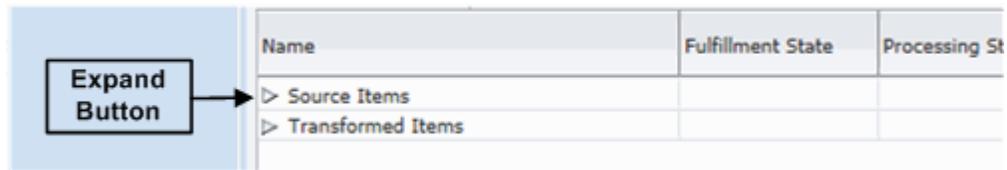
Much of the information presented in the Order Management web client is displayed in tables. These tables all have the same basic functionality, although not all features are available in all tables.

With the exception of column arrangements in the Results area of the Search page, which you can save along with searches, changes you make to tables are not maintained when you leave the current Order Details page. Tables display their default content each time you open a particular Order Details page. See "[Saving a Search](#)" for information about saving column arrangements in the Results area of the Search page.

### Getting More Information About Rows

Some tables, such as those listing dependencies and order activities, allow you to view additional information about a row. Tables with this feature include an **Expand** button to the left of the first column in each row, as illustrated in [Figure 1-3](#).

**Figure 1-3 Expand Buttons**



When you click an **Expand** button, the row expands to show additional information. You can view information about more than one row at the same time.

To get more information about a row in a table:

1. In a table, click the **Expand** button to the left of the first column in a row.  
Additional information is displayed below the row.
2. Click the **Expand** button again to hide the additional information.

### Refreshing Tables

Tables show information that is current as of the time when the page was opened. You can refresh most tables so that they display the latest information. Tables that can be refreshed include a **Refresh** button in their toolbars.

To refresh a table:

1. In the toolbar of a table, click the **Refresh** button.  
The latest information will be displayed in the table.

### Showing and Hiding Columns

By default, tables display all the columns that are available to them. You can change the default arrangement of columns so that only the columns you want are displayed.

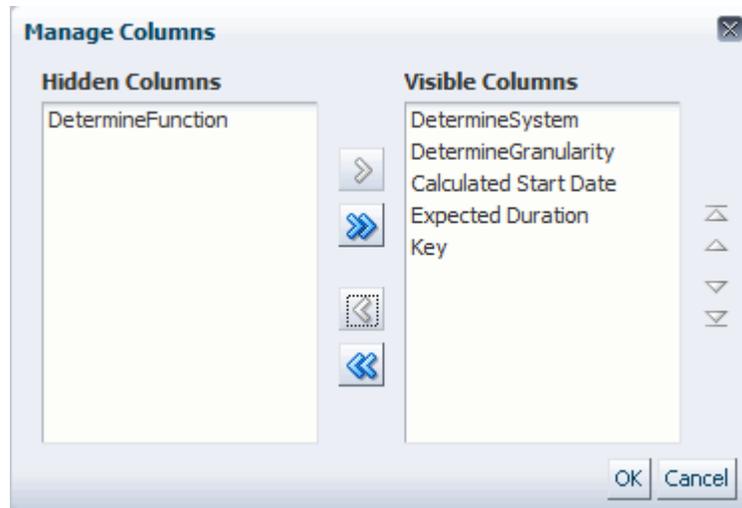
To show or hide table columns:

1. In the toolbar of the table, select **Columns** from the **View** menu.  
A submenu is displayed.
2. Do one of the following:

- To show all the available columns, select **Show All** from the submenu. The columns are displayed immediately.
- To show or hide that column, select or deselect the column name from the submenu. Your changes are visible immediately.
- To open a dialog box in which you can work with all available columns, select **Manage Columns** from the submenu.

The Manage Columns dialog box is displayed, as in [Figure 1-4](#).

**Figure 1-4** *Manage Columns Dialog Box*



3. Select columns in the **Hidden Columns** or **Visible Columns** list, then click the **Move** or **Remove** (single left or right arrow) button to transfer columns from one list to the other. Click the **Move All** or **Remove All** (double left or right arrow) button to transfer all columns.
4. (Optional) To change the column order, select columns in the **Visible Columns** list, then click the up or down arrow buttons to the right of the list.
5. Click **OK**.

The table displays the column arrangement that you specified.

### Reordering Table Columns

There are several ways to change the order of table columns. You can specify the order of columns while you are selecting which columns to display. See "[Showing and Hiding Columns](#)" for more information. You can also reorder columns by dragging them or by using the Reorder Columns dialog box.

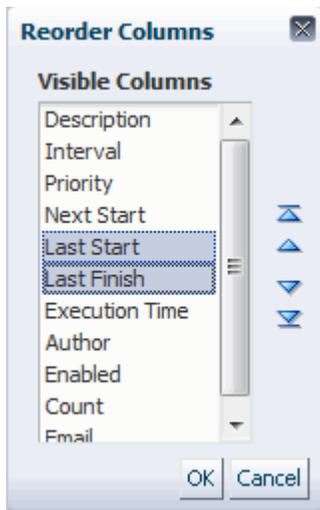
To reorder columns by dragging:

- Click the heading of a column you want to move, and drag it to a new location. The column is inserted into the new location and the surrounding columns move to accommodate it.

To reorder columns by using the Reorder Columns dialog box:

1. In the toolbar of the table, select **Reorder Columns** from the **View** menu.

The Reorder Columns dialog box is displayed, containing a list of the visible columns in the table, as in [Figure 1-5](#).

**Figure 1–5 The Reorder Columns Dialog Box**

2. From the **Visible Columns** list, select the columns and click the arrow buttons to the right of the list.
3. Click **OK**.

The table displays the column order you specified.

### Filtering Table Contents

Some tables allow you to filter data to display only rows that match criteria you specify. You can use two fields to enter filter criteria:

- The **Find** field allows you to enter criteria that are applied across all data in the table. Partial matches are allowed. For example, if you enter the letter **s** in the search field, the table is filtered to display all rows that contain that letter in any field.

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**Note:** The search value applies to all columns, even those that are not currently displayed. If you enter characters that are not present in any visible column but do exist in hidden columns, the rows with the matching hidden data are displayed.

---

- **Query By Example** fields are available for some columns. Criteria you enter in a **Query By Example** field apply only to that column. Unlike the **Find** field, **Query By Example** does not allow partial matches, but you can use **\*** as a wildcard. For example, to find the order component name **InitiateBillingFunction.BRM-VOIP.OrderGranularity** in a **Query By Example** field above a **Blocked Component** column, you must enter either the full order component name or appropriate characters and a wildcard, such as **Ini\***.

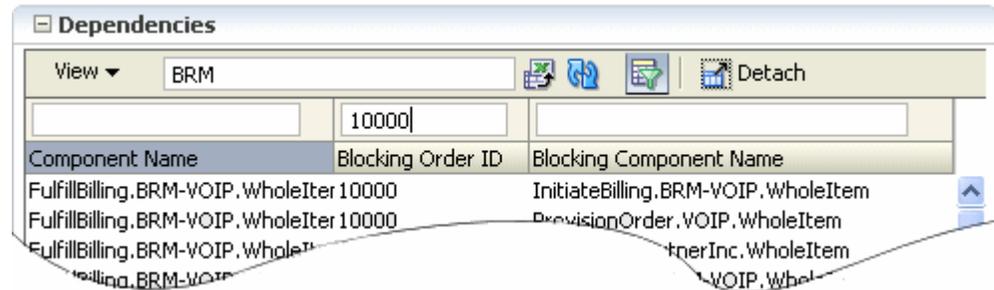
The **Find** field (if available for a table) is always displayed, but you must expose **Query By Example** fields before using them.

The **Find** and **Query By Example** fields work together. When you enter criteria in both, the table is filtered to show only rows that match all the criteria. For example, if you enter **BRM** in the **Find** field and **created** in the **Query By Example** field for the State column, the table is filtered to show only rows that include the string **BRM** somewhere in their data *and* have the state **created**.

You can also use one of the filtering methods without specifying criteria in the other.

Figure 1–6 shows a the search field with **BRM** as the criterion and a **Query By Example** field for the Blocking Order ID column with the value **10000**.

**Figure 1–6 Search and Query By Example Fields**



To filter table contents by using the **Find** field:

- In the toolbar of a table, enter filter criteria in the search field.  
The contents of the table are filtered as you type.

To filter table contents by using **Query By Example** fields:

1. In the toolbar of a table, click the **Query By Example** button.

Fields are displayed above the columns that are enabled for query-by-example filtering.

2. Enter criteria into one or more **Query By Example** fields.
3. Press the **Enter** key.

The contents of the table are filtered to show only rows that match the criteria you entered.

### Sorting Tables by Column Values

You can sort tables by the values in any of their columns.

To sort a table by column values:

1. Place the cursor in the column on which you want to sort.  
An upward-facing and a downward-facing triangle appear in the heading.
2. Click the downward-facing triangle to sort in descending alphanumeric order or the upward facing triangle to sort in ascending order.

The two triangles remain in the column, with the selected triangle highlighted.  
The table contents are sorted by the column you selected in the order you specified.

### Exporting Table Data

You can export data from some tables into Microsoft Excel-format (.xls) spreadsheet files. Only the currently visible data is exported. You can choose to save the file or open it in read-only mode.

To export table data:

1. In the toolbar of a table, click the **Export to Spreadsheet** button.

The standard browser dialog box for downloading files is displayed.

2. Open or save the file.

### Detaching Tables

You can detach some tables so that they are enlarged into windows that are displayed on top of the page. You can move the window, but you cannot work in other parts of the application when it is open.

This feature is useful if you want to see more rows in a table than are visible in the normal configuration.

To detach a table:

1. In the toolbar of a table, click the **Detach** button. Alternatively, select **Detach** from the **View** menu.

The table is detached from the rest of the page and is displayed as a window on top of the rest of the content.

2. When you are finished, close the window by clicking the **Close** button in the title bar.

The table is reattached to its previous location at its original size.

## Opening the Task Web Client

When you are using the Order Management web client to investigate an order's orchestration plan, it may be necessary to access and edit task-level data for the order in the Task web client. For example, when managing fallout, you must edit the task data of an orchestration order component so that the order can continue to process.

To open the Task web client from within the Order Management web client:

- In the Orders area of the left-hand area, click **Manage Tasks**.

The Task web client opens in a separate window.

To open the Task web client from within the Order Management web client:

1. On the Search page, search for the orchestration order.
2. In the Results area, open the order for which you want to work on a task of that order by doing one of the following:
  - Right-click on the order and select **Open Order**.
  - Double-click the order row.

The Order Details page is displayed.

3. Click the **View Tasks** button.

The Worklist page of the Task web client is displayed in a new window. The Worklist page is displayed in context for the order you selected and shows the tasks associated with the orchestration order.

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#### Notes:

- The **View Tasks** button is not visible for orders that have a status of Completed.
  - The Worklist displays only orders on which you are assigned to work (that you have privileges to edit).
- 
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**Tip:** You can use your web browser general settings to choose to display the Task web client on a new tab or display it in a new window.

4. Edit the tasks of the orchestration order in the Worklist as needed.  
For example, select a task to perform some action, and update or submit the task.
5. Close or exit the window and return to the Order Management web client.

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**Important:** Close or exit the window instead of logging out of the Task web client. Logging out of one web client automatically logs you out of the other web client.

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6. If you edited data in the Task web client, refresh the information in the Order Management web client to see the data updates.



## Finding Orders

This chapter explains the search features of the Oracle Communications Order and Service Management (OSM) Order Management web client. It includes information about performing searches and about viewing search results.

### About Searching for Orders

The Order Management web client includes features that enable you to find orders by using a variety of criteria. When you first open it, the application displays the Order Search page.

You can select predefined search or create a customized search by changing the criteria and adding or removing fields. You can save customized searches so that you can use them again. See "Saving a Search."

Figure 2-1 illustrates the Search page and some of its features.

Figure 2-1 Search Page

The screenshot shows the search interface with the following elements:

- Search Criteria:** Includes a dropdown for "Choose from predefined and saved searches", radio buttons for "Match" (All/Any), and input fields for "Order State" (set to "All") and "Has Failure" (set to "Yes").
- Buttons:** "Search", "Reset", "Save...", and "Add Fields".
- Results Section:** Includes "Actions", "View", "Export", "Open Order", and "Detach" options.
- Results Table:** A table with columns: Order ID, Ref. #, Namespace, Version, Process, and Order Type. It contains six rows of search results.

Order ID	Ref. #	Namespace	Version	Process	Order Type
6	Order1433258622...	OsmCentralOMExa...	4.0.0.0.0	BillingSI	OsmCentralOMExa...
9	Order1433258722...	OsmCentralOMExa...	4.0.0.0.0	Customer System SI	OsmCentralOMExa...
11	Order1433258833...	OsmCentralOMExa...	4.0.0.0.0	BillingSI	OsmCentralOMExa...
13	Order1433258919...	OsmCentralOMExa...	4.0.0.0.0	BillingSI	OsmCentralOMExa...
17	Order1433259065...	OsmCentralOMExa...	4.0.0.0.0	CollectionsSI	OsmCentralOMExa...
19	Order1433258191...	OsmCentralOMExa...	4.0.0.0.0	Creation Process	OsmCentralOMExa...

## Searching for Orders

To search for orders:

1. Click **Manage Orders** in the Orders area if the search screen is not already displayed.
2. If you want to use a predefined or saved search other than the default, from the **Saved Search** list, select the search you want to use. The following predefined searches are provided:
  - **Minimal Fields:** Includes search criteria for a limited set of fields, including order ID, reference number, namespace, and type.
  - **Failed Orders:** Finds all orders in the **Failed** state. This is the default search until you specify another as the default. See "[Saving a Search](#)" for more information.
  - **All Fields:** Includes search criteria for all available fields, including the standard fields applicable to all orders with orchestration plans as well as any custom fields defined for a particular orchestration plan.

If the search you selected is configured to run automatically, it runs automatically when you select it, and you are finished searching unless you want to customize the search.

3. If you would like to change the fields used as search criteria, do any of the following:
  - To add a field, from the **Add Fields** list in the Search area, select a field that you want to include.  
The field is displayed in the Search area, along with one or more search operators.
  - To remove a field, in the Search area, click the red **X** to the right of the field you want to remove.  
The field and its operator are removed.
  - To reset the fields to the way they are in the saved search, in the Search area, click the Reset button.  
The Search area is restored to its last-saved arrangement of fields and operators.

For more information about the available fields, see "[Available Search Fields](#)."

4. If you would to enter search criteria in any of the fields, enter the data and select the appropriate operators. See "[Entering Search Criteria](#)" for more information.
5. Click the **Search** button.

The Order Management web client displays the orders that match your search in the Results area.

Note that when the expected start date for an order is in bold, this indicates that the order is a **future-dated order**. A future-dated order is an order that will be processed at a future date. OSM displays regular orders in normal font.

## Available Search Fields

There is a predefined list of search fields that you can add to your query. In addition to these predefined fields, you can also search based on any flexible headers that have been defined in the cartridge for the order.

Table 2–1 contains a list of the predefined search fields.

**Table 2–1 Predefined Search Fields**

Column	Description
Completed Date	The date when the order was completed. In the <b>from</b> and <b>to</b> calendar fields, enter a date range on which you want to query (only available in Query).
Execution Mode	The execution mode of the task. Available values are Do (In Amending), Do, Redo, Undo, Do in Fallout (In Amending), Do in Fallout, Redo in Fallout, and Undo in Fallout.
Expected Duration	<p>The amount of time the order is expected to take to complete processing. Use the following search string format for a query:</p> <p><b>P</b>days<b>D</b>T<b>hours</b><b>H</b>minutes<b>M</b>seconds<b>S</b></p> <p>When specifying hours, minutes, or seconds, you must use the <b>T</b> as part of the value. For example:</p> <ul style="list-style-type: none"> <li>■ PT8H - eight hours.</li> <li>■ PT8H4M - eight hours, four minutes.</li> <li>■ PT4M - four minutes.</li> <li>■ PT8H6S - eight hours, six seconds.</li> <li>■ P9DT8H - nine days, eight hours.</li> <li>■ P9D - nine days (no hours/minutes/seconds, so no <b>T</b> is required).</li> <li>■ PT0S, P0D, PT0H0M - zero duration.</li> </ul> <p>The following are not valid:</p> <ul style="list-style-type: none"> <li>■ P8H - intended to be eight hours, but <b>T</b> is missing.</li> <li>■ P9D8H - intended to be nine days, eight hours, but <b>T</b> is missing.</li> </ul> <p>In the <b>from</b> and <b>to</b> fields, enter a duration range on which you want to query</p>
Expected Grace Period Completion	The date when the grace period is expected to be completed. In the <b>from</b> and <b>to</b> calendar fields, enter a date range on which you want to query.
Expected Order Completion Date	<p>The date when the order is expected to be completed. This is calculated as follows:</p> <ul style="list-style-type: none"> <li>■ If OSM receives the order after the expected start date, the expected order completion date is the expected duration added to the order creation date.</li> <li>■ If OSM receives the order before the expected start date, or if it has no expected start date because it is a process-based order, the expected order completion date is the expected duration added to the expected start date.</li> </ul> <p>In the <b>from</b> and <b>to</b> calendar fields, enter a date range on which you want to query.</p>
Expected Start Date	The date when the order is expected to start processing. In the <b>from</b> and <b>to</b> calendar fields, enter a date range on which you want to query.
Has Failure	Whether the order contains one or more tasks in a failed state. This may or may not be the current task.
Namespace	Namespace of the order.
Order Creation Date	The date when the order was created. In the <b>from</b> and <b>to</b> calendar fields, enter a date range on which you want to query.

**Table 2–1 (Cont.) Predefined Search Fields**

<b>Column</b>	<b>Description</b>
<b>Order ID</b>	Unique system-generated order identifier. In the <b>from</b> and <b>to</b> fields, enter a range of order IDs on which you want to query. Only integers and wildcards are valid.
<b>Order State</b>	The state of the order. Available values are Aborted, Waiting for Revision, Waiting, Amending, Cancelled, Cancelling, Completed, Failed, In Progress, Not Started, and Suspended.
<b>Order Type</b>	The target order type, such as OsmCustomerOMExampleOrder, OsmServiceOMExampleOrder, and so on.
<b>Priority</b>	The priority of the order. In the <b>from</b> and <b>to</b> fields, enter a range of values from <b>0</b> (minimum) to <b>9</b> (maximum).
<b>Process</b>	The order process.
<b>Process Status</b>	All the built-in and user-defined statuses are listed here. The built-in statuses are Back, Cancel, Delete, False, Finish, N/A, Next, Submit, and True.
<b>Ref. #</b>	The reference number of the order.
<b>Requested Delivery Date</b>	The date by which the customer requests delivery of the order.
<b>Source</b>	Source of the order (typically the same as the order type).
<b>Target Order State</b>	The target state of the order. Available values are Aborted, Waiting for Revision, Amending, Cancelled, Cancelling, Completed, Failed, In Progress, Not Started, and Suspended.
<b>Type Order</b>	The action associated with the order, such as Add, Delete, and so on.
<b>Version</b>	Version of the order.

## Entering Search Criteria

You search for orders by entering a value or range of values for a field and then selecting a search operator. For example, **Priority** is a numeric field. You can select from the listed operators and then enter a value. (If you select the **Between** operator, an additional field is added for a second value.)

The operators available for a search field depend on the type of data the field stores. [Table 2–2](#) lists the search operators for the various field types.

**Table 2–2 Field Types and Available Search Operators**

<b>Field Type</b>	<b>Available Search Operators</b>
Currency	<b>Equals</b> (default), <b>Between</b> , <b>Less Than Equals</b>
Date	<b>On or Before</b> , <b>On or After</b> (default), <b>Between</b>
Numeric	<b>Equals</b> (default), <b>Between</b> , <b>Less Than Equals</b>
Phone	<b>Starts With</b> , <b>Ends With</b> , <b>Equals</b> (default), <b>Contains</b>
Text	<b>Starts With</b> , <b>Ends With</b> , <b>Equals</b> (default), <b>Contains</b> , <b>Like</b>
List	No operator displayed. Select a value in the list.

**Table 2–2 (Cont.) Field Types and Available Search Operators**

Field Type	Available Search Operators
Duration	<p><b>Greater Than Equals</b> (default), <b>Between</b>, <b>Less Than Equals</b>. Format is:</p> <p>P[daysD] [T[hoursH] [minutesM] [secondsS]]</p> <p>When specifying hours, minutes, or seconds, you must use the 'T' as part of the value. For example:</p> <p>PT8H - eight hours. PT8H4M - eight hours, four minutes. PT4M - four minutes. PT8H6S - eight hours, six seconds. P9DT8H - nine days, eight hours. P9D - nine days (no hours/minutes/seconds, so no 'T' required). PT0S, P0D, PT0H0M - zero duration.</p> <p>The following are not valid:</p> <p>P8H - intended to be eight hours, but 'T' is missing. P9D8H - intended to be nine days, eight hours, but once again 'T' is missing.</p>

## Working with Saved Searches

When you have configured search criteria and selected the fields that you want to see in the results (see "[Searching for Orders](#)" for more information), you can save the search to be used later.

### Saving a Search

You can save a search so that you can reuse it. A saved search includes fields and search operators. Saved searches are available only to the users who created them.

To save a search:

1. In the Search area, click the **Save** button.  
The Create Saved Search dialog box is displayed.
2. Enter a name for the search. This is the name that will appear in the **Saved Searches** list.
3. (Optional) Select one or more of the options displayed in the dialog box:
  - **Set as Default:** Configures the search to appear when you open the Order Management web client.
  - **Run Automatically:** Configures the search to run automatically when you select it. If you select both this option and **Set as Default**, the search runs automatically each time you open the application.
4. Click **OK**.  
The search name is displayed in the **Saved Searches** list.

### Modifying a Saved Search

After a search has been saved, you can modify it. You can change the name, set the search as the default, and configure it to run automatically. You can also delete saved searches. See "[Deleting a Saved Search](#)."

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**Note:** You cannot save changes to the predefined searches.

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To modify a saved search:

1. From the **Saved Search** list, select **Personalize**.  
The Personalize Saved Searches dialog box is displayed.
2. In the **Saved Searches** field, select a saved search.
3. (Optional) Enter a new name for the search.
4. Select one or more of the options displayed in the dialog box.
5. Click **Apply** to apply your changes and leave the dialog box open. Click **OK** to apply your changes and close the dialog box. Click **Cancel** to close the dialog box without making any changes.

## Deleting a Saved Search

You can delete saved searches that you no longer need.

To delete a saved search:

1. From the **Saved Search** list, select **Personalize**.  
The Personalize Saved Searches dialog box is displayed.
2. In the **Saved Searches** field, select a saved search.

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**Note:** You cannot delete the search that is currently selected in the **Saved Searches** list in the Search area.

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3. Click **Delete**.  
A **Warning** dialog box is displayed.
4. Click **Yes**.  
The **Warning** dialog box closes and the search no longer appears in the **Saved Searches** field.
5. In the Personalize Saved Searches dialog box, click **OK**.  
The Personalize Saved Searches dialog box closes.

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## Finding Faults

This chapter explains the fault search features of the Oracle Communications Order and Service Management (OSM) Order Management web client. It includes information about performing searches for faults and about viewing search results.

### About Searching for Faults

The Order Management web client includes features that enable you to find orders by using a variety of criteria. When you first open it, the application displays the Order Search page. To search for faults, click **View Faults** in the upper left of the window.

You can select predefined search or create a customized search by changing the criteria and adding or removing fields. You can save customized searches so that you can use them again. See "[Saving a Search](#)." Saved searches are only available in the page that you saved them in: that is, if you save a search on the Manage Orders page, it is not available as a saved search on the View Faults page, and vice versa.

### Searching for Faults

To search for faults:

1. In the Orders area, click **View Faults**.
2. If you want to use a predefined or saved search other than the default, from the **Saved Search** list, select the search you want to use. The following predefined searches are provided:
  - **Current Faults**: Includes most of the available fields and the Source Type and Order Type currently selected.

If the search you selected is configured to run automatically, it runs automatically when you select it, and you are finished searching unless you want to customize the search.

3. If you would like to change the fields used as search criteria, do any of the following:
  - To add a field, from the **Add Fields** list in the Search area, select a field that you want to include.  
The field is displayed in the Search area, along with one or more search operators.
  - To remove a field, in the Search area, click the red **X** to the right of the field you want to remove.  
The field and its operator are removed.

- To reset the fields to the way they are in the saved search, in the Search area, click the Reset button.

The Search area is restored to its last-saved arrangement of fields and operators.

For more information about the available fields, see "[Available Search Fields](#)."

4. If you would to enter search criteria in any of the fields, enter the data and select the appropriate operators. See "[Entering Search Criteria](#)" for more information.
5. Click the **Search** button.

The Order Management web client displays the faults that match your search in the Results area. See "[Working with Search Results](#)."

## Available Search Fields

There is a predefined list of search fields that you can add to your query. In addition to these predefined fields, you can also search based on any flexible headers that have been defined in the cartridge for the order.

[Table 3–1](#) contains a list of the predefined search fields.

**Table 3–1** Predefined Search Fields

Column	Description
<b>Execution Mode</b>	The execution mode of the task. Available values are Do (In Amending), Do, Redo, Undo, Do in Fallout (In Amending), Do in Fallout, Redo in Fallout, and Undo in Fallout.
<b>Expected Order Completion Date</b>	The date when the order is expected to be completed. This is calculated as follows: <ul style="list-style-type: none"> <li>■ If OSM receives the order after the expected start date, the expected order completion date is the expected duration added to the order creation date.</li> <li>■ If OSM receives the order before the expected start date, or if it has no expected start date because it is a process-based order, the expected order completion date is the expected duration added to the expected start date.</li> </ul> <p>In the <b>from</b> and <b>to</b> calendar fields, enter a date range on which you want to query.</p>
<b>Failure Reason</b>	Information about the failure.
<b>Fulfillment State</b>	For <b>Source Type</b> values other than <b>Task</b> , the current fulfillment state for the entity.
<b>Order Component</b>	The order component associated with the failure.
<b>Order Creation Date</b>	The date when the order was created. In the <b>from</b> and <b>to</b> calendar fields, enter a date range on which you want to query.
<b>Order ID</b>	Unique system-generated order identifier. In the <b>from</b> and <b>to</b> fields, enter a range of order IDs on which you want to query. Only integers and wildcards are valid.
<b>Order State</b>	The state of the order. Available values are Aborted, Waiting for Revision, Waiting, Amending, Cancelled, Cancelling, Completed, Failed, In Progress, Not Started, and Suspended.
<b>Order Type</b>	The target order type, such as OsmCustomerOMExampleOrder, OsmServiceOMExampleOrder, and so on.
<b>Priority</b>	The priority of the order. In the <b>from</b> and <b>to</b> fields, enter a range of values from 0 (minimum) to 9 (maximum).

**Table 3–1 (Cont.) Predefined Search Fields**

Column	Description
Ref. #	The reference number of the order.
Requested Delivery Date	The date by which the customer requests delivery of the order.
Source	Source of the order (typically the same as the order type).
Source Type	The source of the failure. Available values are All, Order, Order Item, and Task.
Task Name	The name of the task associated with the failure.
Type Order	The action associated with the order, such as Add, Delete, and so on.

## Entering Search Criteria

You search for faults by entering a value or range of values for a field and then selecting a search operator. For example, **Priority** is a numeric field. You can select from the listed operators and then enter a value. (If you select the **Between** operator, an additional field is added for a second value.)

The operators available for a search field depend on the type of data the field stores. [Table 3–2](#) lists the search operators for the various field types.

**Table 3–2 Field Types and Available Search Operators**

Field Type	Available Search Operators
Currency	<b>Equals (default), Between, Less Than Equals</b>
Date	<b>On or Before, On or After (default), Between</b>
Numeric	<b>Equals (default), Between, Less Than Equals</b>
Phone	<b>Starts With, Ends With, Equals (default), Contains</b>
Text	<b>Starts With, Ends With, Equals (default), Contains, Like</b>
List	No operator displayed. Select a value in the list.
Duration	<p><b>Greater Than Equals (default), Between, Less Than Equals.</b> Format is:</p> <p><code>P[daysD][T[hoursH][minutesM][secondsS]]</code></p> <p>When specifying hours, minutes, or seconds, you must use the 'T' as part of the value. For example:</p> <p>PT8H - eight hours. PT8H4M - eight hours, four minutes. PT4M - four minutes. PT8H6S - eight hours, six seconds. P9DT8H - nine days, eight hours. P9D - nine days (no hours/minutes/seconds, so no 'T' required). PT0S, P0D, PT0H0M - zero duration.</p> <p>The following are not valid:</p> <p>P8H - intended to be eight hours, but 'T' is missing. P9D8H - intended to be nine days, eight hours, but once again 'T' is missing.</p>

## Working with Saved Searches

When you have configured search criteria and selected the fields that you want to see in the results (see "[Searching for Faults](#)" for more information), you can save the search to be used later.

### Saving a Search

You can save a search so that you can reuse it. A saved search includes fields and search operators. Saved searches are available only to the users who created them.

To save a search:

1. In the Search area for faults, click the **Save** button.  
The Create Saved Search dialog box is displayed.
2. Enter a name for the search. This is the name that will appear in the **Saved Searches** list.
3. (Optional) Select one or more of the options displayed in the dialog box:
  - **Set as Default:** Configures the search to appear when you open the Order Management web client.
  - **Run Automatically:** Configures the search to run automatically when you select it. If you select both this option and **Set as Default**, the search runs automatically each time you open the application.
4. Click **OK**.

The search name is displayed in the **Saved Searches** list.

### Modifying a Saved Search

After a search has been saved, you can modify it. You can change the name, set the search as the default, and configure it to run automatically. You can also delete saved searches. See "[Deleting a Saved Search](#)."

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**Note:** You cannot save changes to the predefined searches.

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To modify a saved search for faults:

1. From the **Saved Search** list in the fault search window, select **Personalize**.  
The Personalize Saved Searches dialog box is displayed.
2. In the **Saved Searches** field, select a saved search.
3. (Optional) Enter a new name for the search.
4. Select one or more of the options displayed in the dialog box.
5. Click **Apply** to apply your changes and leave the dialog box open. Click **OK** to apply your changes and close the dialog box. Click **Cancel** to close the dialog box without making any changes.

### Deleting a Saved Search

You can delete saved searches that you no longer need.

To delete a saved search for faults:

1. From the **Saved Search** list in the fault search window, select **Personalize**.  
The Personalize Saved Searches dialog box is displayed.
2. In the **Saved Searches** field, select a saved search.

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**Note:** You cannot delete the search that is currently selected in the **Saved Searches** list in the Search area.

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3. Click **Delete**.  
A **Warning** dialog box is displayed.
4. Click **Yes**.  
The **Warning** dialog box closes and the search no longer appears in the **Saved Searches** field.
5. In the Personalize Saved Searches dialog box, click **OK**.  
The Personalize Saved Searches dialog box closes.

## Working with Search Results

The Results area in the Search page displays the faults that are returned by the search. These orders are displayed in a table with a row for each fault. Each row includes columns that display information about the fault. By default, the Results area displays columns for all available fields.

Note that when the expected start date for an order is in bold, this indicates that the order is a **future-dated order**. A future-dated order is an order that will be processed at a future date. OSM displays regular orders in normal font.

To see more detailed information about an order, you can open it by selecting the order you want to open and clicking **Open Order**, or by double-clicking the order row. The Order Details page is displayed. See "[Viewing Order Details](#)" for more information about the Order Details page.

You can also take actions, such as suspending the order or changing the reference ID, on orders you select in the Results area. See "[Managing Orders](#)" for more information about the actions you can take.



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## Viewing Order Details

This chapter describes how you use the Oracle Communications Order and Service Management (OSM) Order Management web client to get detailed information about an order. The chapter includes an overview of the Order Details page and information about the tabs it contains and the information on the tabs.

### About the Order Details Page

The Order Details page is displayed when you open an order. The page has the following main tabs:

- **Order:** Provides information about the order as a whole, including summary information and information about the data on the order, the orchestration plan, and amendments. See "[Viewing Information About the Order](#)" for more information.
- **Order Items:** Provides information about the source and transformed order items on the order, including information about their related order components and the dependencies of the order items. See "[Viewing Order Items](#)" for more information.
- **Order Components:** Provides information about the order components on the order, including any running or failed tasks, related order items, and dependencies. See "[Viewing Order Components](#)" for more information.

You can also view the latest activity for the order and perform actions on the order by selecting an action in the **Actions** menu in the upper-right corner of the Order Details page. See "[Viewing Latest Activity](#)" for more information about viewing the latest activity and see "[Managing Orders](#)" for more information about the actions you can take.

### Returning to the Search Results

You can return to the search results from the Order Details page. This will return you to the search page with the search you performed before opening the order.

To return to the search results, click **Done** at the top right of the window.

### Viewing Information About the Order

The Order tab provides the following types of information about the order:

- Summary information about the order: The **Summary** subtab provides a selection of the most important information about the selected order. The **Summary** subtab is displayed by default when you open the Order Details page. See "[Viewing Summary Information](#)."

- Information about the order data: The **Data** subtab displays data for the order, filtered according to a selected view. See "[Viewing Order Data](#)."
- Graphical representations of the orchestration plan and order dependencies: The **Orchestration Plan** subtab displays graphical information. It is visible only for orders that have orchestration plans. See "[Viewing Orchestration Information](#)."
- Information about any amendments to the order: The **Amendments** subtab displays information about amendments to the current order. See "[Viewing Order Amendments](#)."

## Viewing Summary Information

The Summary tab displays an overview of information about an order. The **Summary** tab is displayed by default when you open the Order Details page. The tab is divided into the areas described in the following sections.

### General Area

The General area is displayed at the top of the **Summary** tab. It includes a selection of important identifying and status information about the entity selected in the Order Info tree.

[Table 4–1](#) describes the information displayed in the General area.

**Table 4–1 Fields in the General Area of the Summary Tab**

Field	Description
<b>Order ID</b>	OSM order ID.
<b>Reference Number</b>	OSM reference number.
<b>Version</b>	OSM amendment version, followed by the date the amendment was submitted. If no amendment has been received, the date is displayed.
<b>Priority</b>	The order priority, expressed as an integer from 0 to 9, with 0 having the highest priority. The default is 5.
<b>Order State</b>	The order state, such as Failed or In Progress.
<b>Target Order State</b>	The state to which the order will transition after the grace period expires. Applicable only to orders currently in a grace period.
<b>Order Creation Date</b>	The date when the order was created in OSM.
<b>Expected Order Completion Date</b>	The date when the order is expected to be completed. This is calculated as follows: <ul style="list-style-type: none"> <li>■ If OSM receives the order after the expected start date, then the expected order completion date is the expected duration added to the order creation date.</li> <li>■ If OSM receives the order before the expected start date, or if it has no expected start date because it is a process-based order, then expected order completion date is the expected duration added to the expected start date.</li> </ul>
<b>Requested Order Delivery Date</b>	The date by which the customer requests the order be delivered.
<b>Expected Order Start Date</b>	The date when the order is expected to start being processed. Displayed in bold if this is a future-dated order.

**Table 4–1 (Cont.) Fields in the General Area of the Summary Tab**

Field	Description
<b>Expected Order Duration</b>	The amount of time the order is expected to take to complete processing. The expected duration format is as follows: <code>P[daysD][T[hoursH][minutesM][secondsS]]</code>
<b>Amends</b>	The order ID of the amended order. The order ID is a link that opens the Order Details page and <b>Summary</b> tab of the amended order.  This field is displayed only for amending orders.
<b>Amended By</b>	The last amendment received for the order along with the total number of amendments received. This field is displayed only for orders that have been amended.  The field value takes the form: <code>order_id[total: number]</code> where: <ul style="list-style-type: none"> <li>▪ <i>order_id</i> is the OSM order ID of the last-received amendment for the current order. The order ID is a hyperlink that opens the <b>Summary</b> tab of the amending order.</li> <li>▪ <i>number</i> is the total number of received amendments.</li> </ul>
<b>Dependencies sub-area</b>	This area is only displayed if there are unresolved dependencies for the order. The following information is displayed: <ul style="list-style-type: none"> <li>▪ <b>Order component of this order is blocked by:</b> the number of order components that are blocking order components on this order. This includes order components on this order that are blocking other order components on this order.</li> <li>▪ <b>Order component of this order is blocking:</b> the number of order components on this order that are being blocked. This includes order components on this order that are being blocked by other order components on this order.</li> </ul> Clicking on either of the values will take you to the main Dependencies area for this tab. See " <a href="#">Dependencies Area</a> " for more information.

### Order Items Processing State Area

The Order Items Processing State area is displayed below the General area. It contains information about the in each processing state for the order. Each row in the table in this area represents an order item state.

[Table 4–2](#) describes the columns in the table in the Order Items Processing State area.

**Table 4–2 Columns in the Order Items Processing State Area of the Summary Tab**

Field	Description
<b>State</b>	Current state of the order item
<b>Total</b>	Total order items in the selected state
<b>Normal</b>	Number of order items in the state that do not have any failures or warnings
<b>Failure</b>	Number of order items in the state with failures
<b>Warning</b>	Number of order items in the state with warnings

Table 4–3 describes the actual order item states that are indicated for each cell in the table. For more information about the meanings of the specific states, see the information about order item processing states in *OSM Modeling Guide*.

Some combinations of a state and Normal/Warning/Failure are not possible, and will never have values in the table in the Order Management web client.

**Table 4–3 Rows in the Order Items Processing State Area of the Summary Tab**

State Listed in State Column	State Indicated by Normal Column	State Indicated by Failure Column	State Indicated by Warning Column
Not Started	NotStarted	Not Applicable	Not Applicable
In Progress	InProgress	InProgressWithFailures	InProgressWithWarnings
Completed	Completed	Not Applicable	CompletedWithWarnings
Partially Failed	Not Applicable	PartiallyFailed	Not Applicable
Undoing	Undoing	UndoingWithFailures	UndoingWithWarnings
Undo Completed	UndoCompleted	Not Applicable	UndoCompleteWithWarnings
Undo in Fallout	Not Applicable	UndoFailed	Not Applicable
None	None	Not Applicable	Not Applicable

### Dependencies Area

The Dependencies area is displayed below the Order Items Processing State area. It contains information about entities on which the entities in the order depend.

More information about the dependencies for individual order components is available in the **Order Component** tab. See "[Viewing Order Component Dependencies](#)" for details.

Table 4–4 describes the information displayed in the Dependencies area.

**Table 4–4 Columns in the Dependencies Area of the Summary Tab**

Field	Description
Order Component	The order component on the current order that is blocked by a dependency.
Predecessor Order ID	The ID of the order that contains the order component on which an order component depends. This is the ID of the current order for an intra-order dependency.
Status	The status of the dependency. Values are: <ul style="list-style-type: none"> <li>■ <b>created</b>: the dependency has been created and is pending</li> <li>■ <b>delayed</b>: the dependency has been resolved, but is waiting for a time delay</li> <li>■ <b>resolved</b>: the dependency has been resolved and is no longer blocking the successor order component</li> </ul>
Predecessor Order Component	The order component on which the current order component depends.
Dependency Type	The type of dependency: <b>Completion</b> , <b>Data Change</b> , or <b>Order Item</b> . For more information, see <i>OSM Concepts</i> .
Dependency ID	The unique identifier of the dependency. For more information, see " <a href="#">Understanding Dependency IDs</a> ."

## Viewing Order Data

The **Data** tab displays the data for the order, filtered according to a selected view.

The **Data** tab supports behavior functionality. See *OSM Concepts* for more information.

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**Note:** You cannot make changes to the order data in the Order Management web client. Changes to orders are normally made with amendments or follow-on orders. Changes to order data can also be made by using the Order Editor in the Task web client.

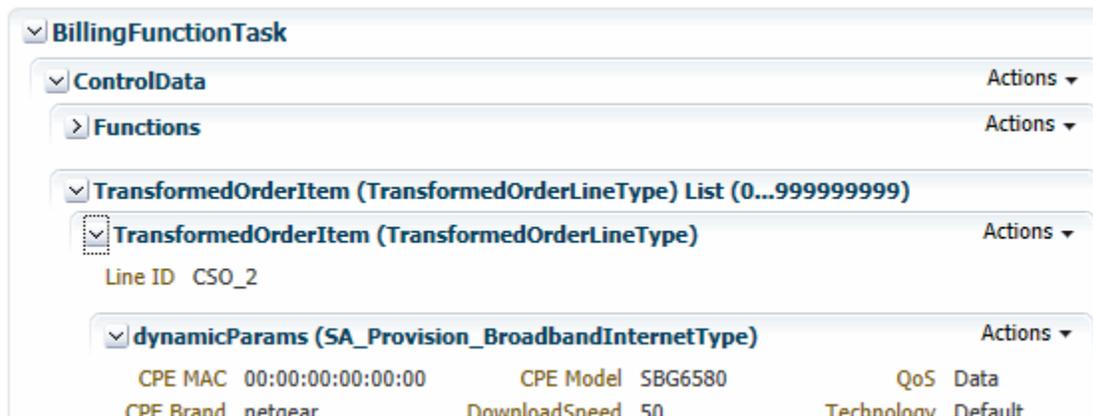
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The **Data** tab shows data that is defined by the selected view. Views are defined in Oracle Communications Design Studio as part of the cartridge configuration.

The data is displayed hierarchically in a tree, which you can expand and collapse to display the information you need.

Data that uses the distributed order template displays its type in its header. [Figure 4-1](#) shows two elements using different data types: the **TransformedOrderItem** node with the **TransformedOrderLineType** type and the **dynamicParams** node with the **SA\_Provision\_BroadbandInternetType** type. See *OSM Concepts* for more information about the distributed order template.

**Figure 4-1** *Distributed Order Template Nodes*



The display of the information is affected by system settings for performance reasons:

- There is a system-wide configurable database fetch limit for large orders. This threshold sets a limit to the amount of data that can be requested from the database at one time.
- There is also a system-wide setting that displays multi-instance elements in a table if there are over the defined number of instances.

For more information about the values of these settings for your OSM instance, consult your system administrator.

You can search for data, select a view, or get the history of data. For more information see:

- [Searching for Data](#)
- [Selecting the View](#)
- [Getting Data History](#)

## Searching for Data

You can search for specific characters or words in the data. For example, you could search for all occurrences of the text **Broadband Modem**. The search results are all of the data elements for the order that include the search text.

Search results are displayed in the **Data** tab. The total number of results is displayed near the **Find** field along with the sequential number of the data element you are currently viewing. **Next** and **Previous** buttons enable you to move between search results.

To search for data:

1. In the **Data** tab, enter text in the **Find** field.
2. Press the **Enter** key.

The first matching data element is displayed. If the data element is a parent, the area displays all of its children. The area in the tab is renamed to correspond to this data. The total number of results is displayed near the **Find** field.

3. Click the **Next** button to see the next result.

The next data element is displayed in the area.

## Selecting the View

Cartridge designers can create different data views to show or hide data based on business needs. These views determine what is displayed in the **Data** tab. If more than one view is available, you can switch between views.

To select a data view:

- In the **Data** tab, select a view from the **View** list.

The data display changes to reflect the view you selected.

## Getting Data History

You can display the history of data elements in the **Data** tab. You can get history at any level in the data hierarchy. If you get the history for parent data, the history includes all children. If you get history for data with no children, you see information about only that data element.

Data history is shown in a dialog box that lists the activity for the selected data element and its children (if any). Information about each event (creation, update, or deletion) in the data's history is displayed.

To get data history:

- In the **Data** tab, click the **Actions** button for a line in the tree view and select **Show Data History**.

The Data History dialog box is displayed.

[Table 4-5](#) describes the information displayed in the Data History dialog box.

**Table 4-5 Columns in the Data History Dialog Box**

Column	Description
Field	The name of the data element
Value	The value of the data element. No value is shown when header lines are selected.

**Table 4–5 (Cont.) Columns in the Data History Dialog Box**

Column	Description
Timestamp	The date and time when the data was created or was last changed
User	The user that performed the action on the data element
Action	The type of change. Available values include <b>Create</b> , <b>Update</b> , and <b>Delete</b> .

## Viewing Orchestration Information

The **Orchestration Plan** tab displays information about the order as a whole and is visible only for orders with an orchestration plan. You can use this information during solution design to validate that order decomposition and orchestration plan generation is functioning as intended. The graphical representation shows exactly how an order is fulfilled.

The **Orchestration Plan** tab includes two different graphical representations:

- The Dependency Graph area includes a representation of dependencies in the selected order. The graph includes a subset of the dependencies shown in the **Dependencies** tab. The graphic includes only intra-order dependencies, not inter-orders dependencies. See "[Understanding the Dependency Graph](#)" for more information.
- The Decomposition Tree area illustrates the orchestration stages into which OSM has broken the order. Order items associated with order components at each orchestration stage are visually linked to the same order item in the subsequent stage. See "[Understanding the Decomposition Tree](#)" for more information.

Both of these graphical representations are displayed fully zoomed out in their areas so you can get an overview of the content. You can enlarge the diagrams and zoom, scroll, and pan to view particular sections of the graph in more detail. See "[Working with Graphics](#)."

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**Note:** If you have a large number of order items and order components, it may not be possible to zoom into the graphical representations sufficiently to be able to read the names of the order items or order components.

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### Understanding the Dependency Graph

The Dependency Graph illustrates the dependencies among the order components in the order.

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**Note:** Only intra-order dependencies are shown in the graph. Inter-order dependencies are not included. See "[Viewing Order Component Dependencies](#)" for more information about the difference between intra-order and inter-order dependencies.

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The graph shows all the executable order components (based on having passed through all orchestration stages) in the order. Arrows show dependencies between order components or order items. Each order component lists the order items it contains and colors differentiate order components based on the first orchestration stage. A legend illustrates the meaning of each color.

The order components with no dependencies are shown on the left side of the graph. Execution of the orchestration plan starts with these order components. When these order components are completed, the dependencies on them are resolved. These resolutions allow the dependent order components, shown to the right of the first group, to be executed. The resolution of this next group of dependencies in turn frees other order components to be executed. This process continues until all order components are executed. The final order components to be executed are those on the right side of the graph.

Figure 4–2 shows a simple set of dependencies as displayed in the Dependency Graph. Order components are color coded based on the first orchestration stage. They are named after the orchestration stages. In this case, there are three stages, so the names have three parts. The first part of the name corresponds to the color coding: all order components of the same color share the same first name segment.

Order component names have the following syntax:

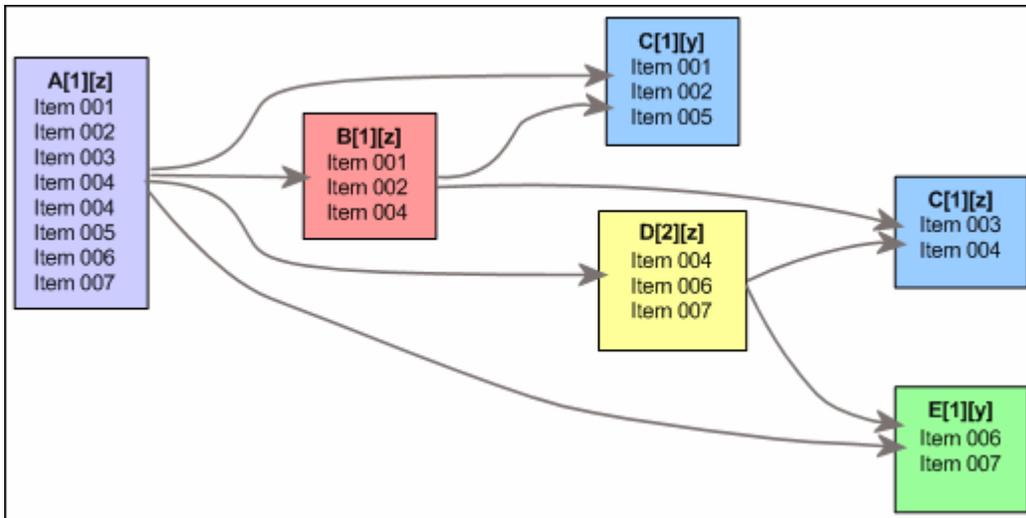
*DecompositionStage\_1[DecompositionStage\_2]...[DecompositionStage\_n]*

For example, if an order has three decomposition stages: function, system, and granularity, and an order component is named

**FulfillBillingFunction[BRM-REZDB][ServiceBundleGranularity]**, the function is **FulfillBillingFunction**, the fulfillment system is **BRM-REZDB**, and the granularity is **ServiceBundleGranularity**.

In Figure 4–2, there are three stages, so the names have three parts. The first part of the name corresponds to the color coding: all order components of the same color share the same first name segment.

Figure 4–2 Dependency Graph



An order component can be dependent on another order component both directly and indirectly (by being dependent on an order component that is itself dependent on another). For example, in Figure 4–2, order component E[1][y] is dependent on order component A[1][z] both directly and indirectly through order component D[2][z].

#### Setting the Dependency Graph Detail Level

The Dependency Graph can display different detail levels:

- **Component:** At this level, the graph shows a single arrow for each dependency between one order component and another.
- **Dependent Item:** At this level, the graph shows arrows for each order item in an order component. The arrows point from dependent order item to the order item on which it depends.

To set the detail level:

- In the upper-left corner of a Dependency Graph, click the **Component** or **Item** button.

The graph redisplay to show the detail level you selected.

## Understanding the Decomposition Tree

The Decomposition Tree illustrates the orchestration stages into which an order is broken. Each order item in the order is shown in the order components into which it is grouped by the orchestration sequence.

The graph displays a series of areas for progressively more specific orchestration stages as you move from left to right in the image. The areas are labeled at the top with the name of the orchestration stage. The number of stages and their names depend on how the stages are defined for orders in Design Studio. See the Design Studio Help and *OSM Concepts* for more information about orchestration stages.

- On the left of the diagram, the first area displays a gray box listing all of the order items in the order. Above that box, a legend shows colors used to differentiate functions in the diagram.
- The next area to the right shows the results of the first orchestration stage. For example, if the first stage is `DetermineFulfillmentFunctionStage`, this area displays color-coded boxes into which order items are grouped into order components by function. The same order item is frequently included in more than one order component.
- The third area shows the next orchestration stage. For example, for a sequence where the next stage is `DetermineFulfillmentSystemStage`, this area shows order components with order items broken down by both function and fulfillment system. The color coding continues to differentiate functions.
- Additional areas correspond to additional orchestration stages. For example, for an orchestration sequence that includes a third and last stage called `DetermineProcessingGranularityStage`, the last area on the right displays executable order components that include function, fulfillment system, and granularity. This final column reflects the named order components that you see in other areas of the Order Management web client, such as the tree view in the Order Items area and the Dependency Graph.

Because order components are generated for order items based on fulfillment patterns, the graph can show separate order components for order items that have the same orchestration stages. For example, there could be separate order components for order items that share the same function, fulfillment system, and processing granularity if the order items are mapped to different fulfillment patterns.

The following greatly simplified example illustrates how the decomposition tree displays the orchestration sequence for a particular order item in an order-to-activate solution.

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**Note:** For clarity, this example shows the decomposition of a single order item. In a real order, the order components in each stage would include many order items, so the relationships would be much more complex.

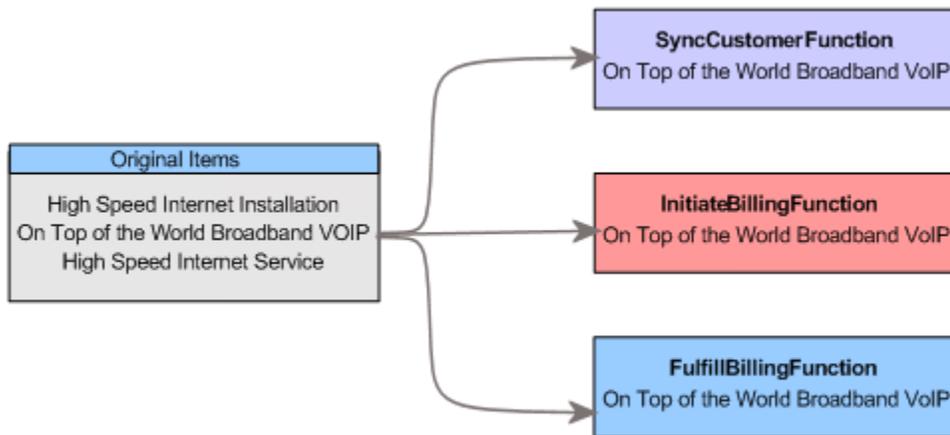
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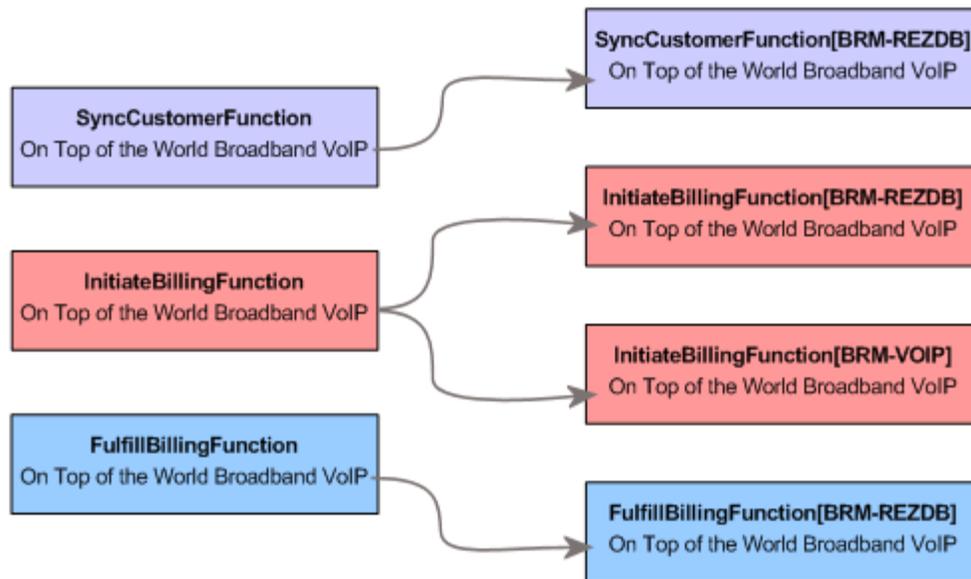
In this example, the **On Top of the World Broadband VoIP** order item progresses through three orchestration stages: `DetermineFulfillmentFunctionStage`, `DetermineFulfillmentSystemStage`, and `DetermineProcessingGranularityStage`.

In the first stage, illustrated in [Figure 4-3](#), the order item is decomposed into three functions.

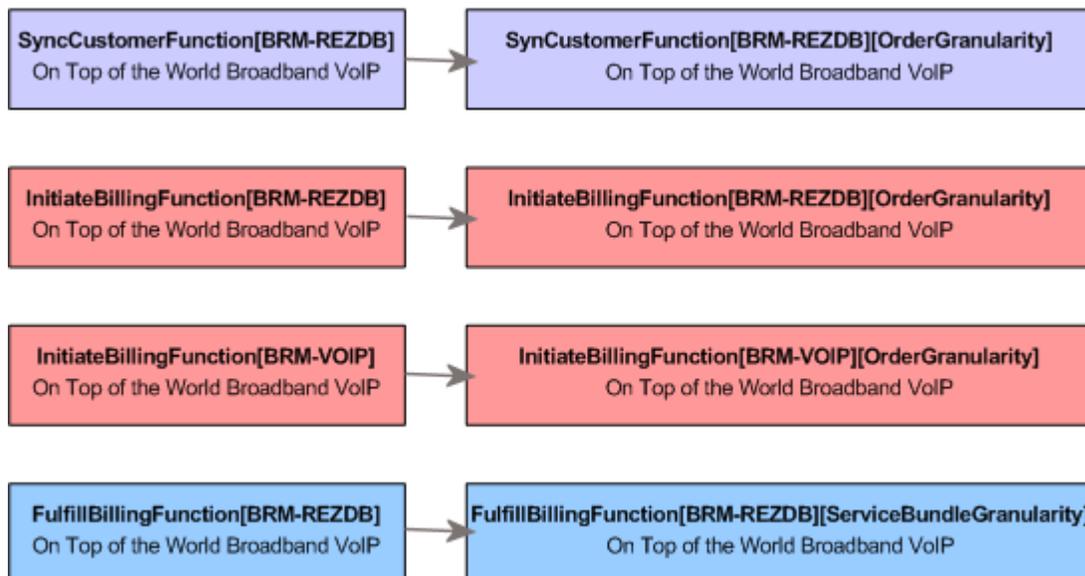
**Figure 4-3** *Orchestration Stage 1*



In the next stage, illustrated in [Figure 4-4](#), each of these three functions is decomposed based on the fulfillment system. In this case, `InitiateBillingFunction` requires two fulfillment systems, while the other two functions require only one fulfillment system each.

Figure 4–4 *Orchestration Stage 2*

In the final stage, illustrated in [Figure 4–5](#), each of the function-fulfillment system order components is decomposed into one fully qualified order component that includes the function, fulfillment system, and granularity level. In this case, each function-fulfillment system order component corresponds to a single executable order component.

Figure 4–5 *Orchestration Stage 3*

## Working with Graphics

Both the Dependency Graph and Decomposition Tree include tools that enable you to view the information you need. You can see an enlarged version of each diagram, zoom in and out, and pan.

### Viewing Enlarged Graphics

Most orders are complex, so their dependency graphs and decomposition trees must be reduced in size to fit in their areas on the **Orchestration Plan** tab. For greater legibility, you can open enlarged versions of the diagrams in separate windows that you can move and resize. You can also zoom and pan in these windows. See "[Zooming In and Out](#)" and "[Panning](#)" for more information.

- In the Dependency Graph or Decomposition Tree area of the **Orchestration Plan** tab, click the **Enlarge** button.

A new window displaying the diagram is displayed.

### Zooming In and Out

Because of the complexity of orders, you often need to zoom in to see the detail you need. You can zoom using three methods:

- By using the **Zoom In** and **Zoom Out** buttons to zoom in or out on the center of the current view of the diagram.
- By using the **Zoom** button to zoom in on an area that you select.

To zoom in and out of the center of diagram:

- In a Dependency Graph or Decomposition Tree window, click the **Zoom In** or **Zoom Out** button in the toolbar.

You zoom into or out of the center of the current view of the diagram.

To zoom into a particular area:

1. In a Dependency Graph or Decomposition Tree window, click the **Zoom** button in the toolbar.

The cursor turns into a plus sign.

2. Drag out the area into which you want to zoom.

The diagram zooms to the area you designated.

### Panning

When you are zoomed into the diagram, not all areas are visible. You can pan to move to other areas.

To pan:

1. In a Dependency Graph or Decomposition Tree window, click the **Pan** button in the toolbar.

The cursor turns into a hand symbol.

2. Click in the diagram, then drag it to move to the area you want to see.

## Viewing Order Amendments

The **Amendments** tab displays information about the amendments that have been received for an order. Amendments are orders that revise or modify another order that is in progress. Amendments require *compensation*, such as redoing or undoing actions

that were completed for the original order. See *OSM Concepts* for more information about amendments and compensation.

Amendments are processed at the order level, so the tab always displays information pertaining to the order as a whole, even if an order component or order item is selected in the Order Info tree. The tab displays no information if the current order has no amendments or is an amendment to another order.

[Table 4–6](#) describes the information displayed in the **Amendments** tab.

**Table 4–6 Columns for Order Amendments**

Column	Description
<b>Order ID</b>	The ID of the amending order
<b>Status</b>	The status of the amendment. Available values include <b>In Progress</b> , <b>Queued</b> , <b>Completed</b> , and <b>Skipped</b> .
<b>Received Date</b>	The data and time that the amending order was received
<b>Version</b>	The version number of the amending order.
<b>Compensation Started</b>	The date and time that compensation caused by the amending order began
<b>Compensation Completed</b>	The date and time that compensation caused by the amending order was completed

## Viewing Latest Activity

The **Activity** area displays information about the order activity. By default, the **Activity** area displays the events that occur after the order is created.

For information about displaying events that occur before the order is created, see the discussion of the `show_all_data_history_logs_for_orderdetails` property in *OSM System Administrator's Guide*.

The following types of events are included on the **Activity** area:

- Amendments
- State changes
- Notifications
- Data changes
- Process history for tasks

### Accessing the Activity Area

To access the activity area, show it using the Restore Pane arrow button on the right side of the page. For more information, see "[Collapsing, Expanding, and Resizing Areas with Collapse Pane and Restore Pane Buttons](#)."

### About the Activity Event Summary

The **Activity** tab contains a table that displays a list of all activity events. [Table 4–7](#) describes the information displayed.

**Table 4–7 Columns for Activity Events**

Column	Description
<b>Time Stamp</b>	The date and time of the event

**Table 4–7 (Cont.) Columns for Activity Events**

Column	Description
Entity Type	The type of entity (order, order component, or task) that the event affects
Entity Name	The name of the affected entity
Event Type	The event type. Available values include <b>Amendment</b> , <b>State change</b> , <b>Notification</b> , <b>Data change</b> , and <b>Process History</b> .
Summary	Additional information about the event

You can see additional event details by expanding rows. See "[About the Activity Event Details](#)."

### About the Activity Event Details

You can view additional information about an event by clicking the **Expand** button next to the row for the event. See "[Getting More Information About Rows](#)" for instructions on expanding rows.

The information displayed for a row depends on the event type. [Table 4–8](#), [Table 4–9](#), [Table 4–10](#), [Table 4–11](#), [Table 4–12](#), and [Table 4–13](#) describe the information displayed for the different types of events.

**Table 4–8 Amendment Event Details**

Field	Description
Amended Order ID	The ID of the amended order. This is the same as the contents of the <b>Entity Name</b> column in the main table.
Amendment Order ID	The ID of the amending order.
Time Stamp	The date and time that the amendment event occurred. This is the same as the content of the <b>Timestamp</b> column in the main table.
Version	The version number of the amending order
Status	The status of the event. Available values include <b>In Progress</b> , <b>Queued</b> , <b>Completed</b> , and <b>Skipped</b> .

**Table 4–9 Order State Change Event Details**

Field	Description
Order ID	The ID of the order
From Order State	The state from which the order transitioned
To Order State	The state to which the order transitioned
Transition Start	The date and time that the state change started
Transition End	The date and time that the state change ended. This is the same as the content of the <b>Timestamp</b> column of the main table.
Transition Duration	The duration of the state change
User	The user that initiated the state change
Reason	The reason for the transition

**Table 4–10 Order Data Change Details**

Field	Description
Order ID	The ID of the order
Time Stamp	The date and time that the data change occurred. This is the same as the content of the <b>Timestamp</b> column of the main table.
Field Path	The path to the affected field. The path reflects the field's place in the data hierarchy of the order, which you can view in the <b>Data</b> tab.
Value	The changed (new, updated, or deleted) value of the field
Action	The type of change. Available values include <b>Create</b> , <b>Update</b> , and <b>Delete</b> .
User	The user that initiated the state change

**Table 4–11 Notification Event Details**

Field	Description
Order ID	The ID of the order
Time Stamp	The date and time that the notification event occurred
Notification ID	The internally-generated ID of the notification
Description	The description from the notification specification.
Type	The notification type. Available values include <b>Data</b> , <b>Order_jeopardy</b> , <b>Poll</b> , and <b>Process</b> .
Priority	The notification priority (1 to 255, with 1 as the highest priority)
Author	The notification event author
Action	The action taken on the notification. Available values include <b>Create</b> , <b>Update</b> , and <b>Delete</b> .
Message	The message logged in the notification history for the notification event, for example, the message provided for an event acknowledgement in the Task web client.

**Table 4–12 Order Component State Change Event Details**

Field	Description
Order ID	The ID of the order
From Order State	The state of the order component at the start of the transition. Available values include <b>Created</b> , <b>Started</b> , and <b>Completed</b> .
To Order State	The state of the order component at the end of the transition. Available values include <b>Created</b> , <b>Started</b> , and <b>Completed</b> .
Transition End	The date and time that the order component state change event occurred

**Table 4–13 Task Process History Event Details**

Field	Description
Order ID	The ID of the order

**Table 4–13 (Cont.) Task Process History Event Details**

Field	Description
Expected Completion	The date and time that the task is expected to finish being in the current state
Started	The date and time that the task started being in the current state
Execution Mode	The mode under which a task is running. May be one of do, redo, undo, failed_do, failed_redo, or failed_undo. Do is the default mode for a task that executes under normal processing; redo and undo are used in amendment processing. The failed_do, failed_redo, and failed_undo modes are used when an order fails.
Duration	The length of time the task spent in the indicated state for this element of the process history
Completed	The actual date and time that the task finished being in the current state
State	The state of the task during this element of the process history
Status	The status of the task when this element of the process history was completed
User	The user who transitioned the task
Workgroups	The workgroups (roles) that are allowed to transition the task

## Viewing Order Items

The **Order Items** tab provides information about the source and transformed order items on the order. Summary information about the order items is provided in a table in the upper part of the window. For more information, see "[Viewing Order Item Summary Information](#)."

When you select an order item in the upper section of the window, detailed information for the order item is provided in the following subtabs:

- **Order Components:** Provides information about order components associated with the selected order item. For more information, see "[Viewing Related Order Component Information](#)."
- **Transformations:** If a source order item is selected, this tab provides information about any order items transformed from it. If a transformed order item is selected, this tab provides information about its source order items. For more information, see "[Viewing Order Item Transformations](#)."
- **Dependencies:** Provides information about any predecessors or successors of the selected order item. For more information, see "[Viewing Order Item Dependencies](#)."

## Viewing Order Item Summary Information

In the **Order Items** tab, the table in the upper part of the window provides summary information about the source and transformed order items on the order.

[Table 4–14](#) describes the information displayed in the summary area of the **Order Items** tab.

**Table 4–14 Columns in the Order Items Tab**

Column	Description
<b>Name</b>	The name of the order item.
<b>Fulfillment State</b>	The current order item fulfillment state for the order item. This is only displayed for source order items.
<b>Processing State</b>	The processing state for the order item. This is only displayed for source order items. For more information about the meanings of the specific states, see the information about order item processing states in <i>OSM Modeling Guide</i> .
<b>Failure Count</b>	The number of order component order items that are currently in a failure state. For more information about these processing states, see the information about order component order item processing states in <i>OSM Modeling Guide</i> .
<b>Warning Count</b>	The number of order component order items that are currently in a warning state. For more information about these processing states, see the information about order component order item processing states in <i>OSM Modeling Guide</i> .
<b>Order Component Counts</b>	The number of order components for the order item that are currently in Created, Started, or Completed state.

## Viewing Related Order Component Information

The **Order Components** subtab provides information about the order components that include the selected order item.

Order components are identified by their names and are broken into columns based on the orchestration sequence used to generate them. For example, if the orchestration sequence includes three stages, the table has a column for each stage, and each column displays the portion of each order component name that corresponds to that stage. See "[Understanding the Dependency Graph](#)" for more information about how order component names are generated.

[Table 4–15](#) describes the information displayed in the Order Components area.

**Table 4–15 Columns in the Order Components Subtab**

Column	Description
<i>Orchestration Stage Name</i>	Lists the portion of the order component name derived from this orchestration stage
<b>Calculated Start Date</b>	If enabled, the date and time before which the order component will not start
<b>Expected Duration</b>	If defined, the time the order component is expected to complete
<b>Key</b>	The run-time name of the order component
<b>Task Failure Count</b>	The number of failed tasks for the order component

## Viewing Order Item Transformations

The **Transformations** tab provides information about any source or transformed order items associated with an order item selected in the upper part of the window. This information is only applicable if the order transformation manager has been used. For more information about the order transformation manager, see *OSM Concepts*.

### Transformed Order Items Area

If a source order item is selected, this tab contains a table with information about order items to which the selected order item has been transformed.

[Table 4–16](#) describes the information displayed in the Transformed Order Items area.

**Table 4–16 Columns in the Transformed Order Items Area**

Column	Description
Line Item Name	The name of the transformed order item.
Mapping Rule	The mapping rule governing the transformation of the source order item to the transformed order item.
Relationship	The relationship governing the transformation.
Provider Function	The provider function in which the source order item and the transformed order item are included.

### Source Order Items Area

If a source order item is selected, this tab contains a table with information about order items from which the selected order item has been transformed.

[Table 4–17](#) describes the information displayed in the Source Order Items area.

**Table 4–17 Columns in the Source Order Items Area**

Column	Description
Line Item Name	The name of the source order item that was transformed.
Mapping Rule	The mapping rule governing the transformation of the source order item to the transformed order item.
Relationship	The relationship governing the transformation.
Provider Function	The provider function in which the source order item and the transformed order item are included.

## Viewing Order Item Dependencies

The **Dependencies** subtab displays information about two different dependency relationships:

- Dependencies in which the current entity is dependent on other entities. See "[Predecessors of This Order Component Area](#)."
- Dependencies in which other entities depend on the current entity. See "[Successors of This Order Component Area](#)."

Dependency information is current as of the time that the Order Details page is opened. For more information, see "[Understanding Dependencies](#)."

### Predecessors of This Order Item Area

The Predecessors of This Order Item area lists entities on which the order item depends.

[Table 4–18](#) describes the information displayed in the Predecessors of This Order Item area.

**Table 4–18 Columns in the Predecessors of This Order Item Area**

Column	Description
Order Item	The order item affected by the dependency
Predecessor Order ID	The ID of the order that contains the order component on which the current order item depends. This is the ID of the current order for an intra-order dependency.
Status	The status of the dependency. Values are: <ul style="list-style-type: none"> <li>■ <b>created</b>: the dependency has been created and is pending</li> <li>■ <b>delayed</b>: the dependency has been resolved, but is waiting for a time delay</li> <li>■ <b>resolved</b>: the dependency has been resolved and is no longer blocking the successor order component</li> </ul>
Predecessor Order Component	The order component on which the current order item depends.
Predecessor Order Item	The name of the order item on which the order item in the current row is dependent.
Dependency Type	The type of dependency. Available values include <b>Completion</b> , <b>Data Change</b> , and <b>Order Item</b> . See <i>OSM Concepts</i> for more information.
Dependency ID	The ID of the dependency. See " <a href="#">Understanding Dependency IDs</a> " for more information.

### Successors of This Order Item Area

The Successors of This Order Item area lists entities that depend on order components on the selected order item.

[Table 4–19](#) describes the information displayed in the Successors of This Order Item area.

**Table 4–19 Columns in the Successors of This Order Item Area**

Field	Description
Order Component	The order component depending on order components on this order item.
Successor Order ID	The ID of the order that contains the order component that depends on the current order item. This is the ID of the current order for an intra-order dependency.
Status	The status of the dependency. Values are: <ul style="list-style-type: none"> <li>■ <b>created</b>: the dependency has been created and is pending</li> <li>■ <b>delayed</b>: the dependency has been resolved, but is waiting for a time delay</li> <li>■ <b>resolved</b>: the dependency has been resolved and is no longer blocking the successor order component</li> </ul>
Successor Order Component	The order component that depends on the current order item.
Successor Order Item	The name of the order item on that depends on the order item in the current row. See <i>OSM Concepts</i> for more information about dependency types.
Dependency Type	The type of dependency. Available values include <b>Completion</b> , <b>Data Change</b> , and <b>Order Item</b> .

**Table 4–19 (Cont.) Columns in the Successors of This Order Item Area**

Field	Description
Dependency ID	The ID of the dependency. See " <a href="#">Understanding Dependency IDs</a> " for more information.

## Viewing Order Components

The **Order Components** tab provides information about the order components on the order. Summary information about the order components is provided in a table in the upper part of the window. For more information, see "[Viewing Order Component Summary Information](#)."

Additional information about individual order components is available in the following subtabs:

- **Running & Failed Tasks:** Provides information about any tasks that are in progress or failed for the selected order component. For more information, see "[Viewing Running and Failed Tasks for an Order Component](#)."
- **Order Items:** Provides information about order components associated with the selected order component. For more information, see "[Viewing Related Order Item Information](#)."
- **Dependencies:** Provides information about order components on which the selected order component depends, and order components that depend on the selected order component. For more information, see "[Viewing Order Component Dependencies](#)."

## Viewing Order Component Summary Information

In the **Order Components** tab, the table in the upper part of the window provides summary information about the order components on the order.

Order components are identified by their names and are broken into columns based on the orchestration sequence used to generate them. For example, if the orchestration sequence includes three stages, the table has a column for each stage, and each column displays the portion of each order component name that corresponds to that stage. See "[Understanding the Dependency Graph](#)" for more information about how order component names are generated.

**Table 4–20** describes the information displayed in the summary area of the **Order Components** tab.

**Table 4–20 Columns in the Order Components Tab**

Column	Description
<i>Orchestration Stage Name</i>	Lists the portion of the order component name derived from this orchestration stage
<b>Calculated Start Date</b>	If enabled, the date and time before which the order component will not start
<b>Expected Duration</b>	If defined, the time the order component is expected to complete
<b>Key</b>	The run-time name of the order component
<b>Task Failure Count</b>	The number of failed tasks for the order component

## Viewing Running and Failed Tasks for an Order Component

The **Running & Failed Tasks** subtab provides information about any tasks that are currently running or in a failed state for the selected order component.

[Table 4-21](#) describes the information displayed in the **Running & Failed Tasks** subtab.

**Table 4-21 Columns in the Running & Failed Tasks Subtab**

Column	Description
Task Name	The name of the running or failed task. Click the name to open the OSM Task web client with this task displayed.
Execution Mode	The mode under which a task is running. May be one of Do, Redo, Undo, Do in fallout, Redo in fallout, or Undo in fallout. Do is the default mode for a task that executes under normal processing; redo and undo are used in amendment processing. Do, Redo, and Undo in fallout are used when an order fails.
Task State	State of the task. Valid states are: <ul style="list-style-type: none"> <li>■ <b>Received:</b> The task for the order has been received in the system and is waiting to be accepted.</li> <li>■ <b>Assigned:</b> The task for the order has been assigned to a user.</li> <li>■ <b>Accepted:</b> The task for the order has been accepted by a user and is working on it.</li> <li>■ <b>Suspended:</b> The task is suspended at a task state defined by the cartridge designer.</li> </ul>
Last State Change Time	Amount of time since the last state change for the task.

## Viewing Related Order Item Information

The Order Items subtab displays the order items associated with the order component in a list by default. You can select the **Hierarchy** option to view the order items in a hierarchy. You can click the name of any order item in this area to open the main **Order Items** tab with that order item selected in the upper part of the tab.

## Viewing Order Component Dependencies

The **Dependencies** subtab displays information about two different dependency relationships:

- Dependencies in which the current entity is dependent on other entities. See ["Predecessors of This Order Component Area."](#)
- Dependencies in which other entities depend on the current entity. See ["Successors of This Order Component Area."](#)

Dependency information is current as of the time that the Order Details page is opened.

### Understanding Dependencies

Dependencies are relationships in which a condition related to one order component must be satisfied before the other order component can be completed. For example, a piece of equipment must be shipped to a location before it can be installed.

Dependencies are managed by OSM at the level of order components. All order items in one order component that are dependent on order items in another order component are grouped together into a single dependency. Only when the required

conditions for all the order items involved in a dependency are satisfied is the dependency resolved.

Dependencies can be between order components in the same order (intra-order dependencies) or between order components in different orders (inter-order dependencies). Inter-order dependencies are particularly common in situations that involve amendments or follow-on orders.

Dependencies are configured in Design Studio and determined for an order when OSM generates its orchestration plan. See *OSM Concepts* and the Design Studio Help for more information about dependencies.

### Understanding Dependency IDs

Dependency IDs uniquely identify dependencies so that you can easily tell which order items are included in which dependencies. OSM manages dependencies at the order component level, so all order items in the same order component share the same dependency ID.

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**Note:** Dependency IDs are used only for this purpose and do not correspond to any other IDs used in the application.

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When you view dependencies for order items in the **Dependencies** tab, each order item is listed separately, even though their dependencies are actually grouped by order component. Dependency IDs enable you to identify the order-component-based dependency into which order items are grouped, since all of the order items for the same order component will have the same dependency ID.

Understanding which order items share dependencies is particularly important when you take actions to resolve dependencies. Resolving a single dependency with a particular ID can affect multiple order items. See "[Resolving Dependencies](#)" for more information.

### Getting Information About Dependency Resolution Delay

Listings of dependencies include information about their resolution delays. A resolution delay defines a period of time for OSM to resolve a dependency after the dependent order component is complete. Resolution delays are defined in Design Studio.

You can see the resolution delay for a dependency by expanding a row in a table listing dependencies. See "[Getting More Information About Rows](#)" for more information about expanding rows.

Depending on whether or how the resolution delay is configured, you can see one of three types of information:

- If no delay is configured for a dependency, you see **Wait Until: N/A**.
- If the resolution delay defines a specific date or it defines a duration and the dependency is complete, you see **Wait Until: *date***, where *date* is one of the following:
  - The specific date configured for the dependency
  - A date calculated from the completion date and the specified duration.

This date can be in the past if the dependency has been resolved.

- If the resolution delay defines a duration and the dependency is not complete, you see **Wait For:***duration* where *duration* specifies the length of the duration defined for the dependency.

### Predecessors of This Order Component Area

The Predecessors of this order component area lists entities on which the order component depends. (This is the same information that is displayed in the **Dependencies** area of the **Summary** tab.)

Table 4–22 describes the information displayed in the Predecessors of this order component area.

**Table 4–22 Columns in the Predecessors of This Order Component Area**

Column	Description
Order Item	The order item affected by the dependency
Predecessor Order ID	The ID of the order that contains the order component on which the current order component depends. This is the ID of the current order for an intra-order dependency.
Status	The status of the dependency. Values are: <ul style="list-style-type: none"> <li>■ <b>created:</b> the dependency has been created and is pending</li> <li>■ <b>delayed:</b> the dependency has been resolved, but is waiting for a time delay</li> <li>■ <b>resolved:</b> the dependency has been resolved and is no longer blocking the successor order component</li> </ul>
Predecessor Order Component	The order component on which the current order component depends.
Predecessor Order Item	The name of the order item on which the order item in the current row is dependent.
Dependency Type	The type of dependency. Available values include <b>Completion</b> , <b>Data Change</b> , and <b>Order Item</b> . See <i>OSM Concepts</i> for more information.
Dependency ID	The ID of the dependency. See " <a href="#">Understanding Dependency IDs</a> " for more information.

### Successors of This Order Component Area

The Successors of this order component area lists entities that depend on the selected order component.

Table 4–23 describes the information displayed in the Successors of this order component area.

**Table 4–23 Columns in the Successors of This Order Component Area**

Field	Description
Order Item	The order item affected by the dependency
Successor Order ID	The ID of the order that contains the order component that depends on the current order component. This is the ID of the current order for an intra-order dependency.

**Table 4–23 (Cont.) Columns in the Successors of This Order Component Area**

<b>Field</b>	<b>Description</b>
<b>Status</b>	The status of the dependency. Values are: <ul style="list-style-type: none"><li>■ <b>created</b>: the dependency has been created and is pending</li><li>■ <b>delayed</b>: the dependency has been resolved, but is waiting for a time delay</li><li>■ <b>resolved</b>: the dependency has been resolved and is no longer blocking the successor order component</li></ul>
<b>Successor Order Component</b>	The order component that depends on the current order component.
<b>Successor Order Item</b>	The name of the order item on that depends on the order item in the current row.
<b>Dependency Type</b>	The type of dependency. Available values include <b>Completion</b> , <b>Data Change</b> , and <b>Order Item</b> . See <i>OSM Concepts</i> for more information.
<b>Dependency ID</b>	The ID of the dependency. See " <a href="#">Understanding Dependency IDs</a> " for more information.

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## Managing Orders

This chapter describes how you use the Oracle Communications Order and Service Management (OSM) Order Management web client to manage orders, particularly fallout orders.

### About Order Actions

The actions you can take to manage orders include the following:

- [Changing the Order Priority](#)
- [Changing the Order Reference](#)
- [Suspending Orders](#)
- [Resuming Orders](#)
- [Canceling Orders](#)
- [Failing Orders](#)
- [Resolving Dependencies](#)
- [Resolving Order Failures](#)
- [Retrying Orders](#)
- [Terminating Orders](#)

The actions you can take on any particular order depend on its current state and on the order life cycle policy defined for the order. See *OSM Concepts* and Oracle Communications Design Studio Help for more information about order lifecycle policies.

### Using Job Control Orders for Actions on Multiple Orders

You can run the following actions on multiple orders using a job control order:

- **Suspend order**
- **Resume order**
- **Fail order**
- **Resolve order failure**
- **Cancel orders**
- **Terminate orders**
- **Retry Order**

The actions that a job control order can take on orders depend on the current state of the target orders and on the order life cycle policy defined for the target orders. In addition, job control order actions are limited to those actions available to all selected orders. For example, if 40 selected orders all have access to four actions but the 41st order has access to only two of those actions, then the job control order for all 41 selected orders is limited to only the common two actions. See *OSM Concepts* and *Design Studio Help* for more information about order lifecycle policies.

Every action that you can run as a job control order includes the job control order related configuration options shown in [Figure 5-1](#).

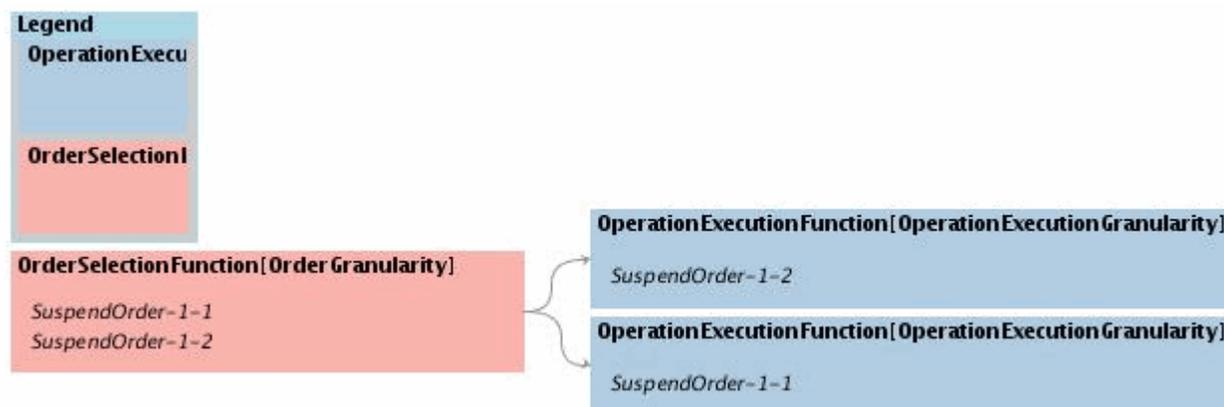
**Figure 5-1 Job Control Order Configuration Options**

The screenshot shows a configuration dialog for a job control order. At the top, there are two checkboxes: "Run operation as a background job" (unchecked) and "Open job order details page" (checked). Below this is a section titled "Job Configuration" containing four fields: "Failure Threshold" (set to 0, with a percentage icon), "Concurrent Operations Among Orders" (set to 1), "Start Date" (set to 03/05/2015 07:02:32 AI), and "Priority" (set to 5). At the bottom of the dialog is a "Reason" text area and "OK" and "Cancel" buttons.

To configure job control order options:

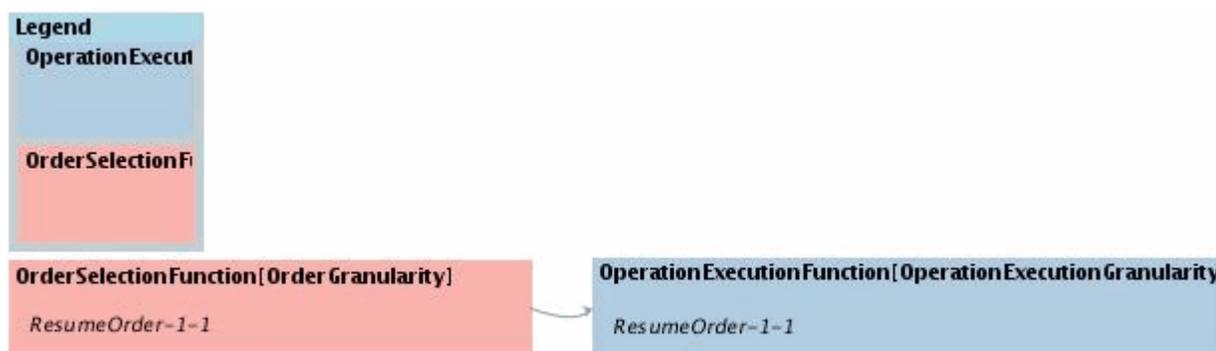
1. Select **Run operations as a background job** to enable the action to run from a job control order. This option also enables you to edit all other job control order configuration options.
2. Select **Open job order details page** if you want the to see the job control order from the **Order Details** page after you select the action.
3. In the **Failure Threshold** field, specify how many actions must fail before the job control order automatically transitions to the suspended state. Valid values are percentages from 1%-99%, absolute values, such as 10, 15, and so on, or 0 which specifies no threshold. If specified, this value overrides the default value of 0.
4. In the **Concurrent Operations Among Orders** field, specify the number of executable components created for each action in the job. If specified, this value overrides the default value of 1. For example, if you select four orders with a suspend order action and configured the concurrent orders field with a value of 2, then OSM generates two executable order components that run in parallel as illustrated in [Figure 5-2](#). Each order component would process two of the four orders.

Figure 5–2 Job Control Order with 2 Concurrent Orders



In the same way, if you select the same four suspended orders with a resume action and configured the concurrent orders field with a value of 1, then OSM generates one executable order component that runs the resume action on all four orders, one after the other, based on the sequence in which the orders were selected (see Figure 5–3).

Figure 5–3 Job Control Order with 1 Concurrent Order



5. In the **Start Date** field, specify the date and time when you want the job control order to start.

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**Note:** You can also use a job control order to future-date an action on only one order.

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6. In the **Priority** field, you can select the priority of the job control order. Orders with the lower priority numbers are processed before orders with higher priority numbers. The default priority is 5.

## Actions on Job Control Orders

Actions that can be run on a job control order itself include:

- **Suspend Order:** You can suspend or update a job control order in the in progress state. Job control orders also automatically enter the suspended state when the job control order passes the job control order **Failure Threshold**.

- **Resume Order:** You can resume a suspended job control order. When you resume a suspended job control order, it returns to the previous state it had been in before entering the suspended state (for example, In Progress or Not Started). The job control order resume processing any pending orders.
- **Terminate Order:** The job control order transitions to the aborted state.
- **Cancel Order:** Canceling a job control order stops all further processing on a job control order. The cancel order does not reverse job control order actions that have already run.
- **Transition to Complete State:** The job control order enters the completed state when the action on all orders has completed whether successfully or unsuccessfully.
- **Fail Order:** Job control order may transition to the failed state; however, job control orders do count all failed actions.

You have permissions to perform different job control order functions depending on whether the OSM user account you are using is associated to the **JCO\_SuperUserRole** or the **JCO\_UserRole** workgroups. The **JCO\_SuperUserRole** can perform all actions. The **JCO\_UserRole** can perform all actions except for **Terminate Order** and **Cancel Order**.

## Changing the Order Priority

You can change the priority of an order, provided you have relevant security permissions. Orders with lower priority numbers are processed before orders with high numbers. The default order priority is 5.

To change the order priority:

1. Do one of the following:
  - In the Results area of the Search page, right-click an order in the table, then select **Change Order Priority**.
  - In the Order Details page, select **Change Order Priority** from the **Actions** menu in the upper-right corner.

The Change Priority dialog box is displayed.

2. Use the slider in the **New Priority** field to select the priority.
3. Click **OK**.

The order priority is updated.

## Changing the Order Reference

You can change the order reference value. The order reference is an alphanumeric value, typically used as an identifier to external systems. Reference numbers can be used as keys to correlate orders between systems.

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**Note:** You should make sure you understand how the order reference is used in your environment before you make any changes. In some cases, changing the reference number can break relations between orders on different systems.

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To change the order reference:

1. Do one of the following:
  - In the Results area of the Search page, right-click an order in the table, then select **Change Reference**.
  - In the Order Details page, select **Change Reference** from the **Actions** menu in the upper-right corner.

The Change Reference dialog box is displayed.

2. In the **New Reference** field, enter the new reference.
3. Click **OK**.

The reference is updated.

## Suspending Orders

Suspending an order stops its processing temporarily. The order cannot be updated while it is suspended, but unlike a canceled or terminated order, you can resume its processing. See "[Resuming Orders](#)."

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**Note:** Make sure you understand how other systems in your order processing solution handle suspended orders. Depending on how your solution is implemented, upstream systems may not be aware that an order has been suspended.

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You can choose to suspend an order with no grace period, with an infinite grace period, or with a grace period that you define. If you suspend with a defined grace period, you can also specify an interval at which jeopardy events are sent to notify other systems of the pending suspension of the order.

To suspend an order with no grace period or an infinite grace period:

1. Do one of the following:
  - In the Results area of the Search page, right-click one or more orders in the table, then select **Suspend Order**.
  - In the Order Details page, select **Suspend Order** from the **Actions** menu in the upper-right corner.

The Suspend Order dialog box is displayed, as shown in [Figure 5-4](#).

**Figure 5–4 The Suspend Order Dialog Box**

2. To suspend the order immediately, click **No Grace Period**. To suspend the order after waiting until all in-process tasks are complete, click **Infinite Grace Period**.
3. (Optional) To run the action as a job order, see "[Using Job Control Orders for Actions on Multiple Orders](#)."
4. (Optional) In the **Reason** text box, enter the reason for suspending the order.
5. Click **OK**.

The order is suspended. The order state is changed to Suspended.

To suspend an order with a defined grace period:

1. Do one of the following:
  - In the Results area of the Search page, right-click on one or more orders in the table, then select **Suspend Order**.
  - In the Order Details page, select **Suspend Order** from the **Actions** menu in the upper-right corner.

The Suspend Order dialog box is displayed.

2. Click **Suspend After Grace Period**.

The dialog box expands to include additional fields, as shown in [Figure 5–5](#).

**Figure 5–5 The Suspend Order Dialog Box Expanded for Grace Period**

3. In the **Grace Period** field, click the calendar icon and specify the date on which the suspension begins.
4. (Optional) Use the **Days**, **Hours**, **Minutes**, and **Seconds** fields to specify an interval for jeopardy events.
5. (Optional) To run the action as a job order, see "[Using Job Control Orders for Actions on Multiple Orders.](#)"
6. (Optional) In the **Reason** text box, enter the reason for suspending the order.
7. Click **OK**.

The order is scheduled for suspension on the date you specified.

## Resuming Orders

You can resume processing of orders that have been suspended or are in the Waiting for Revision state. The availability of this action depends on the order specification design.

To resume a suspended order:

1. Do one of the following:
  - In the Results area of the Search page, right-click on one or more orders in the table, then select **Resume Order**.

- In the Order Details page, select **Resume Order** from the **Actions** menu in the upper-right corner.

The Resume Order dialog box is displayed.

2. (Optional) To run the action as a job order, see "[Using Job Control Orders for Actions on Multiple Orders](#)."
3. (Optional) In the **Reason** text box, enter the reason for resuming order processing.
4. Click **OK**.

The dialog box closes and order processing resumes. The order state is set to In Progress.

## Canceling Orders

You can cancel an order to stop its processing and roll back all the tasks associated with it. Canceling an order stops its processing either immediately or after a grace period that you specify. It is not possible to restart an order after it has been canceled. You must resubmit the order if you want to process it again.

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**Note:** You should not cancel an order that is in Suspended state if it was suspended while in the Amending state and has unfinished compensation. In this situation, resume the order before canceling it.

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Canceling an order is similar to terminating it except that terminating an order does not result in a rollback of tasks. See "[Terminating Orders](#)."

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**Caution:** Make sure you understand the impact on other systems of canceling orders. Depending on how your solution is implemented, upstream systems may not be aware that an order has been canceled.

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You can choose to cancel an order with no grace period, with an infinite grace period, or with a grace period that you define. If you cancel the order with a defined grace period, you can also specify an interval at which jeopardy events are sent to notify other systems of the pending cancellation of the order.

To cancel an order with no grace period or an infinite grace period:

1. Do one of the following:
  - In the Results area of the Search page, right-click on one or more orders in the table, then select **Cancel Order**.
  - In the Order Details page, select **Cancel Order** from the **Actions** menu in the upper-right corner.

The Cancel Order dialog box is displayed, as shown in [Figure 5-6](#).

Figure 5–6 The Cancel Order Dialog Box

**Cancel 2 Orders**

No Grace Period  
 Cancel After Grace Period  
 Infinite Grace Period

Run operation as a background job  
 Open job order details page

**Job Configuration**

Failure Threshold  %

Concurrent Operations Among Orders

Start Date

Priority

Reason

OK Cancel

2. To cancel the order immediately, click **No Grace Period**. To cancel the order after waiting until all in-process tasks are complete, click **Infinite Grace Period**.
3. (Optional) To run the action as a job order, see "[Using Job Control Orders for Actions on Multiple Orders](#)."
4. (Optional) In the **Reason** text box, enter the reason for canceling the order.
5. Click **OK**.

The order is canceled or scheduled to be canceled. While the order is in the process of being canceled, its state is **Cancelling**. After the cancellation is complete, the state is **Canceled**.

To cancel an order with a defined grace period:

1. Do one of the following:
  - In the Results area of the Search page, right-click on one or more orders in the table, then select **Cancel Order**.
  - In the Order Details page, select **Cancel Order** from the **Actions** menu in the upper-right corner.

The Cancel Order dialog box is displayed.

2. Click **Cancel After Grace Period**.

The dialog box expands to include additional fields, as shown in [Figure 5–7](#).

**Figure 5–7 The Cancel Order Dialog Box Expanded for Grace Period**

3. In the **Grace Period** field, click the calendar icon and specify the date on which the order should be canceled.
4. (Optional) Use the **Days**, **Hours**, **Minutes**, and **Seconds** fields to specify an interval for jeopardy events.
5. (Optional) To run the action as a job order, see "[Using Job Control Orders for Actions on Multiple Orders.](#)"
6. (Optional) In the **Reason** text box, enter the reason for canceling the order.
7. Click **OK**.

The order is scheduled for cancellation on the date you specified.

## Failing Orders

You can fail orders manually. Failing an order stops its processing and sets its state to Failed.

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**Note:** In most environments, fallout handling rules detect processing problems and automatically fail orders. Manually failing orders is therefore not normally required. There may be some situations and environments when it may be necessary to manually fail orders, however.

Make sure you understand how other systems in your order processing solution handle failed orders. Depending on how your solution is implemented, upstream systems may not be aware that an order has been manually failed.

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Orders you fail manually are treated the same ways as orders failed automatically by the system. Manually failed orders are returned by the Failed Orders predefined search along with automatically failed orders. See "[Searching for Orders](#)" for information about search for failed orders.

It is not possible to change the state of a failed order or to make other changes until you resolve the order failure. See "[Resolving Order Failures](#)."

You can choose to fail an order with no grace period, with an infinite grace period, or with a grace period that you define. If you fail the order with a defined grace period, you can also specify an interval at which jeopardy events are sent to notify other systems of the pending failure of the order.

To fail an order with no grace period or an infinite grace period:

1. Do one of the following:
  - In the Results area of the Search page, right-click on one or more orders in the table, then select **Fail Order**.
  - In the Order Details page, select **Fail Order** from the **Actions** menu in the upper-right corner.

The Fail Order dialog box is displayed, as shown in [Figure 5-8](#).

Figure 5–8 The Fail Order Dialog Box

**Fail 2 Orders**

No Grace Period  
 Fail After Grace Period  
 Infinite Grace Period

Run operation as a background job  
 Open job order details page

**Job Configuration**

Failure Threshold  %

Concurrent Operations Among Orders

Start Date

Priority

Reason

OK Cancel

2. To fail the order immediately, click **No Grace Period**. To fail the order after waiting for all current tasks to be completed, click **Infinite Grace Period**.
3. (Optional) To run the action as a job order, see "[Using Job Control Orders for Actions on Multiple Orders](#)."
4. (Optional) In the **Reason** text box, enter the reason for terminating the order.
5. Click **OK**.

The dialog box closes. The order's state is set to Failed and its processing stops.

To fail an order with a defined grace period:

1. Do one of the following:
  - In the Results area of the Search page, right-click on one or more orders in the table, then select **Fail Order**.
  - In the Order Details page, select **Fail Order** from the **Actions** menu in the upper-right corner.

The Fail Order dialog box is displayed.

2. Click **Fail After Grace Period**.

The dialog box expands to include additional fields, as shown in [Figure 5–9](#).

Figure 5–9 The Fail Order Dialog Box Expanded for Grace Period

**Fail 2 Orders**

No Grace Period  
 Fail After Grace Period  
 Infinite Grace Period

Grace Period

Interval for Fail Jeopardy Event

Days      
 Hours Minutes Seconds

Run operation as a background job  
 Open job order details page

**Job Configuration**

Failure Threshold   %

Concurrent Operations Among Orders

Start Date

Priority

Reason

OK Cancel

3. In the **Grace Period** field, click the calendar icon and specify the date on which to fail the order.
4. (Optional) Use the **Days**, **Hours**, **Minutes**, and **Seconds** fields to specify an interval for jeopardy events.
5. (Optional) To run the action as a job order, see "[Using Job Control Orders for Actions on Multiple Orders.](#)"
6. (Optional) In the **Reason** text box, enter the reason for failing the order.
7. Click **OK**.

The order is scheduled for failure on the date you specified.

## Resolving Dependencies

You can resolve dependencies manually so that blocked order components and orders can be processed. For example, if you are analyzing a failed order and discover an unresolved dependency that is blocking the processing of an order component, you can resolve it.

In some cases, resolving a dependency may require that you take action to correct a problem such as a failure in an external system. In other cases, a revision order may be received that corrects an issue in the order.

If it is not possible to resolve a dependency in some other way (for example by retrying a failed task in the blocking order component), you can resolve it manually in the Order Management web client.

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**Caution:** Resolving a dependency in the Order Management web client does not make any changes in the underlying order data, it just marks a dependency as resolved so that processing can proceed.

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**Note:** Resolving a dependency is specific to the order. Because dependencies are determined in orchestration plans, other orders of the same type continue to include the dependency until the design is modified.

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Resolving a dependency is irreversible. If, at a later point, changes in orders or order components mean that the conditions of the dependency are no longer met, the dependency remains resolved. In other words, a dependency is permanently resolved if the dependency condition has been met at least once or if the dependency has ever been resolved manually.

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**Caution:** Make sure you understand the impact on other systems of manually resolving dependencies. You can introduce order processing inconsistencies by manually resolving dependencies. For example, resolving a dependency may cause other systems to expect that a particular service has been provisioned when it has not.

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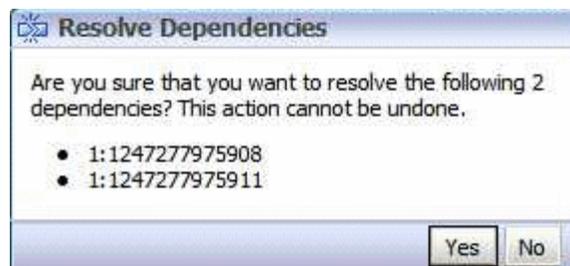
Dependencies are managed at the order component level, so when you resolve a dependency, you resolve it for all order items in the order component. You can use dependency IDs to understand which order items will be affected by resolving a dependency. See "[Understanding Dependency IDs](#)" for more information.

The Resolve Dependency action is available only when an order is in the Failed state. After you resolve dependencies, you must resolve the order failure to allow the order to continue processing. See "[Resolving Order Failures](#)."

To resolve a dependency:

1. In a table that lists dependencies, select one or more dependencies that you want to resolve. See "[Viewing Order Component Dependencies](#)" for more information about where dependencies are displayed.
2. In the toolbar of the area containing the table, click the **Resolve Dependency** or **Resolve Dependencies** button.

The Resolve Dependencies dialog box is displayed, listing the dependencies that will be resolved, as shown in [Figure 5-10](#).

**Figure 5–10 The Resolve Dependencies Dialog Box**

3. Click **Yes**.

The dependency is resolved.

## Resolving Order Failures

When the reason for an order failure has been corrected, typically by resolving a dependency, you can resolve the order failure. See "[Resolving Dependencies](#)" for more information. Resolving the order failures sets all of the failed tasks to Accepted state. Processing resumes automatically if there are pending tasks to be completed.

To resolve an order failure:

1. Do one of the following:
  - In the Results area of the Search page, right-click on one or more orders in the table, then select **Resolve Order Failure**.
  - In the Order Details page, select **Resolve Order Failure** from the **Actions** menu in the upper-right corner.

The Resolve Order Failure dialog box is displayed.

2. (Optional) To run the action as a job order, see "[Using Job Control Orders for Actions on Multiple Orders](#)."
3. (Optional) In the **Reason** text box, enter the reason for resolving the failure.
4. Click **OK**.

The dialog box closes. The order state is set to In Progress and order processing resumes.

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**Note:** If the order failed because of a recognition rule failure or after reaching its point of no return (PoNR), it cannot be resolved.

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## Retrying Orders

When the reason for an order failure has been corrected, you can retry the order. This means retrying all of the failed tasks on the order. Retrying the order sets all of the failed tasks into Received state. Processing resumes automatically if there are pending tasks to be completed.

To retry an order:

1. Do one of the following:
  - In the Results area of the Search page, right-click on one or more orders in the table, then select **Retry Order**.

- In the Order Details page, select **Retry Order** from the **Actions** menu in the upper-right corner.

The Retry Order dialog box is displayed.

2. (Optional) To run the action as a job order, see "[Using Job Control Orders for Actions on Multiple Orders.](#)"
3. (Optional) In the **Reason** text box, enter the reason for retrying the order.
4. Click **OK**.

The dialog box closes. The order state is set to In Progress and order processing resumes.

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**Note:** If the order failed because of a recognition rule failure, it cannot be retried.

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## Terminating Orders

You can terminate orders that have not progressed through the system and cannot be recovered. A terminated order cannot be resumed. Terminating an order is similar to cancelling an order except that no tasks are rolled back. As a result, cleanup may be required after terminating an order.

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**Caution:** Make sure you understand the impact on other systems of terminating orders. Depending on how your solution is implemented, upstream systems may not be aware that an order has been terminated.

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To terminate an order:

1. Do one of the following:
  - In the Results area of the Search page, right-click on one or more orders in the table, then select **Terminate Order**.
  - In the Order Details page, select **Terminate Order** from the **Actions** menu in the upper-right corner.

The Terminate Order dialog box is displayed.

2. (Optional) To run the action as a job order, see "[Using Job Control Orders for Actions on Multiple Orders.](#)"
3. (Optional) In the **Reason** text box, enter the reason for terminating the order.
4. Click **OK**.

The order is terminated. The order state is set to Aborted.

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## Managing Order Items and Order Components

This chapter describes how you use the Oracle Communications Order and Service Management (OSM) Order Management web client to manage order items and order components.

### Managing Order Items

You can manage order items using the following actions:

- [Showing the Latest Activity for the Order Related To an Order Item](#)
- [Opening an Order Component in the Order Component Tab](#)
- [Finding a Transformed Order Item for an Original Order Item in the Order Item Table](#)

The actions you can take on an order item depend on its current state and whether it is an original or transformed order item. See *OSM Concepts* and Oracle Communications Design Studio Help for information about transforming order items using the order transformation manager.

#### Showing the Latest Activity for the Order Related To an Order Item

You can display recent activity for the order that contains the selected order item. For more information about what is displayed, see "[Viewing Latest Activity](#)."

To show the latest activity for the order related to an order item:

1. Open the order that contains the information you want to see by selecting the order you want to open in the search results and clicking **Open Order**, or by double-clicking the order row.
2. Click the **Order Items** tab in the Order Details area.
3. Select an order item from the table at the top of the window.
4. Click **Actions** immediately above the upper table, and from the resulting menu select **Show latest activity**.

The Activity area will be displayed on the right side of the window, containing information about the relevant order.

#### Opening an Order Component in the Order Component Tab

You can open an order component for an order item in the **Order Components** tab.

To open an order component in the **Order Components** tab:

1. Open the order that contains the information you want to see by selecting the order you want to open in the search results and clicking **Open Order**, or by double-clicking the order row.
2. Click the **Order Items** tab in the Order Details area.
3. Select an order item from the table at the top of the window.  
The order components associated with the selected order item are displayed in the table in the lower part of the window.
4. Select the row containing the order component you are interested in and click **Actions** immediately above the lower table.
5. From the resulting menu, select **Show in Order Components tab**.

### Finding a Transformed Order Item for an Original Order Item in the Order Item Table

You can find a transformed order item from its source order item and, from there, select the transformed order item in the order item table.

To find a transformed order item for an original order item in the order item table:

1. Open the order that contains the information you want to see by selecting the order you want to open in the search results and clicking **Open Order**, or by double-clicking the order row.
2. Click the **Order Items** tab in the Order Details area.
3. Select an order item from the table at the top of the window.
4. In the lower part of the window, select the **Transformations** tab.  
The transformed order items for the selected order item are displayed in the table in the lower part of the window.
5. Select the row containing the transformed order item you are interested in and click **Actions** immediately above the lower table.
6. From the resulting menu, select **Select in Order Items tree-table**.  
In the table at the top of the window, the order items are expanded to that the transformed order item you selected is visible and selected.

## Managing Order Components

The actions you can take to manage order components include the following:

- [Showing the Latest Activity for the Order](#)
- [Retrying or Resolving the Tasks for an Order Component](#)
- [Opening and Editing a Task](#)
- [Retrying or Resolving a Specific Task](#)
- [Opening an Order Item in the Order Item Tab](#)

The actions you can take on any particular order component depend on its current state and the state of its tasks. See *OSM Concepts* and Design Studio Help for more information about the order transformation manager.

## Showing the Latest Activity for the Order

You can display recent activity for the order that contains the selected order component. For more information about what is displayed, see "[Viewing Latest Activity](#)."

To show the latest activity for the order related to an order component:

1. Open the order that contains the information you want to see by selecting the order you want to open in the search results and clicking **Open Order**, or by double-clicking the order row.
2. Click the **Order Components** tab in the Order Details area.
3. Select an order component from the table at the top of the window.
4. Click **Actions** immediately above the upper table, and from the resulting menu select **Show latest activity**.

The Activity area will be displayed on the right side of the window, containing information about the relevant order.

## Retrying or Resolving the Tasks for an Order Component

You can retry or resolve all of the failed tasks for an order component. Retrying tasks sends all of the applicable tasks to the Received state so that they can run again. Resolving tasks sends all of the applicable tasks to the Accepted state so that they can be started again.

To retry the tasks for an order component:

1. Open the order that contains the information you want to see by selecting the order you want to open in the search results and clicking **Open Order**, or by double-clicking the order row.
2. Click the **Order Components** tab in the Order Details area.
3. Select an order component that has failed tasks from the table at the top of the window. The task failure count column displays the number of tasks that have failed for that order component.

The tasks that are failed or are currently running for the order component are displayed in the table in the lower part of the window.

4. Click **Actions** immediately above the upper table, and from the resulting menu select one of the following:
  - **Retry**: if you want to send the failed tasks for the order component to Received state.
  - **Resolve**: if you want to send the failed tasks for the order component to Accepted state.

The selected action will be performed and the new state of the tasks will be displayed in the table in the lower part of the window.

## Opening and Editing a Task

You can open a failed or in progress task for an order component in the OSM Task web client. If you have the appropriate privileges, you can edit the task.

To open a task for editing:

1. Open the order that contains the information you want to see by selecting the order you want to open in the search results and clicking **Open Order**, or by double-clicking the order row.
2. Click the **Order Components** tab in the Order Details area.
3. Select an order component that has failed tasks from the table at the top of the window. The task failure count column displays the number of tasks that have failed for that order component.

The tasks that are failed or are currently running for the order component are displayed in the table in the lower part of the window.

4. Do one of the following:
  - Click the name of the task in the table in the lower part of the window.
  - Click the row containing the task you would like to open, click **Actions** immediately above the lower table, and from the resulting menu, select **Edit Task**.

The Task web client will be opened with the selected task in the task editor.

## Retrying or Resolving a Specific Task

You can retry or resolve a specific failed task associated with an order component. Retrying a task sends it to the Received state so that it can run again. Resolving tasks sends it to the Accepted state so that it can be started again.

To retry a specific task:

1. Open the order that contains the information you want to see. by selecting the order you want to open in the search results and clicking **Open Order**, or by double-clicking the order row.
2. Click the **Order Components** tab in the Order Details area.
3. Select an order component that has failed tasks from the table at the top of the window. The task failure count column displays the number of tasks that have failed for that order component.

The tasks that are failed or are currently running for the order component are displayed in the table in the lower part of the window.

4. Click the row for one of the failed tasks in the table in the lower part of the window. Do not click the name of the task.
5. Click **Actions** immediately above the upper table, and from the resulting menu select one of the following:
  - **Retry**: if you want to send the failed task to Received state.
  - **Resolve**: if you want to send the failed task to Accepted state.

The selected action will be performed and the new state of the task will be displayed in the table in the lower part of the window.

## Opening an Order Item in the Order Item Tab

You can open an order item associated with an order component in the **Order Items** tab.

To open a task for editing:

1. Open the order that contains the information you want to see by selecting the order you want to open in the search results and clicking **Open Order**, or by double-clicking the order row.
2. Click the **Order Components** tab in the Order Details area.
3. Select an order component from the table at the top of the window.
4. Select the **Order Items** subtab in the lower part of the window.

The list of order items associated with the order component is displayed in the lower part of the window.

5. Click the name of the order item to open it in the **Order Items** tab.



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## Managing Workgroups, Notifications, System Errors, and Cartridges

This chapter describes how to use the Order Management web client to manage workgroups, notifications, and system errors for the Oracle Communications Order and Service Management (OSM) system.

### About Managing Workgroups, Notifications, System Errors, and Cartridges

Use the OSM Administration area of the Order Management web client to manage workgroups, notifications, and system errors.

Using the Administration area, you can do the following:

- Manage workgroups, which includes the following tasks:
  - Managing users' membership in workgroups. Membership in workgroups controls what functions and tasks users are allowed to perform. There are different ways to associate users with workgroups. For more information, see "[About Associating Users with Workgroups](#)."
  - Managing workgroup calendars, which specify work schedules that are optionally used by order jeopardy management.
- Manage notifications, which provide access to audit data. You to enable and disable notification types.
- Manage system errors, which provide information about errors that have occurred during order processing.
- View the cartridges deployed to the server and manage the default versions of cartridges. (Applies to version 7.3.0.1 and higher.)
- Refresh the server cache, which loads any changes that you have made, such as associating users with workgroups or creating a workgroup calendar, into the OSM runtime system.

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**Note:** Depending on the size and complexity of your system, refreshing the server cache might take a significant amount of time. For more information, see "[Refreshing the Server Cache](#)."

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## About Associating Users with Workgroups

Membership in a workgroup controls user permissions. You can make users members of workgroups by either assigning users to workgroups or by assigning workgroups to users. Either method results in the same outcome.

You can associate users with workgroups in these ways:

- By using the Order Management web client, which is described in this chapter. For more information, see either "[Managing Workgroups](#)" or "[Managing Users](#)."
- By adding the user information to an XML document and running the XML Import/Export application to load the contents of the document into the OSM system. The XML document you create is based on the **UserAdmin.xsd** schema file, located at:

`OSM_home\SDK\XMLImportExport\models`

where *OSM\_home* is the directory in which the OSM software is installed. See *OSM System Administrator's Guide* for more information about using the XML Import/Export application.

After associating users with workgroups, the user membership is reflected in both the Workgroup Administration page and User Administration page of the Order Management web client.

## Managing Workgroups

Workgroups, which you create as **roles** in Oracle Communications Design Studio, use permissions to define what actions a user who is assigned to the workgroup can perform. After you create a role in Design Studio and associate it with specific orders, tasks, functions, and so on, that role is displayed in the Order Management web client as a workgroup. See the Design Studio Modeling OSM Processes Help for information about creating roles.

A workgroup consists of a group of users. You can assign users to one or more workgroups and remove users from workgroups to which they have been assigned. You can add or remove users to more than one workgroup at a time.

The Workgroup Administration page lists all workgroups that are currently deployed to the OSM system. The Workgroup Administration table displays the following columns:

- **Modified:** Indicates whether the workgroup has been changed since the last time the Workgroup Administration page was saved.
- **Workgroup Name:** Displays the name of the workgroup that was created as a role in Design Studio.
- **Description:** Provides a description of the workgroup that was created as a role in Design Studio.

## Assigning Users to Workgroups

When you assign users to a workgroup, those users become workgroup members and can perform the functions and tasks in that workgroup.

See the Design Studio Modeling OSM Processes Help for information about creating the **roles** that are managed as workgroups in the Order Management web client.

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**Note:** The option to assign users to workgroups is available only if you are a member of the OMS\_user\_assigner WebLogic security realm group.

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To assign a user to a workgroup:

1. In the Order Management web client Administration area, click **Administer Workgroups**.

The Workgroup Administration page is displayed.

2. In the list of workgroups, select one or more workgroups to which you want to assign users.

The Users area displays a list of available users, and a list of users that are members of the selected workgroups.

3. Move users from the **Available Users** list to the **Member Users** list by using the arrow buttons:

- To move all users, click the double right arrow.
- To move one or more users, select the users (use the Shift key to select multiple consecutive users) and click the single right arrow.

If you select a group of users but the workgroup already contains one of the selected users, OSM does not add the user twice.

4. Click **Save**.
5. If you have no other tasks to perform in the Order Management web client, click **Refresh Server Cache**.

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**Important:** Refreshing the server cache might take a significant amount of time and possibly interrupt order processing. For more information, see "[Refreshing the Server Cache](#)."

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## Removing Users from Workgroups

When you remove users from a workgroup, those users can no longer perform the functions and tasks in that workgroup.

To remove a user from a workgroup:

1. In the Order Management web client Administration area, click **Administer Workgroups**.

The Workgroup Administration page is displayed.

2. In the list of workgroups, select one or more workgroups from which you want to remove users.

The Users area displays a list of available users, and a list of users that are members of the selected workgroups.

3. Move users from the **Member Users** list to the **Available Users** list by using the arrow buttons:

- To move all users, click the double left arrow.
- To move one or more users, select the users (use the Shift key to select multiple consecutive users) and click the single left arrow.

4. Click **Save**.
5. If you have no other tasks to perform in the Order Management web client, click **Refresh Server Cache**.

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**Important:** Refreshing the server cache might take a significant amount of time and possibly interrupt order processing. For more information, see "[Refreshing the Server Cache](#)."

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## Refreshing Workgroup Data

When you refresh workgroup data, OSM reloads the content of the workgroups table in the Workgroup Administration page using current system data.

To refresh workgroup data:

1. In the Order Management web client Administration area, click **Administer Workgroups**.

The Workgroup Administration page is displayed.

2. In the Workgroup Administration toolbar, click **Refresh Workgroups**.

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**Note:** If you click **Refresh Workgroups** before saving workgroup changes, you are prompted to confirm the refresh operation. If you select **Yes**, unsaved changes are lost. A dot in the **Modified** column of a workgroup indicates unsaved changes.

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## Deleting Workgroups

You delete workgroups to remove **roles** that are no longer in use. Deleting a workgroup from the Order Management web client removes the workgroup from the system. All references to the deleted workgroup are also removed, including workgroup permissions, workgroup calendars, and workgroup views.

Delete workgroups when roles that have previously been modeled in a cartridge and deployed to Design Studio are removed and the cartridge is redeployed without those roles.

To delete a workgroup:

1. In the Order Management web client Administration area, click **Administer Workgroups**.

The Workgroup Administration page is displayed.

2. In the list of workgroups, click the workgroup that you want to delete.
3. In the Workgroup Administration toolbar, click **Delete**.
4. Click **Yes** to confirm.
5. If you have no other tasks to perform in the Order Management web client, click **Refresh Server Cache**.

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**Important:** Refreshing the server cache might take a significant amount of time and possibly interrupt order processing. For more information, see "[Refreshing the Server Cache](#)."

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## Managing Users

A workgroup consists of a group of users. You can assign workgroups to one or more users and you can also remove workgroups from users to which they have been assigned.

The User Administration page of the Order Management web client lists all users that are currently deployed to the OSM system. The User Administration table displays the following columns:

- **Modified:** Indicates whether the user has been changed since the last time the User Administration page was saved.
- **Username:** Displays the name of the user.
- **Email address:** Displays the email address of the user, if available.

## Assigning Workgroups to Users

When you assign workgroups to a user, the user can perform the functions and tasks in that workgroup.

See the Design Studio Modeling OSM Processes Help for information about creating the **roles** that are managed as workgroups in OSM Administration.

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**Note:** The option to assign workgroups to users is available only if you are a member of the OMS\_user\_assigner WebLogic security realm group.

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To assign a workgroup to a user:

1. In the Order Management web client Administration area, click **Administer Users**.  
The User Administration page is displayed.

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**Note:** To appear in the list of users, a user must be a member of at least one of the following WebLogic groups: OMS\_client, OMS\_ws\_api, OMS\_xml\_api, or OSM\_automation.

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2. In the list of users, select the user to which you want to assign workgroups.  
The Users area displays a list of available workgroups.
3. Move the user from the **Available Workgroups** list to the **Member Workgroups** list:
  - To move all users, click the double right arrow.
  - To move one or more users, select the users (use the Shift key to select multiple consecutive users) and click the single right arrow.
4. Click **Save**.
5. If you have no other tasks to perform in the Order Management web client, click **Refresh Server Cache**.

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---

**Important:** Refreshing the server cache might take a significant amount of time and possibly interrupt order processing. For more information, see [Refreshing the Server Cache.](#)"

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## Removing Workgroups from Users

When you remove workgroups from a user, that user can no longer perform the functions and tasks in that workgroup.

To remove a workgroup from a user:

1. In the Order Management web client Administration area, click **Administer Users**.

The User Administration page is displayed.

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**Note:** To appear in the list of users, a user must be a member of at least one of the following WebLogic groups: OMS\_client, OMS\_ws\_api, OMS\_xml\_api, or OSM\_automation.

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2. In the list of users, click the user from which you want to remove workgroups.

The Workgroups area displays a list of available workgroups, and a list of workgroups that are associated with the selected user.

3. Move workgroups from the **Member Workgroups** list to the **Available Workgroups** list:

- To move all workgroups, click the double left arrow.
- To move one or more workgroups, select the workgroups (use the Shift key to select multiple consecutive workgroups) and click the single left arrow.

4. Click **Save**.

5. If you have no other tasks to perform in the Order Management web client, click **Refresh Server Cache**.

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**Important:** Refreshing the server cache might take a significant amount of time and possibly interrupt order processing. For more information, see "[Refreshing the Server Cache.](#)"

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## Defining Workgroup Calendars

Define calendars to enable OSM to determine which workgroups are available to complete tasks.

When orders are being processed by OSM, customers want to know when the orders will be completed. To determine the completion date of an order, OSM uses the expected duration of tasks that are part of the order. For some tasks, OSM must consider the non-work days, such as holidays, of the user who will complete the tasks. OSM uses the calendar to help determine the number of days a task will take to complete.

When you create a task, you define an expected duration and whether that duration is system-based or schedule-based.

For system-based tasks, OSM calculates the expected completion of a task based on the system's calendar. It does not calculate the user's actual working hours. System-based

tasks do not use the scheduled hours that are defined by workgroup calendars.

For schedule-based tasks, OSM calculates the expected completion of a task based on the user's working calendar schedule.

If you have more than one workgroup responsible for the same task, and each workgroup has a different calendar, OSM chooses the first available workgroup that has access to the task.

You define a calendar by configuring a schedule's settings for work hours, regional holidays, schedule exceptions, and time zone settings. For information about configuring time zone system settings, see *OSM System Administrator's Guide*.

After you define calendars, orders are assigned to workgroups in different regions based on when those workgroups are scheduled to work. When you make changes to the schedule, only new orders that arrive at the task are affected.

You can define a calendar for one or more workgroups. Defining a workgroup calendar includes doing the following:

- [Defining Schedules](#)
- [Specifying Time Zones](#)
- [Setting Calendar Start and End Dates and Times](#)

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**Note:** The option to define a calendar is available only if you are a member of the OMS\_workgroup\_manager WebLogic security realm group.

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## Defining Schedules

You can define a schedule for one or more workgroups.

Define the following:

- **Workweek (mandatory):** Defines the schedule's working hours. See "[Defining Workweeks](#)."
- **Regional holidays (optional):** Defines regional holidays that can be used in schedules. See "[Defining Regional Holidays](#)."
- **Schedule exceptions (optional):** Schedule exceptions are the extra days and hours that users would normally work but, for some reason, do not. Exceptions are similar to regional holidays but are workgroup-specific as opposed to region-specific. See "[Adding Schedule Exceptions](#)."
- **The schedule itself,** which includes a workweek and may include regional holidays and schedule exceptions. See "[Creating the Schedule](#)."

Schedule exceptions override holidays that, in turn, override the normal work hours defined by the workweek. The actual working hours for a particular day of the year are calculated from the schedule exceptions, if there are any for that day. Otherwise, the day is taken as a holiday if it is defined as such. If there are no exceptions or holidays, actual work hours are calculated from the normal work hours.

### Defining Workweeks

The schedule for a workgroup must include a workweek. A workweek defines the days and times that a workgroup works, and is part of the overall workgroup schedule. A workweek is comprised of one or more work shifts.

To define a workweek:

1. In the Order Management web client Administration area, click **Administer Workgroups**.  
The Workgroup Administration page is displayed.
2. In the list of workgroups, click the workgroup for which you want to define a workweek.
3. In the Calendar area, beside **Schedule**, click **Not Defined**.  
The Schedule page is displayed.
4. Click **Workweek**.  
The Workweeks page is displayed.
5. Click **Add** in the Workweeks area.
6. Enter a **Description** for the workweek.  
The **Name** field is automatically populated with the text that you entered in the **Description** field.
7. (Optional) In the Name field, modify the workweek name. The name cannot contain spaces.

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**Note:** You must add at least one work shift to the workweek before you can save the workweek.

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8. Click **OK**.  
The system creates the new workweek.
9. In the Edit Workweek area, click **Add**.
10. For each work shift that you want to define for the workweek, do the following:
  - a. Select a day of the week.
  - b. Enter a start and stop time in 24-hour clock format.
11. Click **Save and Close**.
12. If you have no other tasks to perform in the Order Management web client, click **Refresh Server Cache**.

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**Important:** Refreshing the server cache might take a significant amount of time and possibly interrupt order processing. For more information, see "[Refreshing the Server Cache](#)."

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## Defining Regional Holidays

To define regional holidays, you set up regions and specify the holidays for those regions. You can then include the holidays in schedules.

Regions are hierarchical. A region can have zero or one parent region, and zero or more sub-regions (or child regions), and there can be any number of regions in a hierarchy. A child region inherits the regional holidays of its parent regions in the hierarchy.

To define regional holidays:

1. In the Order Management web client Administration area, click **Administer Workgroups**.  
The Workgroup Administration page is displayed.
2. In the list of workgroups, click the workgroup for which you want to define regional holidays.
3. In the Calendar area, beside **Schedule**, click **Not Defined**.  
The Schedule page is displayed.
4. Click **Region**.  
The Regions page is displayed.
5. Click **Add** in the Regions area.
6. Enter a **Description** for the region.  
The **Name** field is automatically populated with the text that you entered in the **Description** field.
7. (Optional) In the Name field, modify the region name. The name cannot contain spaces.
8. Click **OK**.  
The system creates the region.
9. Click the region that you created.
10. For each regional holiday that you want to define, click **Add** and enter a name and date.
11. Click **Save and Close**.
12. If you have no other tasks to perform in the Order Management web client, click **Refresh Server Cache**.

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**Important:** Refreshing the server cache might take a significant amount of time and possibly interrupt order processing. For more information, see "[Refreshing the Server Cache](#)."

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### Creating the Schedule

To create a schedule for a workgroup:

1. In the Order Management web client Administration area, click **Administer Workgroups**.  
The Workgroup Administration page is displayed.
2. In the list of workgroups, click the workgroup for which you want to create a schedule.
3. In the Calendar area, beside **Schedule**, click **Not Defined**.  
The Schedule page is displayed.
4. From the **Workweek** list, select the workweek that you want to include in the schedule.
5. (Optional) If you want to include regional holidays in the schedule, select a region in the **Region** list whose holiday you want to include.

6. (Optional) To specify non-work hours that are exceptions to the regular schedule, do the following for each schedule exception that you want to add:
  - a. Click **Add** in the **Schedule Exceptions** area.
  - b. Select the date and time options for the exception. Enter start and stop times in 24-hour clock format.
7. Click **Save and Close**.
8. If you have no other tasks to perform in the Order Management web client, click **Refresh Server Cache**.

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**Important:** Refreshing the server cache might take a significant amount of time and possibly interrupt order processing. For more information, see "[Refreshing the Server Cache](#)."

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### Adding Schedule Exceptions

You can add exceptions when you are creating a schedule, or add exceptions to an existing schedule.

To add schedule exceptions:

1. In the Order Management web client Administration area, click **Administer Workgroups**.

The Workgroup Administration page is displayed.
2. In the list of workgroups, click the workgroup for which you want to add schedule exceptions.
3. In the Calendar area, beside **Schedule**, click **Defined** or **Not Defined**.

The Schedule page is displayed.
4. For each exception that you want to add to the schedule, do the following:
  - a. Click **Add** in the Schedule Exceptions area.
  - b. Enter a date for the schedule exception.
  - c. Enter a start and stop time in 24-hour clock format.
5. Click **Save and Close**.
6. If you have no other tasks to perform in the Order Management web client, click **Refresh Server Cache**.

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**Important:** Refreshing the server cache might take a significant amount of time and possibly interrupt order processing. For more information, see "[Refreshing the Server Cache](#)."

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### Specifying Time Zones

After you define a schedule for a workgroup, you must specify a time zone. You can specify the default time zone or select a different time zone. The default time zone is the user's time zone preference, which is set in the Task web client. See *OSM Task Web Client User's Guide* for more information.

The Time Zone page allows you to optionally override the UTC offset and daylight savings time (DST) information associated with the time zone.

To specify a time zone:

1. In the Order Management web client Administration area, click **Administer Workgroups**.

The Workgroup Administration page is displayed.

2. In the list of workgroups, click the workgroup for which you want to specify a time zone.

3. In the Calendar area, beside **Time Zone**, click **Not Defined**.

The Time Zone page is displayed and the default time zone is automatically selected.

4. (Optional) In the **Load defaults from** list, select a different time zone.

5. Click **Apply** for the time zone.

UTC offset and DST information are automatically updated to correspond with the time zone that you selected.

6. (Optional) To override the DST setting for the time zone, select or deselect the **Uses Daylight Savings Time** option.

7. (Optional) To override the UTC offset for DST, change **Offset from UTC** to a different value.

8. Click **Apply** for the Time Zone page.

9. If you have no other tasks to perform in the Order Management web client, click **Refresh Server Cache**.

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**Important:** Refreshing the server cache might take a significant amount of time and possibly interrupt order processing. For more information, see "[Refreshing the Server Cache](#)."

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## Setting Calendar Start and End Dates and Times

You must enter the dates that you want the calendar to be in effect.

You must create a schedule before you can define calendar start and end dates and times. For more information, see "[Defining Schedules](#)."

To keep the calendar dates consistent, the calendar's start date is changed internally in the following cases:

- When a calendar is generated for the first time for a specific workgroup, the internal date is set as follows:
  - If there are pending orders in OSM, the calendar start date is changed to the date when the first pending order entered the system
  - If there are no pending orders in OSM and a calendar is generated for the first time, the user-defined start date is used.
- When a calendar is regenerated for a specific workgroup, the internal date is set as follows:
  - If the calendar start date is later than the last calendar stop date generated, the calendar start date is changed to the last calendar stop date generated.

- If the calendar start date is earlier than the last calendar stop date generated, the user-defined calendar start date is used.

To define calendar start and end dates and times:

1. In the Order Management web client Administration area, click **Administer Workgroups**.  
The Workgroup Administration page is displayed.
2. In the list of workgroups, click the workgroup for which you want to set effective calendar dates.
3. In the Calendar area, click the **Start Date/Time** calendar icon.  
The Select Date and Time calendar is displayed.
4. Set the effective start date and time. The time format is *hh:mm:ss*.
5. Click **OK**.
6. In the Calendar area, click the **End Date/Time** calendar icon.  
The Select Date and Time calendar is displayed.
7. Set the effective end date and time. The time format is *hh:mm:ss*.
8. Click **OK**.
9. If you have no other tasks to perform in the Order Management web client, click **Refresh Server Cache**.

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**Important:** Refreshing the server cache might take a significant amount of time and possibly interrupt order processing. For more information, see "[Refreshing the Server Cache](#)."

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## Refreshing the Server Cache

When you modify workgroups using the Order Management web client, for example, creating or deleting a calendar for a workgroup, or when you make other changes in the OSM system, you must refresh the server cache in order to load those changes into the OSM runtime system.

Depending on the size and complexity of your system, refreshing the server cache might take a significant amount of time. In addition, order processing might be interrupted while the refresh is in progress. Oracle recommends refreshing the server cache during maintenance windows or at low-volume times.

To refresh the server cache:

1. In the Order Management web client Administration area, click **Refresh Server Cache**.

The server cache is refreshed with any changes to the metadata.

## Managing Notifications

Notifications inform users of changes that have occurred in the system or actions that need to be taken to complete or correct a task.

Notifications are created in Design Studio by a system administrator. See the Design Studio Modeling OSM Processes Help for more information.

Notifications provide users with system information. Notifications are messages that are generated at the following times:

- When data is changed in the system. These notifications are informational only.
- When orders transition to a specific state, status, or exception in a process. These notifications are based on rules that are evaluated when the order are transitioned.
- When data is polled. These notifications are based on rules that are evaluated at regular intervals, as defined in Design Studio. For example, jeopardy notifications use polling at specified intervals to identify processes or tasks that are in jeopardy.

Notifications work as follows:

1. An event occurs that triggers a notification. The event can be based on a polling schedule (for example, every seven days), a date value change on an order, or as a result of a task becoming jeopardized. (See the Design Studio Modeling OSM Processes Help for more information about jeopardy notifications.)
2. A notification is sent by email to a specific user or to all users in a workgroup. You can see the email on the **Notifications** tab in the Task web client. The email informs you that the notification has been generated.

The Notifications page in the Order Management web client displays the audit data for notifications. For example, **notification X** is defined in Design Studio. At run time, there are five instances of **notification X**. The Notifications page displays the 5 instances of **notification X**, the time that the latest notification was created, and other data about the various instances of **notification X**. The page also allows you to disable **notification X** so that another instance will not be created unless the notification is re-enabled in the Notifications page.

[Table 7-1](#) lists the columns on the Notifications page.

**Table 7-1 Columns on the Notifications Page**

Column	Description
Description	Describes of the notification.
Interval	A description of the polling interval, for example, "Every 1 hour 5 minutes." Applicable only to notifications sent at specified polling times.
Priority	The notification priority between 1 and 255, with 1 being the highest priority.
Next Start	The date and time that the notification criteria are next evaluated to determine whether to generate a notification. Applicable only to notifications sent at specified polling times.
Last Start	The date and time that the evaluation of the notification criteria was last started. Applicable only to notifications sent at specified polling times.
Last Finish	The date and time that the evaluation of the notification criteria was last finished. Applicable only to notifications sent at specified polling times.
Execution Time	The duration between the Last Start and Last Finish values, in the format <i>hh:mm:ss</i> .
Author	The user who created the notification.
Enabled	Displays <b>true</b> if the notification may be created in the future; <b>false</b> if the notification is disabled.
Count	The number of active instances of the notification.

**Table 7-1 (Cont.) Columns on the Notifications Page**

Column	Description
Email	Displays <b>true</b> if the user has subscribed to be notified by email; <b>false</b> otherwise.

## Exporting Notifications

You can export the contents of the Notifications table using the **Export** button on the Notifications toolbar. The exported contents are in a format that you can open in Microsoft Excel.

To export the contents of the Notifications table:

1. In the Order Management web client Administration area, click **Manage Notifications**.

The Notifications page is displayed.

2. In the **Cartridge** list, select the cartridges for which you want to export notifications. Select **All** to select all the deployed cartridges.

The notifications for the cartridges you selected are displayed in the Notifications table.

3. Click **Refresh** to ensure all notifications are displayed.
4. In the Notifications toolbar, click the **Export** button.

The notifications are exported to an HTML file that you can open in Microsoft Excel.

## Setting Up Email Notifications

For information about setting up email notifications using the `credStoreAdmin` command, see *OSM System Administrator's Guide*.

## Disabling or Enabling Notifications

You can disable or enable the notifications that have been configured for OSM cartridges.

To disable or enable notifications:

1. In the Order Management web client Administration area, click **Manage Notifications**.

The Notifications page is displayed.

2. In the **Cartridge** list, select the cartridges for which you want to disable or enable notifications. Select **All** to select all the deployed cartridges.

The notifications for the cartridges you selected are displayed in the Notifications table.

3. Click **Refresh** to ensure all notification items are displayed.
4. (Optional) Filter the notifications by selecting one of the following options in the Notifications page toolbar:
  - **Both**: Displays notifications that are currently enabled and disabled.
  - **Enabled**: Displays notifications that are currently enabled.
  - **Disabled**: Displays notifications that are currently disabled.

5. Select the notifications that you want to disable or enable.

**Tip:** Use the Shift or Ctrl key to select multiple notifications.

6. Do one of the following:

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**Note:** When disabling or enabling groups of notifications, all notifications in the group must have the same status, either disabled or enabled, otherwise the toolbar buttons are not available.

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- Click **Disable** to disable the selected notifications.
- Click **Enable** to enable the selected notifications.

## Managing System Errors

You can view and clear system errors in the System Errors page.

The System Errors page displays a list of errors that have occurred during order processing. The errors might include database errors, system interruptions, and any other problems that might occur. You can use this information to help troubleshoot the error and recheck and clear the error.

Errors can occur if a rule used for error handling has invalid syntax or cannot be checked by the system.

[Table 7–2](#) describes the columns on the System Errors page.

**Table 7–2 Columns on the System Errors Page**

Column	Description
Sequence ID	A unique sequential identifier for the system error.
Event Type	The type of error: Both, Rule, or Notification.
User Name	Displays either the name of the user that authored the PL/SQL code that caused the error, or "omsadmin" for internal system errors.
Cleared	Displays the status of the system error: <b>Y</b> for cleared; <b>N</b> for not cleared.
Text 1	Displays the error label associated with the <b>ID1</b> value. <b>Text1</b> can be one of the following: <b>notification id</b> ; <b>order id</b> ; <b>order</b> ; or <b>task</b> .
ID1	Displays the order ID value associated with <b>Text1</b> .
Type1	The task type, which is specified only when the metadata entity that generated the error is a task.
Text2	Displays the error label associated with the <b>ID2</b> value. <b>Text2</b> can be one of the following: <b>order id</b> ; <b>order</b> ; or <b>hist_seq_id</b> .
ID2	Displays the order ID value associated with <b>Text2</b> .
Type2	Always null. This column is not used.
TimeStamp	The date and time that the system error was generated.
Total	The number of instances of the system error.

## Exporting System Errors

You can export the contents of the System Errors table using the **Export** button on the System Errors toolbar. The exported contents are in a format that you can open in Microsoft Excel.

To export the contents of the System Errors table:

1. In the Order Management web client Administration area, click **Manage System Errors**.

The System Errors page is displayed.

2. Click **Refresh** to ensure all system errors are displayed.
3. In the System Errors toolbar, click the **Export** button.

The system errors are exported to an HTML file that you can open in Microsoft Excel.

## Filtering System Errors

You can filter the system errors that are displayed. For example, you can display all system errors or only the errors that have not been resolved and cleared.

To filter system errors:

1. In the Order Management web client Administration area, click **Manage System Errors**.

The System Errors page is displayed.

2. From the **Type** options in the toolbar, select the type of system error to display:
  - **Both**: Displays system errors of any type.
  - **Rule**: Displays only rule system errors.
  - **Notification**: Displays only notification system errors.
3. From the **State** options in the toolbar, select the state of system errors to display:
  - **Both**: Displays both cleared and uncleared system errors.
  - **Not Cleared**: Displays system errors that have not been cleared from the system.
  - **Cleared**: Displays system errors that have been cleared from the system.
4. Click **Refresh** to ensure all system errors are displayed.

## Clearing System Errors

After you fix a system error, you must clear the error. Clearing the error allows the system to reevaluate, and allows the order to continue processing.

To clear a system error:

1. In the Order Management web client Administration area, click **Manage System Errors**.

The System Errors page is displayed.

2. Select the system errors that you want to clear.

**Tip:** Use the Shift or Ctrl key to select multiple system errors.

3. Click **Clear**.

## Viewing Deployed Cartridges and Setting Default Versions

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**Note:** The information in this section applies only to OSM 7.3.0.1 or higher.

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You can use the Order Management web client to view a list of the valid cartridges deployed to the OSM server and also any copyright and license information provided with the cartridge. You can also set the default version of the cartridge if more than one version of the same cartridge is deployed.

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**Note:** The option to view cartridges and set default versions is available only if you are a member of the Cartridge\_Management\_WebService WebLogic security realm group.

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The View Cartridges page contains a list of the cartridges deployed to the OSM server. By default, the list is sorted by the last updated time, starting with the most recent. The View Cartridges table displays the following columns:

- **Modified:** Indicates that you have changed the value of **Default** for this cartridge.
- **Name:** Displays the name of the cartridge. If the cartridge is a composite cartridge, this column also contains a button that allows you to display the child cartridges of the composite cartridge.
- **Version:** Displays the version of the cartridge.
- **Default:** Indicates whether the cartridge version in the current row is the default version of the cartridge.
- **Type:** Displays the type of cartridge. Valid values are **Stand-alone**, **Composite**, and **Component**.
- **Deployed On:** Displays the date and time when the cartridge was first deployed.
- **Last Updated:** Displays the date and time when the cartridge was most recently deployed.
- **Build Number:** Displays the build number of the cartridge.
- **Provider:** Displays the vendor of the cartridge.
- **Description:** Displays the description of the cartridge.

### Changing the Default Versions of Deployed Cartridges

When you set a version of a cartridge as a default version, that version of the cartridge will handle the inbound orders for the cartridge.

To set the default version of the cartridge:

1. In the Order Management web client Administration area, click **View Cartridges**.  
The View Cartridges page is displayed.

2. Select the **Default** option for the version of the cartridge you want to handle incoming orders. The **Default** option is only available on Stand-alone and Solution cartridges. You can select this option for more than one cartridge in this window.

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**Note:** If you make a change in error, click **Cancel** to cancel all pending changes.

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3. Click **Save** to save the change to the database.
4. To cause the change to take effect immediately, you should refresh the server cache. See "[Refreshing the Server Cache](#)" for more information.

## Viewing the Copyright and License Information for a Cartridge

You can view the copyright and license information that was defined for the cartridge in Design Studio.

To set the default version of the cartridge:

1. In the Order Management web client Administration area, click **View Cartridges**.  
The View Cartridges page is displayed.
2. Select the row for the cartridge about which you would like information and click **Show Details**.

The Details window is displayed.