



Oracle CPQ Cloud

Update 19B

What's New

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REVISION HISTORY

This document will continue to evolve as existing sections change and new information is added. All updates appear in the following table:

| Date | Feature | Notes |
|-------------|----------------|---------------------------|
| 14 May 2019 | | Created initial document. |

OVERVIEW

Oracle Configure, Price, and Quote (CPQ) Cloud enables companies to streamline the entire opportunity-to-quote-to-order process, including product selection, configuration, pricing, quoting, ordering, and approval workflows. CPQ Cloud provides a flexible, scalable, enterprise-ready solution ideal for companies of all sizes that sell products and services across direct, indirect, and e-commerce sales channels.

This guide outlines the information you need to know about new or improved functionality in Oracle CPQ Cloud 19B and describes any tasks you might need to perform for the update. Each section includes a brief description of the feature, the steps you need to take to enable or begin using the feature, any tips or considerations that you should keep in mind, and the resources available to help you.

KEY RESOURCES

Refer to CPQ Cloud Administration Online Help for detailed descriptions and instructions.

In CPQ Cloud 19B, we are introducing new Administrator Videos in our Administration Online Help. These videos provide quick demonstrations for several administration tasks.

SECURITY & NEW FEATURES

We would like to remind you if your system has modified security structures you may need to advise your security administrator of new features you would like to implement.

GIVE US FEEDBACK

We welcome your comments and suggestions to improve the content. Please send us your feedback at cpqcloud_documentation_us_grp@oracle.com.

FEATURE SUMMARY

We continue to add many new features to Oracle Cloud Applications and we now give you the option to take advantage of new functionality at a pace that suits you. The table below offers a quick view of the actions required to enable each of the new features.

| Feature | Action Required to Enable Feature | | | |
|---------------------------------------------------------------------------------|-----------------------------------|--------------------------|-------------------------------|---------------------------------|
| | Automatically Available | End User Action Required | Administrator Action Required | Oracle Service Request Required |
| JET Configuration UI | | | | |
| AJAX Functionality for Configuration Recommendation Rules | | | ✓ | |
| JET Configuration UI Layout Enhancements | ✓ | | | |
| Configuration Options for the JET Configuration UI | ✓ | | | |
| JET Configuration UI Layout Access Control | ✓ | | | |
| CSS Customization of JET Configuration UI | | | ✓ | |
| JET Configuration UI Key Changes, Limitations, and Known Issues | | | ✓ | |
| Configuration Run-Time Data and Administration REST API Enhancements | | | | |
| Configuration Run-Time Data REST API Enhancements | | | ✓ | |
| Configuration Administration REST API Enhancement | | | ✓ | |
| Email Approval Notification Enhancements | | | | |
| Default Approval Email Notification Enhancements | | | ✓ | |
| Custom Approval Email Notification Enhancements | | | ✓ | |
| Advanced Approval Email Notification Enhancements | | | ✓ | |
| Transition Rule Notification Enhancements | | | ✓ | |
| Email Approval Response Enhancements | | | ✓ | |
| Subscription Management Solution Enhancements | | | | |
| Subscription Workbench | | | ✓ | |
| Subscription Workbench Layout Editor Support Enhancement | ✓ | | | |
| Account REST API Services | | | ✓ | |
| Subscription Ordering Enhancements | | | | |
| Simple Product Support for Subscription Ordering | | | ✓ | |
| Multi-Select Support for Asset Operations | | | ✓ | |
| New Transaction Support for Asset Operations | | | ✓ | |

| Feature | Action Required to Enable Feature | | | |
|------------------------------------------------------------------------------------------|-----------------------------------|--------------------------|-------------------------------|---------------------------------|
| | Automatically Available | End User Action Required | Administrator Action Required | Oracle Service Request Required |
| Asset REST API Enhancements | | | ✓ | |
| Transaction Array Enhancements | | | | |
| Add Transaction Arrays to Document Designer and Email Designer Documents | ✓ | | | |
| Transaction Array UI Enhancements | ✓ | | | |
| Simplified Add All Attributes to JET Layout | ✓ | | | |
| Collaborative Quoting | | | | |
| Concurrent Editing of Quotes | | | ✓ | |
| Current Editor Display | ✓ | | | |
| Real-time Activity Display | ✓ | | | |
| Lock Action | | | ✓ | |
| Granular Activity History Tracking | ✓ | | | |
| Commerce REST API Enhancements | | | ✓ | |
| System Configuration Enhancements | | | | |
| System Navigation Panel Status Display Enhancement | ✓ | | | |
| System Navigation Panel Item Naming Enhancements | ✓ | | | |
| Display Entire System Data JSON in the Configuration Pipeline Viewer | ✓ | | | |
| Favorites Support for BOM-Related Models | ✓ | | | |
| Customer Requested Enhancements | | | | |
| Approval Justification Text Entry | ✓ | | | |
| Clone Commerce Action | ✓ | | | |
| Supported Currency Enhancement | | | | ✓ |
| Select All Columns with BMQL JOIN Clause | ✓ | | | |
| Transaction Count Setting | ✓ | | | |

MODERN USER EXPERIENCE

The following CPQ Cloud 19B enhancement leverages the rich interface and interactive capabilities available in CPQ Cloud to provide an intuitive selling experience.

JET RESPONSIVE CONFIGURATION UI

CPQ Cloud 19B introduces the JET Configuration UI. JavaScript Extension Toolkit (JET) leverages popular open-source technologies, and features a rich set of modern UI components with built-in accessibility and mobile support. The responsive design provides layouts that can flow vertically to fit within different browser display widths, allowing users to view and edit Configurations across multiple devices using the same Configuration layout.

The following functionality is available in CPQ Cloud 19B:

- JET Configuration User Experience Enhancements
- JET Configuration UI Support for Existing Functionality
- AJAX Functionality for Configuration Recommendation Rules
- JET Configuration UI Layout Enhancements
- Configuration Options for the JET Configuration UI
- JET Configuration UI Layout Access Control
- CSS Customization of the JET Configuration UI

JET Configuration User Experience Enhancements

The JET Configuration UI provides a modernized and fully responsive user experience to walk users through the configuration process on any device and in any CPQ-supported language. CPQ Cloud's JET Configuration UI supports the most vital functionality of the legacy UI with the following user experience enhancements:

- Most actions now display updated content without requiring a full page refresh.
- Display a page loading indicator while the JET Configuration UI is being loaded into the page.
- The JET Configuration UI header and action toolbar remain "sticky" at the top of the screen to provide improved scrolling behavior.
- Simple filters allow users to quickly locate key items within arrays and item tables.
- View menus allow users to hide and show columns in arrays and item tables.
- Array and item list columns can be resized and sorted.
- Improved options for displaying Totals and Items List in side-panel.
- New display options are available for attributes and tabs.
- Error messages display inline and in a collapsible sticky header bar Error Panel.

JET Configuration UI Support for Existing Functionality

The JET Configuration UI supports all basic configuration features previously available in CPQ's legacy Configuration UI:

- Product Hierarchy and configuration attributes of all data types, including Single Select Pick Lists (SSPLs); image menus; and horizontal, vertical, and tabbed arrays.
- Configuration rules, including: Recommendation Rules, Constraint Rules, Hiding Rules, Pricing Rules, Recommended Item Rules, and BOM Mapping Rules.
- Standard configuration actions, Process Invocations, punch-ins, and navigation to/from Commerce UIs including Update, Start Over, Next/Previous, Add to Transaction, Add to Favorites, Add to Cart, Add from Catalog, Reconfigure a model from Commerce, Reconfigure from Favorites, Resume Pending Configuration, and Search Flows.
- Single and multi-node configuration UI flows with Price, Recommended Item and BOM Item table panels, and Configuration flow rules.
- Configuration options, UI settings, and CSS styling customization.

TIPS AND CONSIDERATIONS

The JET Configuration experience retains the following legacy UI pages and dialogs:

- Pipeline Viewer
- Favorites
- Pending Configurations
- Shopping Cart
- Search Flows

IMPORTANT: Subscription Ordering flows, System Configuration, Attribute Calculators, and External Configurators are not supported in the CPQ Cloud 19B JET Configuration UI.

AJAX FUNCTIONALITY FOR CONFIGURATION RECOMMENDATION RULES

CPQ Cloud 19B provides AJAX functionality in the JET UI for Recommendation Rules, which are used to help buyers configure products by offering suggested attribute values. Now recommendations can be displayed when the Recommendation Rule is triggered without reloading the whole page.

Recommendations can be created for each Configuration where a model would likely have certain attribute values. In prior releases, recommendations were not displayed until an action was performed or the page was refreshed.

Navigate to the applicable Configuration Recommendation Rule and select the **Ajax Enabled** checkbox to enable AJAX functionality for JET Configuration UIs.

The screenshot shows the configuration interface for a Recommendation Rule named "Rec Cloud Backup [Simple]". The "Name" field contains "Rec Cloud Backup [Simple]" and the "Variable Name" is "recCloudBackup". The "Status" is set to "Active". The "Ajax Enabled" checkbox is checked and highlighted with a red box, with "JET UI Only" selected. The "Condition" is set to "Always True". The "Action" is "Standard" and is configured to set the "Cloud Backup" attribute to "True" with a "Set" type. A message "Protect Data with Cloud Backup!" is displayed on the user side. At the bottom, there are buttons for "Printer Friendly Version", "Email a Copy", "Translations", "Apply", "Update and Back", and "Back".

IMPORTANT: AJAX functionality is only provided for JET Configuration UIs, this functionality is not available for legacy Configuration UIs.

STEPS TO ENABLE

AJAX functionality for Configuration Recommendation Rules requires administrator setup on CPQ Cloud 19B sites.

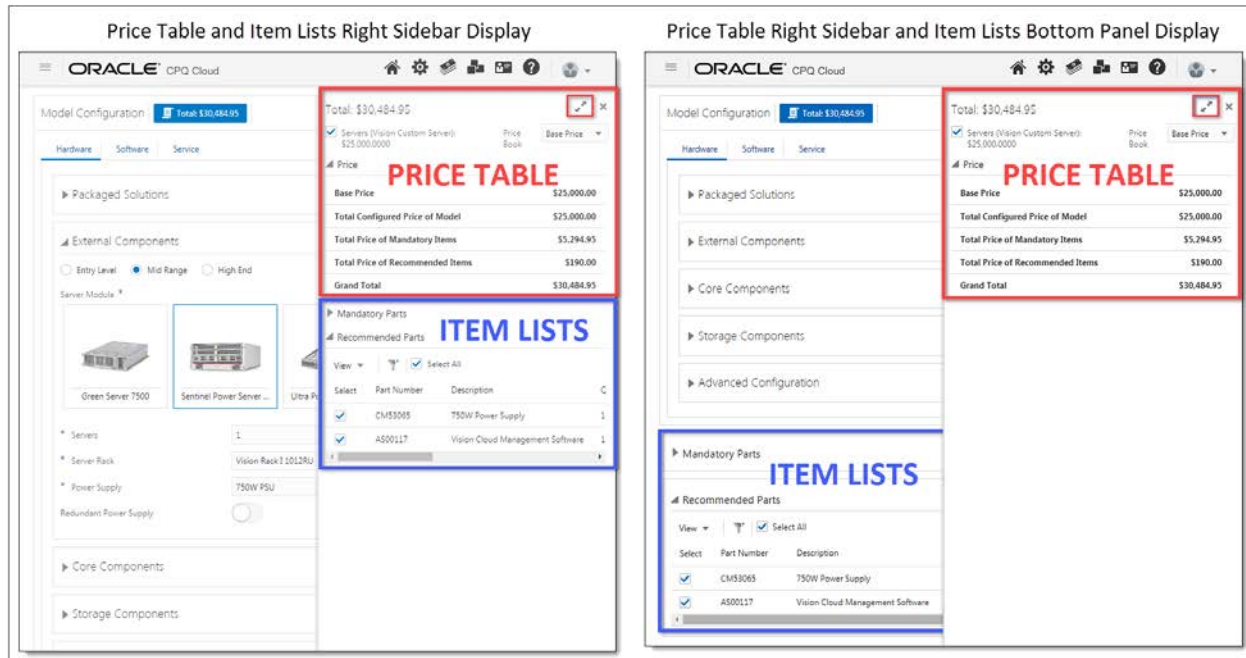
JET CONFIGURATION UI LAYOUT ENHANCEMENTS

Enhanced UI features of the JET Configuration UI are defined by enhancements to the administration of attribute and UI layouts. A single configuration flow UI layout is used for both legacy and JET Configuration UIs. The JET-specific features will display only in the JET Configuration UI - when the end user has access rights to the JET Configuration UI for the associated Product Family.

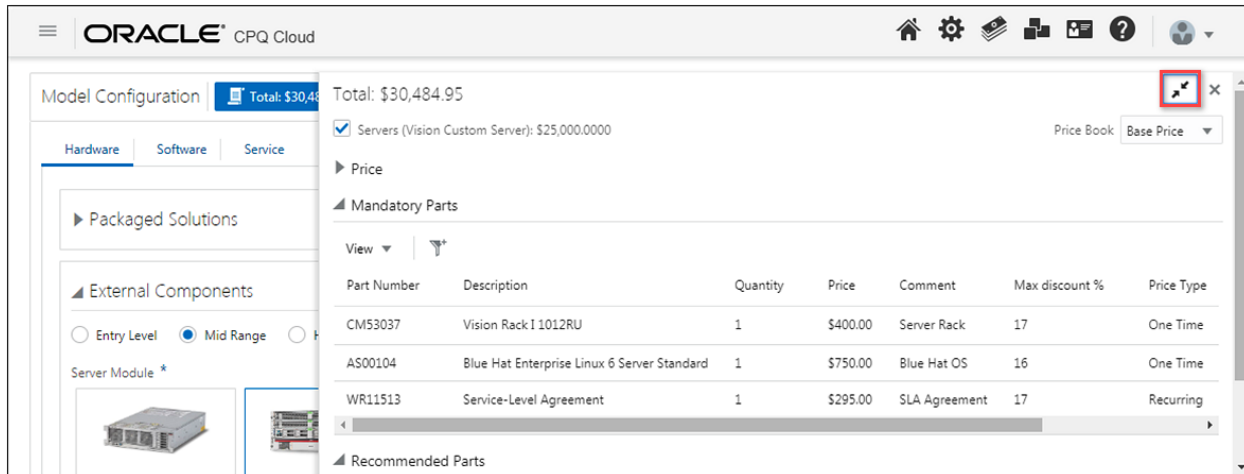
CPQ Cloud 19B provides JET Configuration UI enhancements for price table and item list layouts, tabs, and attribute display options.

Price Table and Item List Layout Enhancements

Administrators can individually select the placement of price tables and items lists (e.g. recommended items, mandatory items, and BOM items). Right sidebars are initially hidden on the JET Configuration UI. To view the sidebar the user clicks on the Total price button. The following image shows two of the possible display options.

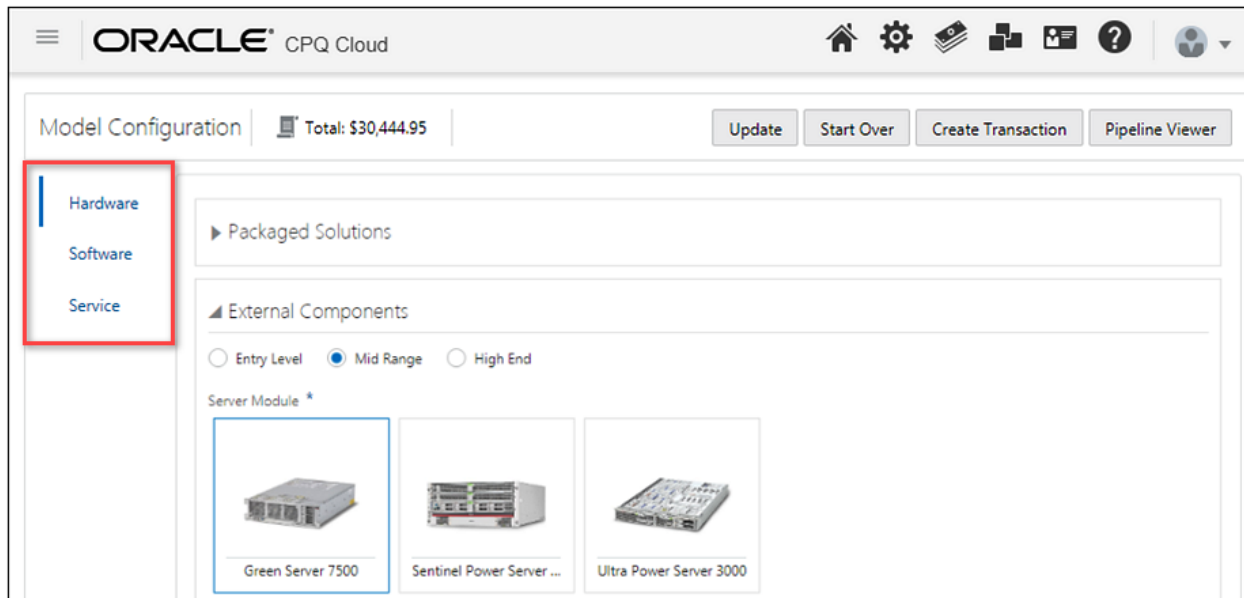


To improve viewing of item list tables with several columns, users can click on the expand icon to increase the size of the right sidebar.



Vertical Tabs for Configuration UI Panels

In CPQ Cloud, administrators can use tab components to show different groups of content within the Configuration UI. CPQ Cloud 19B allows administrators to display vertical tabs for the JET Configuration UI. Vertical tabs are arranged on the left side of a panel instead of on the top in horizontal space.



JET Configuration Layout Properties

CPQ Cloud 19B provides new JET-specific layout properties for the Configuration UI. The following options control the behavior for the JET Configuration UI.

IMPORTANT: The layout Template is only used for Legacy layouts. Templates do not control the layout for JET Configuration UIs.

The screenshot shows a 'Layout Properties' dialog box with the following settings:

- Processing Event: Action
- Stylesheet: primaryDefault
- Alternate Stylesheet: config_alt
- Tab Loading Behavior: All
- Template: Default
- Tab Display: Vertical
- JET Item List Display: Right Sidebar
- JET Price Table Display: Right Sidebar
- Sidebar Behavior: Overlay Push Content

Buttons at the bottom: Ok (with a green checkmark icon) and Cancel (with a red 'X' icon).

The following table describes the JET-specific layout options:

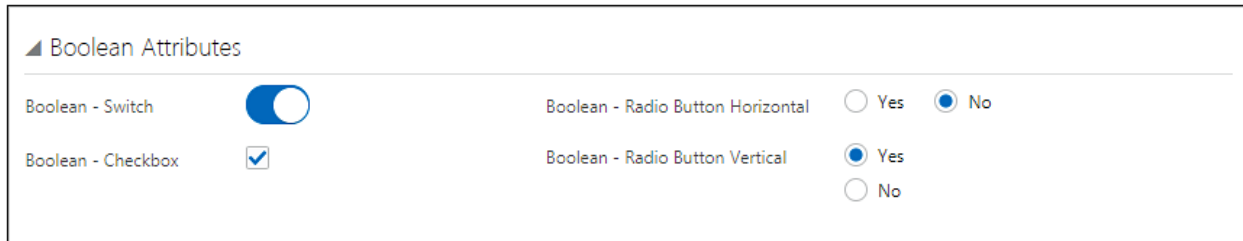
| Option | Description |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Tab Display | Administrators can select Horizontal or Vertical tab placement |
| JET Item List Display | This option controls whether items lists (e.g. recommended items, mandatory items, and BOM items) are displayed in the right sidebar or the bottom panel. |
| JET Price Table Display | This option controls whether price tables are displayed in the right sidebar, bottom panel, or hidden. When item lists are displayed in the right sidebar, the price table can only be displayed in the right sidebar or hidden. |
| Sidebar Behavior | This option controls sidebar behavior when price tables or item lists are displayed as right sidebars. Overlay or push content behavior can be selected. |

New Attribute Display Options for the JET Configuration UI

The JET Configuration provides new attribute display options for Boolean attributes, numeric attributes, and image menus.

Boolean Attribute Display Options

CPQ Cloud 19B allows administrators to display a Switch, Checkbox, Radio Button Horizontal, or Radio Button Vertical for Boolean attributes displayed on the JET Configuration UI. The Switch selector is the default JET Display Type option. The following image shows the four different display options available for JET Configuration UI Boolean attributes.

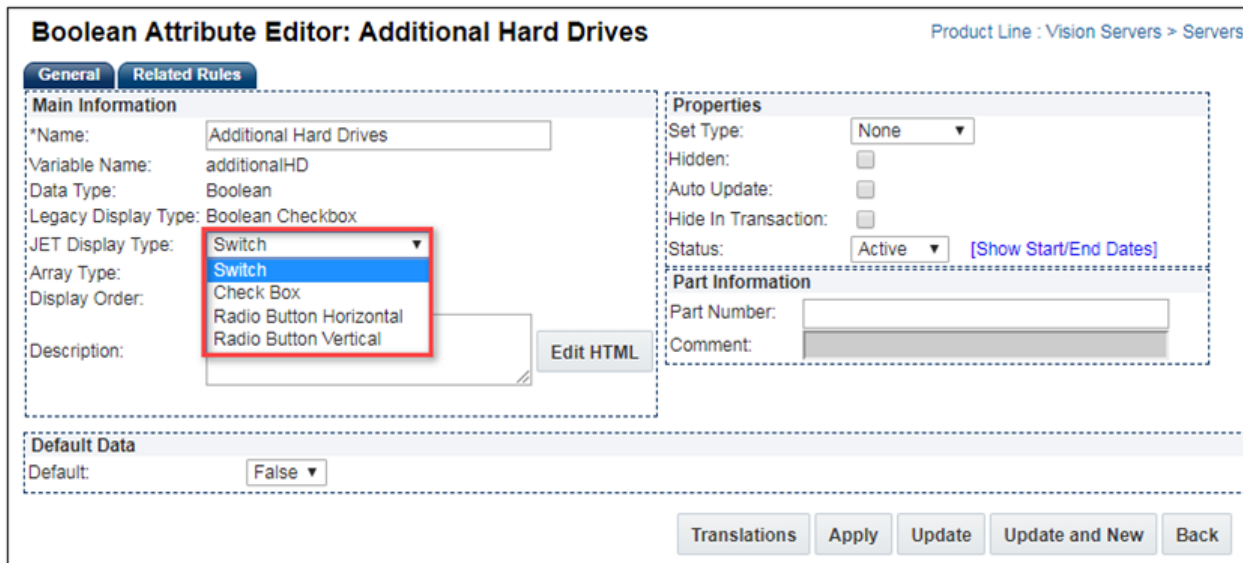


A screenshot of the 'Boolean Attributes' configuration panel. It contains four options:

- Boolean - Switch: (represented by a blue toggle switch)
- Boolean - Radio Button Horizontal: Yes No
- Boolean - Checkbox:
- Boolean - Radio Button Vertical: Yes No

CONFIGURATION BOOLEAN ATTRIBUTE EDITOR

The Configuration Attribute Editor lists the **Legacy Display Type** and **JET Display Type** for Boolean data type attributes. The Switch and Radio Button display options are only available for the JET Configuration UI. The Attribute Editor defines the default display type properties for all layouts.



A screenshot of the 'Boolean Attribute Editor: Additional Hard Drives' interface. The breadcrumb trail is 'Product Line : Vision Servers > Servers'. The interface is divided into several sections:

- General / Related Rules** (tabs)
- Main Information**:
 - *Name: Additional Hard Drives
 - Variable Name: additionalHD
 - Data Type: Boolean
 - Legacy Display Type: Boolean Checkbox
 - JET Display Type: Switch (dropdown menu with options: Switch, Check Box, Radio Button Horizontal, Radio Button Vertical)
 - Array Type: Switch
 - Display Order: (empty)
 - Description: (empty)
 - Edit HTML button
- Properties**:
 - Set Type: None (dropdown)
 - Hidden:
 - Auto Update:
 - Hide In Transaction:
 - Status: Active (dropdown) [Show Start/End Dates]
- Part Information**:
 - Part Number: (empty)
 - Comment: (empty)
- Default Data**:
 - Default: False (dropdown)
- Buttons: Translations, Apply, Update, Update and New, Back

CONFIGURATION LAYOUT BOOLEAN ATTRIBUTE PROPERTIES

The Configuration Layout Attribute Properties Behavior Properties tab also lists the **Legacy Display Type** and **JET Display Type** for Boolean Attributes. When Override is selected, the display type for the layout attribute properties will override the default display type defined in the Attribute Editor for only this layout.

Attribute Properties: Additional Hard Drives (additionalHD)

Data Type: Boolean
Attribute Type: Boolean

| Property | Admin | Layout | Override |
|---------------------|---------|----------------------------------------------------------------------|--------------------------|
| Legacy Display Type | Boolean | Boolean | |
| JET Display Type | Switch | Switch | <input type="checkbox"/> |
| Set Type | None | Radio Button Horizontal Radio Button Vertical Boolean Checkbox | <input type="checkbox"/> |
| Default Value | false | | <input type="checkbox"/> |
| Auto Lock | No | <input type="checkbox"/> | |
| Auto Update | No | <input type="checkbox"/> | |
| Hide | No | <input type="checkbox"/> | |

Ok Cancel

Numeric Attribute Display Options

CPQ Cloud 19B allows administrators to display a Text field, Spinner, Slider Horizontal, or Slider Vertical for integer attributes displayed on the JET Configuration UI. Currency attributes can only be displayed as a Text field or a Spinner. The Spinner JET Display Type is also available for Float attributes. The Text field is the default JET Display Type option. The following image shows the display options available for JET Configuration UI integer and currency attributes.

Numeric Attributes

Integer - Text: 236

Integer - Spinner: 53

Currency - Text: \$1,200

Currency - Spinner: \$230

Integer - Slider Horizontal: Value: 84

Integer - Slider Vertical: Value: 1000

CONFIGURATION INTEGER ATTRIBUTE EDITOR

CPQ Cloud 19B provides support for Text, Spinner, Slider Horizontal, and Slider Vertical layouts for Integer attributes on JET Configuration UIs. The Configuration Attribute Editor for integer data types lists the **Legacy Display Type** and **JET Display Type** for Integer Attributes. The Spinner and Slider layout options are only available for the JET Configuration UI. Sliders require administrators to choose the increment value for sliders. It is recommended that a default value always be designated for sliders. The Attribute Editor defines the default display type properties for all layouts.

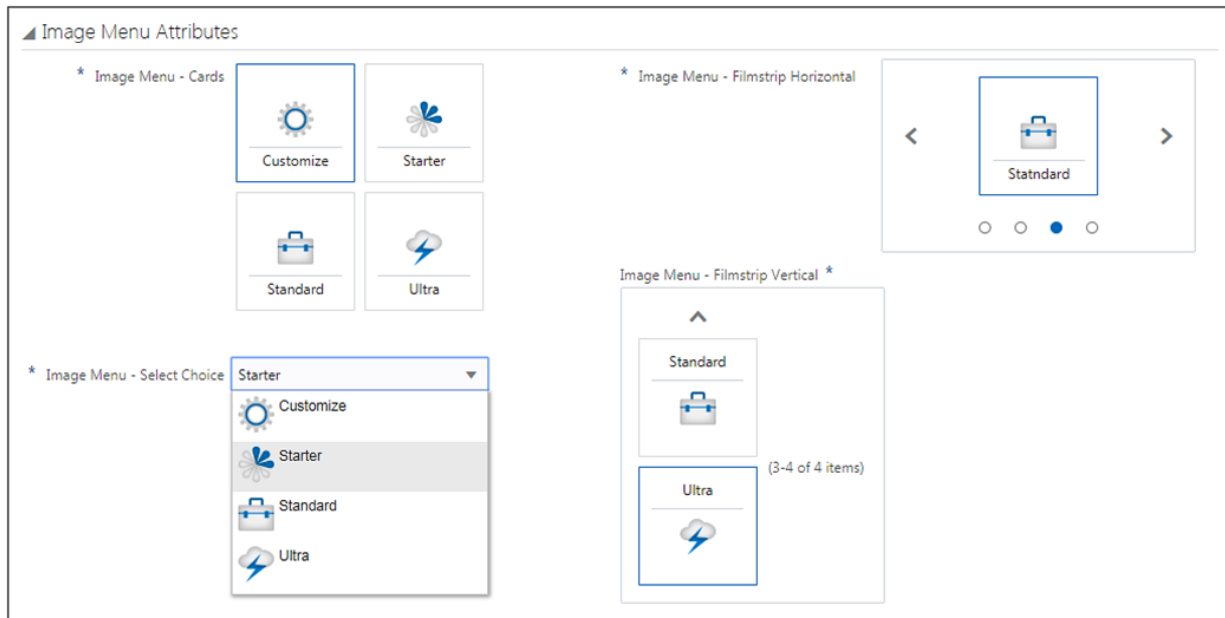
CONFIGURATION LAYOUT INTEGER ATTRIBUTE PROPERTIES

The Configuration Layout Attribute Properties Behavior Properties tab also lists the **Legacy Display Type** and **JET Display Type** for Integer Attributes. When Override is selected, the display type for the layout attribute properties will override the default display type defined in the Attribute Editor for only this layout.

| Property | Admin | Layout | Override |
|---------------------|-------|-------------------|-------------------------------------|
| Legacy Display Type | Text | Text | <input type="checkbox"/> |
| JET Display Type | Text | Text | <input type="checkbox"/> |
| Set Type | None | Text | <input type="checkbox"/> |
| Default Value | 1 | Spinner | <input type="checkbox"/> |
| Auto Lock | No | Slider Horizontal | <input type="checkbox"/> |
| Required | No | Slider Vertical | <input type="checkbox"/> |
| Auto Update | Yes | | <input checked="" type="checkbox"/> |
| Hide | No | | <input type="checkbox"/> |

Image Menu Display Options

CPQ Cloud 19B allows administrators to display Cards, Select Choice, Filmstrip Horizontal, or Filmstrip Vertical for image menu attributes displayed on the JET Configuration UI. The following image shows the display options available for JET Configuration UI image menu attributes. Additional settings are available to display arrows and/or paging controls. In the image below, the Filmstrip Horizontal is displaying Arrows and Paging Controls and the Filmstrip Vertical is displaying Arrows and Paging Information.



CONFIGURATION MENU ATTRIBUTE EDITOR

The Configuration Menu Attribute Editor lists the **Legacy Display Type** and **JET Display Type** for image menu attributes. The Select Choice, Film Strip Horizontal, Film Strip Vertical, and Cards layout options are only available for the JET Configuration UI. The Attribute Editor defines the default display type properties for all layouts. Additional JET-specific image properties and filmstrip controls are also defined using the Attribute Editor.

Menu Attribute Editor: Packaged Solutions Product Line : Vision Servers > Servers

General **Related Rules**

Main Information

*Name: Packaged Solutions
Variable Name: packagedSolutions
Data Type: Text
Image Menu: No Yes
Legacy Display Type: Grid
JET Display Type: Film Strip Horizontal
Array Type: Select Choice
Display Order: Film Strip Horizontal
Attribute Value Pricing: Film Strip Vertical
Cards
Description: [Edit HTML](#)

Properties

Set Type: None
Required:
Hidden:
Auto Update:
Hide In Transaction:
Legacy Constrained Values Display: Marked
JET Constrained Values Display: Disabled
Status: Active [\[Show Start/End Dates\]](#)

Image Menu Properties

Fix Dimension: Height
Image Size: 50 px

Legacy Properties

Label and Price Location: Below Image
Columns: 4
Rows (0 for auto): 0

JET Properties

Control Display: Arrows and Paging Controls
Label and Price Location: Below Image
Height: 125 px
Width: 125 px

Menu Population

Menu Entry: Displayed Text Variable Name

Customize [Custom Configuration]
Starter [Green]
Standard [Sentinel]
Ultra [Ultra]

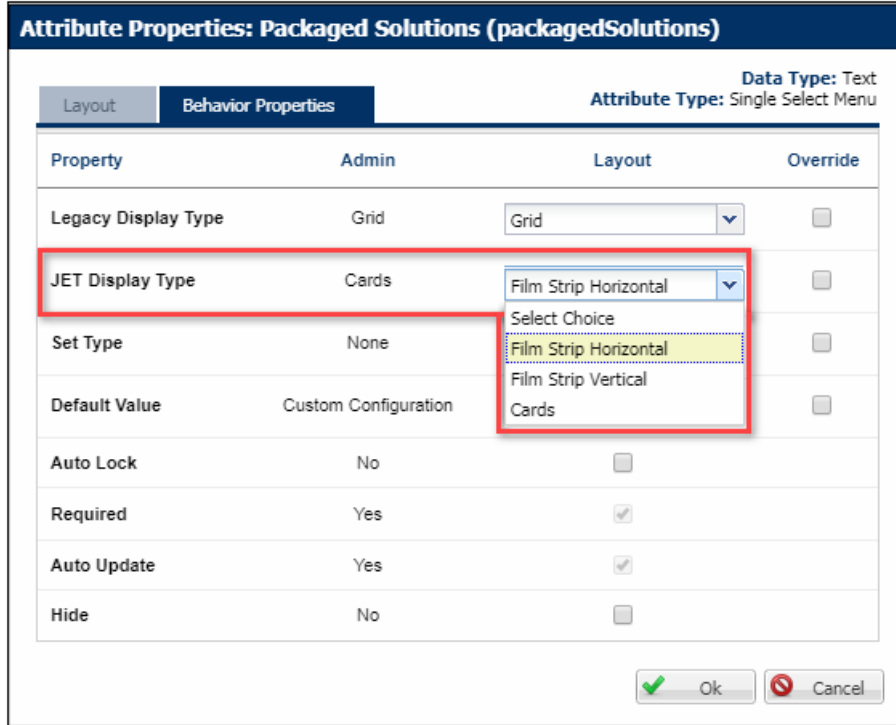
[Add Entry](#)
[Delete](#)
[Entry Manager](#)

Default: Custom Configuration [Set](#) [Clear](#)
[\[Show Entry Details\]](#)

[Translations](#) [Apply](#) [Update](#) [Update and New](#) [Back](#)

CONFIGURATION LAYOUT IMAGE MENU ATTRIBUTE PROPERTIES

The Configuration Layout Attribute Properties Behavior Properties tab also lists the **Legacy Display Type** and **JET Display Type** for image menu attributes. When Override is selected, the display type for the layout attribute properties will override the default display type defined in the Attribute Editor for only this layout.

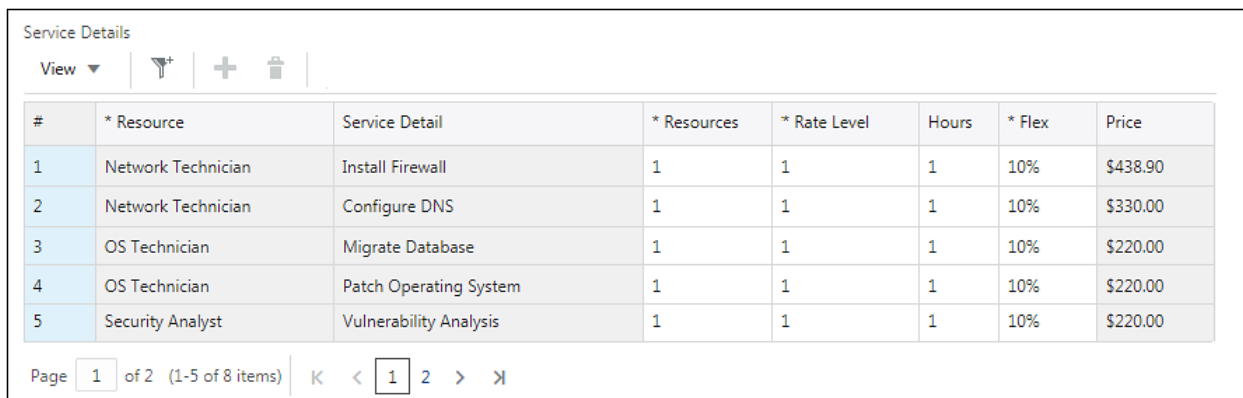


STEPS TO ENABLE

No steps are required to enable this feature.

Configuration Options for the JET Configuration UI

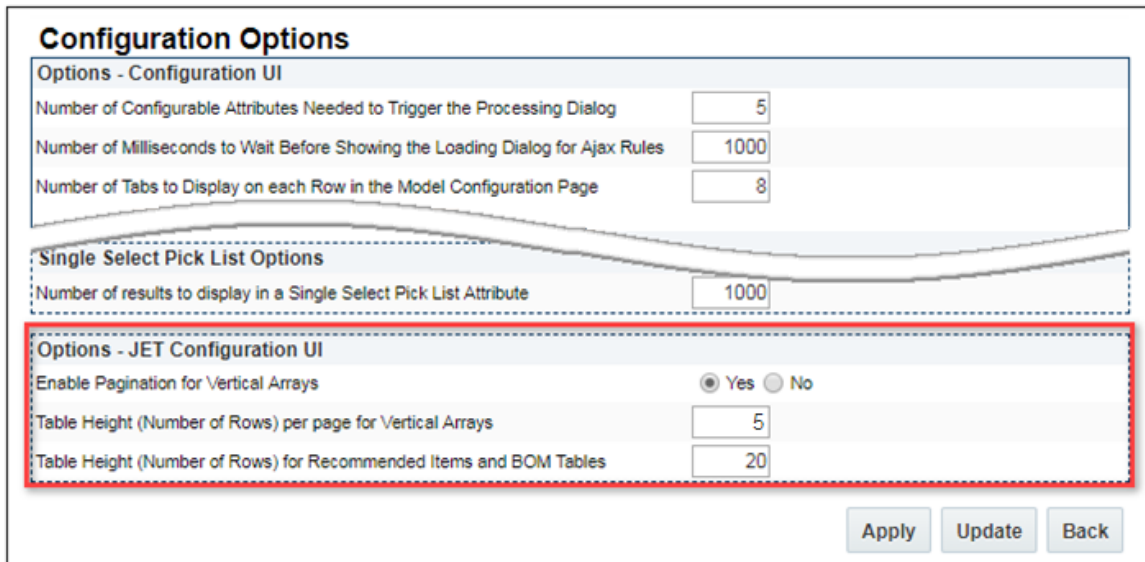
Beginning in CPQ Cloud 19B, administrators can enable pagination for vertical arrays and set the table height for vertical arrays and item lists displayed on JET Configuration UI layouts. The following image shows a vertical array with pagination enabled and the table height set to 5 rows.



Configure JET Configuration UI Options

To enable pagination for vertical arrays and set table height for vertical arrays and item lists, perform the following steps:

1. Navigate to Configuration Options page.
Admin > Products > Configuration Settings



The screenshot shows the 'Configuration Options' page with three sections. The first section, 'Options - Configuration UI', contains three input fields: 'Number of Configurable Attributes Needed to Trigger the Processing Dialog' (5), 'Number of Milliseconds to Wait Before Showing the Loading Dialog for Ajax Rules' (1000), and 'Number of Tabs to Display on each Row in the Model Configuration Page' (8). The second section, 'Single Select Pick List Options', contains one input field: 'Number of results to display in a Single Select Pick List Attribute' (1000). The third section, 'Options - JET Configuration UI', is highlighted with a red dashed border and contains three settings: 'Enable Pagination for Vertical Arrays' (radio buttons for Yes and No, with 'Yes' selected), 'Table Height (Number of Rows) per page for Vertical Arrays' (5), and 'Table Height (Number of Rows) for Recommended Items and BOM Tables' (20). At the bottom right of the form are three buttons: 'Apply', 'Update', and 'Back'.

2. If desired, set the Enable Pagination for Vertical Arrays option to **Yes**.
3. Enter the Table Height (Number of Rows) per page for Vertical Arrays.
4. Enter the Table Height (Number of Rows) for Recommended Items and BOM Tables.
This setting is applicable to recommended items, mandatory items, and BOM items.
5. Click **Apply** or **Update**.

STEPS TO ENABLE

No steps are required to enable this feature.

JET CONFIGURATION UI LAYOUT ACCESS CONTROL

Administrators have the option of enabling the JET Configuration UI while continuing to use the legacy UI for some users. The JET UI is rendered from the same layout definition as the legacy UI. Administrators can assign user access to JET Configuration UI based on user type or user group. With both layouts enabled, customers can make the transition to the JET Configuration layout at their own pace. Since the JET Configuration UI is enabled at the Product Family level, customers can also gradually transition to the JET Configuration UI by enabling only selected Product Families.

Enable the JET Configuration UI Layout for a Product Family

To enable the JET Configuration UI for a product family and assign user access rights, perform the following steps:

1. Navigate to the Supported Product Families page.
Admin > Products > Catalog Definition > Product Families
2. Select **Layout Access Control** from the applicable Product Family Navigation drop-down, and then click **List**. The Layout Access Control page opens.

| Enabled | Layout UI | Override Mobile | User Definition |
|---------------------------------------|----------------|-----------------|---------------------------------|
| <input checked="" type="checkbox"/> 3 | JET Responsive | No 4 | Access Rights 5 |

Apply Update Back

3. Select the **Enabled** checkbox.
4. (Optional) To replace the mobile layout with the JET Configuration layout, select **Yes** from the Override Mobile drop-down.
5. Click the **Access Rights** link to assign user and group access.
6. Specify the user types and groups that will view the JET Configuration UI. Only the users types or groups assigned to the Show column will view this layout, all other users types or groups will view the legacy layout.

Layout Access Control

Product Family : Vision Servers

Access Editor

Select which users will view this UI.

Hide for following Company:User Types

- FullAccessWithESales : SalesAgent
- FullAccessWithESales : ChannelAgent
- FullAccessWithESales : RestrictedAccess
- BuyAccess : BuyAccess
- BuyAccess : RestrictedAccess
- QuickRegistrationBuy : QuickRegistrationBuy

Show for following Company:User Types

- FullAccessWithESales : FullAccess
- BuyAccess : FullAccess
- QuickRegistrationBuy : FullAccess
- RestrictedAccess : FullAccess

>
<

Hide for following Groups:

- Business Administrator
- Executive Users
- Sales User
- Manager User

Show for following Groups

- JET UI
- Sales Administrator
- Technical Administrator

>
<

Apply
Update
Back

7. Click **Update** to save user and group access rights.
8. Click **Apply** or **Update**.

STEPS TO ENABLE

No steps are required to enable this feature.

CSS Customization of JET Configuration UI

A single JET-specific CSS file reduces complexity and provides a customized, seamless aesthetic for the JET Configuration and Transaction UIs as well as future JET UI enhancements.

Unlike Legacy UI's, the new JET UI applies only a single custom Stylesheet in addition to the base framework-generated styling. Any existing customizations applied through the other legacy CSS files will not affect the new JET UIs. The new JET Stylesheet applies to all JET UIs in CPQ Cloud site-wide rather than to a single UI or set of UIs. As a result, site-wide standards such as corporate styling can be implemented more easily, in one place. When additional JET UIs such as Homepage are released, these pages will also apply the single JET Stylesheet.

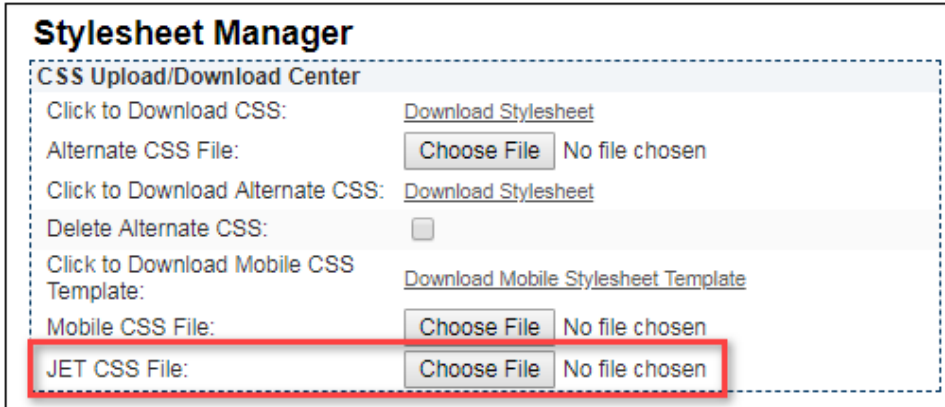
Rather than downloading an initial CSS stylesheet, modifying it and uploading the modified file, customers will now reference the JET UI's system-generated CSS using a web development tool, such as Chrome Development Tools, create any desired modifications to the base styling, and then upload a custom CSS file to revise the JET styling. For optimal performance, it is recommended that only modifications to the styling be included in this CSS file.

Upload a Custom CSS File

The custom CSS file will be uploaded on the Stylesheet administration page.

1. Navigate to the Stylesheet Manager.
Admin > Style and Templates > Stylesheet

The **Stylesheet Manager** page displays as shown below.



Stylesheet Manager

CSS Upload/Download Center

| | |
|----------------------------------------|-----------------------------------------------------------|
| Click to Download CSS: | Download Stylesheet |
| Alternate CSS File: | <input type="button" value="Choose File"/> No file chosen |
| Click to Download Alternate CSS: | Download Stylesheet |
| Delete Alternate CSS: | <input type="checkbox"/> |
| Click to Download Mobile CSS Template: | Download Mobile Stylesheet Template |
| Mobile CSS File: | <input type="button" value="Choose File"/> No file chosen |
| JET CSS File: | <input type="button" value="Choose File"/> No file chosen |

2. Click **Browse** to upload and apply styling customizations to JET UIs

STEPS TO ENABLE

Administrators should review the [CPQ Cloud JET CSS: Branding and Styling \(Doc ID 2462711.1\)](#) document prior to implementing CSS Customization for the JET Configuration UI.

JET CONFIGURATION UI KEY CHANGES, LIMITATIONS, AND KNOWN ISSUES

The following list provides descriptions of key changes, limitations, and known issues present in the JET Configuration UI as of CPQ Cloud 19B.

| User Interface Element | Description of Key Changes, Limitations, and Known Issues |
|--------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| JET CSS Stylesheet | JET uses a different CSS stylesheet from the legacy standard and alt stylesheets. As a result, CSS customizations may need to be refactored to work correctly with the JET Responsive Transaction UI. For additional details, refer to CPQ Cloud JET CSS: Branding and Styling (Doc ID 2462711.1) . |
| JET Help Text | The JET Configuration UI help text does not support Rich Text, links, or HTML tags in CPQ 19B. |
| JET HTML DOM | JET uses a different Document Object Model (DOM) from legacy UI pages. As a result, JavaScript customizations to the CPQ Configuration UI are not warranted to work as expected. |
| Asset-Based Ordering Flows | UI flows between CPQ's asset page and JET Configuration UIs, (i.e. reconfiguring an asset) are not supported in CPQ 19B. Oracle recommends that customers not enable JET Configuration UI access for product families that use ABO. |
| System Configuration | The JET Configuration UI does not support system configuration, the system configuration UI pane, or the implementation of models as children of other models in CPQ 19B. Oracle recommends that customers not enable JET UI access for product families that use system configuration. |
| Configuration Integrations | The JET Configuration UI does not support platform-supported Configuration Integrations, including HTTP Post, Custom, and Client-side types in CPQ 19B. |
| External Configurator Integration | Integration of the JET Configuration UI with external configurators is not supported in CPQ 19B. |
| Configurable Attribute Calculators | The JET Configuration UI does not support configurable attribute calculators in CPQ 19B. |
| UI Controls in Configuration Arrays | Integer and Float attributes with Slider controls, and Boolean attributes with Switch display type, are not supported in Vertical and Horizontal Configuration Array sets. |
| Search Flows, Favorites, Pending Configurations | Navigation between the JET Configuration UI and Search Flow, Favorites, or Pending Configuration pages is supported, but these pages continue to display as legacy UI pages in CPQ 19B. |
| Image Dropdown Menus (Select Choice) | Image dropdown menus using the JET "Select Choice" display option only display images in the dropdown list. Images are not displayed for the selected items. |
| Message Display | The JET Configuration UI does not support the "Bottom of Page" Message Placement option in CPQ 19B. The messages will display in the sticky header Error Panel. |
| Layout Preview | The Configuration Layout Editor Preview will not display JET-specific controls and options. |

STEPS TO ENABLE

Administrators should review JET Configuration UI Key Changes, Limitations, and Known Issues prior to implementing the JET Configuration UI.

ENTERPRISE PLATFORM

The following CPQ Cloud 19B features and enhancements cater to the needs of large, complex enterprises for a robust, integrated, and performant platform:

- Configuration Run-Time Data and Administration REST API Enhancements
- Email Approval Notification Enhancements
- Subscription Management Solution Enhancements
- Subscription Ordering Enhancements
- Transaction Array Enhancements

CONFIGURATION RUN-TIME DATA AND ADMINISTRATION REST API ENHANCEMENTS

Customer configuration flows dictate how users go through the pages and the options available to the users as they create Transactions. Configuration flow rules consist of a condition and flow attributes. Actions display on the node depending on defined criteria. CPQ Cloud 19B adds Configuration Run-Time Data REST API services endpoints to support the new JET Configuration UI. Configuration Run-Time Data REST APIs enable customers to build modern and responsive custom UIs.

CPQ Cloud 19B supports the following process invocations in the Configuration Run-Time Data REST API:

- Add a Model configuration to the Favorites list
- Reconfigure a Model configuration from the Favorites list
- Calculate total prices of recommended items, BOM items, and attribute value based on designated pricing implementation

IMPORTANT: In 19B the rest version is updated to v8. The Configuration Run-Time Data REST API **Add from Catalog** endpoint is not supported in version 8, instead the Add from Catalog flow is supported using the **Configure a Model** endpoint and request payload parameters. Refer to CPQ Cloud Online Help for detailed information.

Add Model to Favorites

| Add Model to Favorites | | |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Description | <p>This action adds the current valid model configuration to the Favorites list.</p> <p>The process invocation ID defined as the target for the Favorites is used. The response includes the Favorite ID and the destination URL.</p> | |
| URI Endpoint | <p><code>/rest/v8/config{prodFamVarName}. {prodLineVarName}. {modelVarName}/actions/_cm_{invocation_id}</code></p> | |
| Endpoint Parameters | prodFamVarName | The variable name of a Product Family |
| | prodLineVarName | The variable name of a Product Line |
| | modelVarName | The variable name of the Model |
| | invocation_id | <p>The process invocation ID for the Favorite list</p> <p>Note: This is the Identifier of an action defined for a page in the Process Invocation metadata API.</p> |
| HTTP Method | POST | |
| Request Body Parameters | cacheInstanceId | <p>The unique identifier for the entry of configuration data stored in the cache. This is obtained from actions that launch configuration and passed along in subsequent actions.</p> <p>(Required)</p> |
| | criteria | A top-level object that captures the query definition for the current resource request. |
| | delta | This boolean parameter is used to obtain only the partial response containing the attributes that are affected by rules. |
| Response Body Parameters | cacheInstanceId | The unique identifier for the entry of configuration data stored in the cache. This is obtained from actions that launch configuration and passed along in subsequent actions. |
| | FavoriteId | The unique identifier for the Favorite list |
| | destinationUrl | The source identified by the action that launched the Configuration or Transaction |

URI ENDPOINT SAMPLE

```
https://sitename.oracle.com/rest/v8/configvision.servers.ultraPowerSolutionPackage/
actions/_cm_21734357
```

SAMPLE REQUEST BODY

```
{
  "cacheInstanceId":
  "TyorT0UiW6H2ahn6Io2hm44KpkPZmpcwBgs8P7csERyRfXTpOWyOaOVpnv7XZvTH" ,
  "criteria": {
    "state": true,
    "childDefs": [{
      "name": "_priceInfo"
    }, {
      "name": "_recmdModels"
    }, {
      "name": "_mandatoryModels"
    }, {
      "name": "_recmdParts"
    }, {
      "name": "_mandatoryParts"
    }, {
      "name": "_bom"
    }
  ]
},
  "delta": true
}
```

SAMPLE RESPONSE BODY

```
{
  "cacheInstanceId":
  "8xJxmWo7cN5P0ozcMmBBu6UpMj5XVolEBzkqhLMKOJPPzNaxrMuSABD7YgGGdGRb" ,
  "destinationUrl":
  "https://sitename.oracle.com/commerce/buyside/commerce_list.jsp?id=21734357" ,
  "FavoriteId": 21734357
}
```

Reconfigure From Favorites

| Reconfigure From Favorites | | |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Description | <p>This action reconfigures the Model configuration from the Favorite detail page and returns the configuration data stored in the Favorite in the response. Users can also update and save the configuration.</p> <p>The Favorite ID is used as the input parameter in the request body.</p> | |
| URI Endpoint | /rest/v8/config{prodFamVarName}.{prodLineVarName}.{modelVarName}/actions/_reconfigureFav | |
| Endpoint Parameters | prodFamVarName | The variable name of a Product Family |
| | prodLineVarName | The variable name of a Product Line |
| | modelVarName | The variable name of the Model |
| HTTP Method | POST | |
| Request Body Parameters | criteria | A top-level object that captures the query definition for the current resource request |
| | FavoriteId | The unique identifier for the Favorite list |
| Response Body Parameters | cacheInstanceId | The unique identifier for the entry of configuration data stored in the cache. This is obtained from actions that launch configuration and passed along in subsequent actions. |
| | configData | Top-level object in the payload containing the configuration data |

URI ENDPOINT SAMPLE

```
https://sitename.oracle.com/rest/v8/configvision.servers.ultraPowerSolutionPackage/actions/_reconfigureFav
```

SAMPLE REQUEST BODY

```
{
  "cacheInstanceId":
  "TyorT0UiW6H2ahn6Io2hm44KpkPZmpcwBgs8P7csERYRfXTpOWyOaOVpnv7XZvTH",
  "criteria": {
    "state": true,
    "childDefs": [{
      "name": "_priceInfo"
    }, {
      "name": "_recmdModels"
    }, {
      "name": "_mandatoryModels"
    }, {
      "name": "_recmdParts"
    }, {
      "name": "_mandatoryParts"
    }, {
      "name": "_bom"
    }
  ]
},
  "FavoriteId": 21734357
}
```

SAMPLE RESPONSE BODY

```
{
  "cacheInstanceId":
  "yEWLwQLFNjbx9XC6c6mWaUPDB8GdZm68IKPJbzTgLiDRhuCKHvZrNECmRtDSVx6d",
  "configData": {
    "numberOfItems": {
      "value": 1,
      "displayValue": "1"
    },
    "_recmdModels": {
      "items": []
    },
    "_bom": {
      "items": []
    },
    "_mandatoryModels": {
      "items": []
    },
    "_price_book_var_name": {
      "value": "_default_price_book",
      "links": [{
        "rel": "related",
        "href": "https://sitename.oracle.com/rest/v8/configPF.PL.Model/_priceBooks"
      }
    ]
  },
  "_state": {
    "updatable": true,
    "hasError": false,
    "hasWarning": false,
    "messages": [],
    "actions": {
      "_update": {
        "enabled": true,
        "visible": true
      },
      "_save": {
        "enabled": true,
        "visible": true
      },
      "_cancel": {
        "enabled": true,
        "visible": true
      }
    }
  },
  "attributes": {
    "numberOfLineItems": {
      "updatable": true,
      "hasError": false,
      "hasWarning": false,
      "messages": [],
      "visible": true,
      "hasConstraintViolation": false,
      "domain": {
        "constraintType": "DISALLOWED",
        "constraintList": [],
        "domainRestricted": true,
        "availableElements": [{
          "value": 1,
          "displayValue": "1"
        }
      ]
    }
  }
}
```

```

    },
    "required": false,
    "recommendationMessages": []
  },
  "help": {
    "updatable": false,
    "hasError": false,
    "hasWarning": false,
    "messages": [],
    "visible": true,
    "hasConstraintViolation": false,
    "recommendationMessages": []
  },
  "_price_book_var_name": {
    "updatable": true,
    "hasError": false,
    "hasWarning": false,
    "messages": [],
    "visible": true,
    "hasConstraintViolation": false,
    "domain": {
      "constraintType": "DISALLOWED",
      "constraintList": [],
      "domainRestricted": true,
      "availableElements": [{
        "value": "_default_price_book",
        "displayValue": "Base Price"
      }, {
        "value": "pricebook1",
        "displayValue": "Pricebook 1: Multiplier of Base Price (2.0x)"
      }
    ]
  },
  "required": false,
  "recommendationMessages": []
},
"_isMainModelSelected": {
  "updatable": false,
  "hasError": false,
  "hasWarning": false,
  "messages": [],
  "visible": true,
  "hasConstraintViolation": false,
  "recommendationMessages": []
}
},
"links": [{
  "rel": "child",
  "href": "https://sitename.oracle.com/rest/v8/configPF.PL.Model/_bom"
}, {
  "rel": "child",
  "href": "https://sitename.oracle.com/rest/v8/configPF.PL.Model/_recmdModels"
}, {
  "rel": "child",
  "href":
"https://sitename.oracle.com/rest/v8/configPF.PL.Model/_mandatoryModels"
}, {
  "rel": "child",
  "href": "https://sitename.oracle.com/rest/v8/configPF.PL.Model/_recmdParts"
}, {
  "rel": "child",
  "href":
"https://sitename.oracle.com/rest/v8/configPF.PL.Model/_mandatoryParts"

```

```

    }, {
      "rel": "child",
      "href": "https://sitename.oracle.com/rest/v8/configPF.PL.Model/_priceInfo"
    }, {
      "rel": "child",
      "href": "https://sitename.oracle.com/rest/v8/configPF.PL.Model/_priceBooks"
    }
  ],
  "_mandatoryParts": {
    "items": []
  },
  "_isMainModelSelected": true,
  "_priceInfo": {
    "items": [{
      "category": {
        "code": "GENERAL",
        "displayName": "Price"
      },
      "_others": [{
        "name": "Total Configured Price of Model",
        "variableName": "_totalConfiguredPrice",
        "price": {
          "value": 0,
          "currency": "USD"
        }
      }, {
        "name": "Total Price of Recommended Items",
        "variableName": "_totalRecommendedPrice",
        "price": {
          "value": 15.98,
          "currency": "USD"
        }
      }, {
        "name": "Grand Total",
        "variableName": "_grandTotal",
        "price": {
          "value": 15.98,
          "currency": "USD"
        }
      }
    ]
  }
},
  "name": "Price"
},
  "_recmdParts": {
    "items": [{
      "id": "part~part3~performanceAdvancedAction",
      "selected": "true",
      "partNumber": "part3",
      "comment": "Part returned from hardcoded recommended items action returning
3 parts",
      "price": {
        "value": 3.33,
        "currency": "USD"
      },
      "extendedDescription1": "Extended description 1 for part3",
      "description": "",
      "directBuy": "Direct Buy",
      "quantity": 3,
      "_part_custom_field19": "Custom Field 19, part3",
      "partDisplayNumber": "Part Display 3",
      "companyAssociations": "",

```

```

    }
  ],
  "selectAll": true
}
}, "systemCurrentDate": "2019-04-11", "_flow": {
  "flow": "simpleModelFlow",
  "productFamily": "PF",
  "productLine": "PL",
  "model": "Model",
  "links": [{
    "rel": "self",
    "href":
"https://sitename.oracle.com/rest/v8/productFamilies/PF/productLines/PL/models/Model/
layouts/simpleModelFlow"
  }
]
}
}
}
}

```

Load Configuration Data

| Load Configuration Data | | |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Description | <p>This action reads the configuration data from a particular cache instance. This endpoint will not run the rules but rather loads that configuration data.</p> <p>The cache instance ID is used as the input parameter in the request body.</p> | |
| URI Endpoint | /rest/v8/config{prodFamVarName}.{prodLineVarName}.{modelVarName}/actions/_loadData | |
| Endpoint Parameters | prodFamVarName | The variable name of a Product Family |
| | prodLineVarName | The variable name of a Product Line |
| | modelVarName | The variable name of the Model |
| HTTP Method | POST | |
| Request Body Parameters | cacheInstanceId | The unique identifier for the entry of configuration data stored in the cache. This is obtained from actions that launch configuration and passed along in subsequent actions. (Required) |
| | criteria | A top-level object that captures the query definition for the current resource request |
| Response Body Parameters | cacheInstanceId | The unique identifier for the entry of configuration data stored in the cache. This is obtained from actions that launch configuration and passed along in subsequent actions. |
| | configData | Top-level object in the payload containing the configuration data |
| | systemCurrentDate | The date of the REST call for the configuration data |
| | _flow | A top-level object that captures the configuration flow variable name for the current request |

URI ENDPOINT SAMPLE

```
https://sitename.oracle.com/rest/v8/configvision.servers.ultraPowerSolutionPackage/
actions/_loadData
```

SAMPLE REQUEST BODY

```
{
  "cacheInstanceId":
  "TyorT0UiW6H2ahn6Io2hm44KpkPZmpcwBgs8P7csERyRfXTpOWyOaOVpvnv7XZvTH",
  "criteria": {
    "state": true,
    "childDefs": [{
      "name": "_setNormalArray"
    }, {
      "name": "_setSSPLArray"
    }
  ]
}
```

SAMPLE RESPONSE BODY

```
{
  "cacheInstanceId":
  "DTNqIQk94zzB5qQLn8bjnc1eTbTyw5L002oK8nsH9gJ0iSM9xEN7wCN9Dxa4pNHR",
  "configData": {
    "whereDoYouCall": {
      "value": "None",
      "displayValue": "None"
    },
    "_setNormalArray": {
      "_state": {
        "insertable": true,
        "sortable": false,
        "deletable": true,
        "defaultRowState": {
          "updatable": true,
          "hasError": false,
          "messages": [],
          "attributes": {
            "addOnService": {
              "updatable": true,
              "hasError": false,
              "hasWarning": false,
              "messages": [],
              "visible": true,
              "hasConstraintViolation": false,
              "domain": {
                "constraintType": "DISALLOWED",
                "constraintList": [],
                "domainRestricted": true,
                "availableElements": [{
                  "value": "DVR",
                  "displayValue": "DVR",
                  "avp": {
                    "value": 20.0,
                    "currency": "USD"
                  }
                }
              ], {

```

```

        "value": "Hotspot",
        "displayValue": "Hotspot",
        "avp": {
            "value": 10.0,
            "currency": "USD"
        }
    }, {
        "value": "Replacement Plan",
        "displayValue": "Replacement Plan",
        "avp": {
            "value": 7.0,
            "currency": "USD"
        }
    }
]
},
"recommendationMessages": []
},
"durationofservice": {
    "updatable": true,
    "hasError": false,
    "hasWarning": false,
    "messages": [],
    "visible": true,
    "hasConstraintViolation": false,
    "domain": {
        "constraintType": "DISALLOWED",
        "constraintList": [],
        "domainRestricted": true,
        "availableElements": [{
            "value": "Per Month",
            "displayValue": "Per Month"
        }, {
            "value": "Per Year",
            "displayValue": "Per Year"
        }
    ]
},
"recommendationMessages": []
}
},
"actions": {
    "_delete": {
        "enabled": true,
        "visible": true
    },
    "_add": {
        "enabled": true,
        "visible": true
    }
},
"attributes": {
    "addOnService": {
        "visible": true
    },
    "durationofservice": {
        "visible": true
    }
}
},
"items": [{
    "_index": 0,
    "_rowKey": "a7ed40ed-bff3-4ea2-ab49-831140926c7f",

```

```

        "addOnService": {
            "value": "DVR",
            "displayValue": "DVR",
            "avp": {
                "value": 20.0,
                "currency": "USD"
            }
        },
        "durationofservice": {
            "value": "Per Year",
            "displayValue": "Per Year"
        },
        "_state": {
            "hasError": false,
            "messages": []
        }
    }
]
},
"locationType": {
    "value": "",
    "displayValue": "",
    "links": [{
        "rel": "related",
        "href":
"https://sitename.oracle.com/rest/v8/configunityINC.standAloneServices.mobility/_pick
Lists/locationType"
    }
]
},
"_price_book_var_name": {
    "value": "_default_price_book",
    "links": [{
        "rel": "related",
        "href":
"https://sitename.oracle.com/rest/v8/configunityINC.standAloneServices.mobility/_pric
eBooks"
    }
]
},
"_state": {
    "updatable": true,
    "hasError": false,
    "hasWarning": false,
    "messages": [],
    "actions": {
        "_cm_17996461": {
            "enabled": true,
            "visible": false
        },
        "_previous": {
            "enabled": true,
            "visible": false
        },
        "_cancel": {
            "enabled": true,
            "visible": false
        },
        "_addToTxn": {
            "enabled": true,
            "visible": false
        },
        "_next": {
            "enabled": true,

```

```

        "visible": false
    }
},
"attributes": {
    "_isMainModelSelected": {
        "updatable": false,
        "hasError": false,
        "hasWarning": false,
        "messages": [],
        "visible": false,
        "hasConstraintViolation": false,
        "recommendationMessages": []
    },
    "numberOfPlans": {
        "updatable": true,
        "hasError": false,
        "hasWarning": false,
        "messages": [],
        "visible": false,
        "hasConstraintViolation": false,
        "recommendationMessages": []
    }
}
}
"links": [{
    "rel": "child",
    "href":
"https://sitename.oracle.com/rest/v8/configunityINC.standAloneServices.mobility/_bom"
}, {
    "rel": "child",
    "href":
"https://sitename.oracle.com/rest/v8/configunityINC.standAloneServices.mobility/_recom
dModels"
}, {
    "rel": "child",
    "href":
"https://sitename.oracle.com/rest/v8/configunityINC.standAloneServices.mobility/_mand
atoryModels"
}, {
    "rel": "child",
    "href":
"https://sitename.oracle.com/rest/v8/configunityINC.standAloneServices.mobility/_recom
dParts"
}, {
    "rel": "child",
    "href":
"https://sitename.oracle.com/rest/v8/configunityINC.standAloneServices.mobility/_mand
atoryParts"
}, {
    "rel": "child",
    "href":
"https://sitename.oracle.com/rest/v8/configunityINC.standAloneServices.mobility/_pick
Lists"
}, {
    "rel": "child",
    "href":
"https://sitename.oracle.com/rest/v8/configunityINC.standAloneServices.mobility/_pric
eInfo"
}, {
    "rel": "child",
    "href":
"https://sitename.oracle.com/rest/v8/configunityINC.standAloneServices.mobility/_pric
eBooks"
}, {

```

```

        "rel": "child",
        "href":
"https://sitename.oracle.com/rest/v8/configunityINC.standAloneServices.mobility/_setNormalArray"
    }
}
],
"selectState": {
    "value": "",
    "displayValue": "",
    "links": [{
        "rel": "related",
        "href":
"https://sitename.oracle.com/rest/v8/configunityINC.standAloneServices.mobility/_pickLists/selectState"
    }
]
},
"VoipAPP": false,
"_isMainModelSelected": true,
"numberOfPlans": null
}, "systemCurrentDate": "2019-04-11", "_flow": {
    "flow": "unityMobility",
    "productFamily": "unityINC",
    "productLine": "standAloneServices",
    "model": "mobility",
    "links": [{
        "rel": "self",
        "href":
"https://sitename.oracle.com/rest/v8/productFamilies/unityINC/productLines/standAloneServices/models/mobility/layouts/unityMobility"
    }
]
}
}
}

```

Load Array Set Data

| Load Array Set Data | | |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Description | This action reads the configuration data from a particular array set. This endpoint will not run the rules but rather loads that configuration data of the array set. The cache instance ID is used as the input parameter in the request body. | |
| URI Endpoint | /rest/v8/config{prodFamVarName}.{prodLineVarName}.{modelVarName}/_set{arraySetVarName}/actions/_loadData | |
| Endpoint Parameters | prodFamVarName | The variable name of a Product Family |
| | prodLineVarName | The variable name of a Product Line |
| | modelVarName | The variable name of the Model |
| | arraySetVarName | The variable name of the array set |
| HTTP Method | POST | |
| Request Body Parameters | cacheInstanceId | The unique identifier for the entry of configuration data stored in the cache. This is obtained from actions that launch configuration and passed along in subsequent actions. (Required) |
| | criteria | A top-level object that captures the query definition for the current resource request. |
| Response Body Parameters | cacheInstanceId | The unique identifier for the entry of configuration data stored in the cache. This is obtained from actions that launch configuration and passed along in subsequent actions. |
| | items | A top-level object in the payload containing the index of the element in the array set and the array definitions. |

URI ENDPOINT SAMPLE

```
https://sitename.oracle.com/rest/v8/configvision.servers.ultraPowerSolutionPackage/actions/_loadData
```

SAMPLE REQUEST BODY

```
{
  "cacheInstanceId":
  "ZGQn3ciig5QBSvvvzZnin1IpAEUyC0wTv22guTBLnzGWNjgG6ekKPa7JvNrQubs3",
  "criteria": {
    "state": true,
    "fields": ["arrayTextField1"]
  }
}
```

SAMPLE RESPONSE BODY

```
{
  "_state": {
    "insertable": true,
    "sortable": false,
    "deletable": true,
    "defaultRowState": {
      "updatable": true,
      "hasError": false,
      "messages": [],
      "attributes": {
        "arrayTextField1": {
          "updatable": true,
          "hasError": false,
          "hasWarning": false,
          "messages": [],
          "visible": true,
          "hasConstraintViolation": false
        }
      }
    },
    "actions": {
      "_delete": {
        "enabled": true,
        "visible": true
      },
      "_add": {
        "enabled": true,
        "visible": true
      }
    },
    "attributes": {
      "arrayTextField1": {
        "visible": true
      }
    }
  },
  "items": [{
    "index": 0,
    "_rowKey": "6d5eb9ef-393c-43aa-9528-925489f8767d",
    "arrayTextField1": "test0",
    "_state": {
      "hasError": false,
      "messages": []
    }
  }, {
    "index": 1,
    "_rowKey": "d8da0d00-92d3-48bb-af02-1bf72c80fd81",
    "arrayTextField1": "",
    "_state": {
      "hasError": false,
      "messages": []
    }
  }, {
    "index": 2,
    "_rowKey": "bb3102d3-a83e-47ef-a38d-0abe9f31508e",
    "arrayTextField1": "",
    "_state": {
      "hasError": false,
      "messages": []
    }
  }
}
```

```

    ],
    "cacheInstanceId" :
    "ZGQn3ciig5QBSvvvzZnin1IpAEUyC0wTv22guTBLnzGwnjgG6ekKPa7JvNrQubs3"
  }

```

STEPS TO ENABLE

The Configuration Run-Time Data REST API enhancements are automatically available with CPQ Cloud 19B. Administrators need to update any systems that interact with these CPQ web services to begin using these new features.

CONFIGURATION ADMINISTRATION REST API ENHANCEMENT

Get Recommended Items Metadata

| Get Recommended Items Metadata | | |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|
| Description | <p>This action retrieves the metadata defined in the Page Template for the Recommended Items, Mandatory Items, Mandatory Models, Recommended Models and BOM Items. The response includes the Model Template and Parts Template metadata.</p> <p>This endpoint is used in conjunction with the Configure Model (<code>/rest/v8/config{prodFamVarName}.{prodLineVarName}.{modelVarName}/actions/_configure</code>) endpoint to return the recommended items as per the metadata defined in the Page Template.</p> <p>This endpoint accepts an optional query parameter language code to retrieve a translation defined in the template. If the language code provided is not defined in the template, the response displays in the site base language.</p> | |
| URI Endpoint | <code>/rest/v8/pageTemplates/recommended_spare_templates</code> | |
| HTTP Method | GET | |
| Request Body Parameters | langcode | The language code for translation. (Optional) |
| Response Body Parameters | modelTemplate | The model metadata items identified in the Page Template |
| | partsTemplate | The parts metadata identified in the Page Template |

URI ENDPOINT SAMPLE

```
https://sitename.oracle.com/rest/v8/pageTemplates/recommended_spare_templates
```

URI ENDPOINT SAMPLE WITH LANGUAGE CODE (OPTIONAL)

```
https://sitename.oracle.com/rest/v8/pageTemplates/recommended_spare_templates?language=de
```


SAMPLE RESPONSE BODY

```
{
  "modelTemplate": {
    "items": [{
      "name": "Model Name",
      "variableName": "modelName",
      "label": "Model Name",
      "order": 1
    }, {
      "name": "Comment",
      "variableName": "comment",
      "label": "Comment",
      "order": 2
    }, {
      "name": "Price",
      "variableName": "price",
      "label": "Price",
      "order": 3
    }, {
      "name": "Quantity",
      "variableName": "quantity",
      "label": "Quantity",
      "order": 5
    }, {
      "name": "Description",
      "variableName": "description",
      "label": "Description",
      "order": 6
    }
  ]
},
  "partsTemplate": {
    "items": [{
      "name": "Part Number",
      "variableName": "partNumber",
      "label": "Part Number",
      "order": 1
    }, {
      "name": "Comment",
      "variableName": "comment",
      "label": "Comment",
      "order": 3
    }, {
      "name": "Price",
      "variableName": "price",
      "label": "Price",
      "order": 4
    }, {
      "name": "Extended Description 1",
      "variableName": "extendedDescription1",
      "label": "Extended Description 1",
      "order": 6
    }, {
      "name": "Description",
      "variableName": "description",
      "label": "Description",
      "order": 7
    }
  ]
}
```

```

    }, {
      "name": "Direct Buy",
      "variableName": "directBuy",
      "label": "Direct Buy",
      "order": 9
    }, {
      "name": "Quantity",
      "variableName": "quantity",
      "label": "Quantity",
      "order": 10
    }, {
      "name": "Custom Field 19",
      "variableName": "_part_custom_field19",
      "label": "Custom Field 19",
      "order": 23
    }, {
      "name": "Custom Field 18",
      "variableName": "_part_custom_field18",
      "label": "Custom Field 18",
      "order": 24
    }, {
      "name": "Part Display Number",
      "variableName": "partDisplayNumber",
      "label": "Part Display Number",
      "order": 43
    }, {
      "name": "Company Associations",
      "variableName": "companyAssociations",
      "label": "Company Associations",
      "order": 44
    }
  ]
},
"links": [{
  "rel": "self",
  "href":
"https://sitename.oracle.com/rest/v8/pageTemplates/recommended_spare_templates"
}
]
}

```

STEPS TO ENABLE

The Configuration Administration REST API enhancements are automatically available with CPQ Cloud 19B. Administrators need to update any systems that interact with these CPQ web services to begin using these new features.

EMAIL APPROVAL NOTIFICATION ENHANCEMENTS

Email Approval Notifications help shorten the quote lifecycle by minimizing the lag between when an approval is requested and when an approver takes action. Emails notify approvers that a sales user has submitted a quote for approval and allows approvers to approve or reject without logging into CPQ Cloud. CPQ Cloud 19B improves the usability of email approval notifications with the following enhancements.

DEFAULT APPROVAL EMAIL NOTIFICATION ENHANCEMENTS

In CPQ Cloud 19B, the Default Approver Template uses an HTML format which includes improved layout, format, and style. The system-generated token is relocated from the email subject line to the end of the message body. This improves readability and reduces the likelihood the email is flagged as spam or causes the user to be suspicious that the email contains a virus.

In addition, the Default Approver Template now includes Approve and Reject mailto links. Refer to [Email Approval Response Enhancements](#).

From: support@yourcompany.com <support@yourcompany.com>
Sent: Friday, April 12, 2019 11:53 AM
To: Lisa Jones <lisa.jones@yourcompany.com>
Subject: Pending Approval Notification

Dear Lisa Jones,
Transaction ABC-123 requires your approval for the reason: Price Requires Approval.

✓ [Approve](#) ✗ [Reject](#)

Sales User requested the approval with the comment:
Need response as soon as possible. Thanks!

Click here to open the quote:
https://sitename.oracle.com/commerce/buyside/document.jsp?formaction=performAction&action_id=36244076&bs_id=36824389&bm_cm_process_id=36244034&document_id=36244074

Do not modify the text below:
Token #rBUxKxfd6LSN+7X8kn8zvB5mbNAekU+fyrdkRltvm9JOecpONN8DSd7yqIYCobFB407tRziFM+InaWQKsJTU/g==

Sample Default Approval Email Notification

To enable HTML approval email notifications, complete the following steps:

1. Navigate to the **Commerce Options** page.

Admin Home > Commerce and Documents > Commerce Settings

Commerce Options

Options - Commerce

Number of Milliseconds to Wait Before Showing the Loading Dialog for Ajax Rules

Allow Commerce Processes and Invocations to be Deployed and Undeployed Yes No

Allow Commerce Processes to be Cloned and Migrated Yes No

Allow the Transaction ID to be included in the Commerce Search Yes No

Commerce Pricing Behavior From Catalog Version 1 Version 2

Transfer Advanced Pricing Profiles JSON to Commerce Yes No

Enable sticky header for line item grid Yes No

Number of columns to freeze on line item grid

Enable Subscription Ordering for Simple Products Yes No

Enable HTML Approval Email Yes No

2. Select **Yes** to set the **Enable HTML Approval Email** option.
3. Click **Update**.

IMPORTANT: Once the HTML Approval Email is enabled, all new approval email notifications will be sent using the new HTML format. All in-progress approvals that were sent using the old format can be approved or rejected using the legacy response format.

If you have not defined your approval process and want to create a process that uses the default notification, complete the following steps:

1. Navigate to the **Processes** page.

Admin Home > Commerce and Documents > Process Definitions

Processes

| Select | Name | Navigation | Quick Links | Description | Last Deployed |
|--------------------------|---------------------------------------|------------|-------------------------------------------------------------------------------|---------------------------------|--------------------|
| <input type="checkbox"/> | Oracle Quote to Order | Documents | <input checked="" type="checkbox"/> List Open | The reference commerce process. | 04/02/2019 7:28 AM |

- For a process, select **Documents** from the Navigation drop-down and then click **List**. The Documents List page displays.

| Document List | | | | Process : Oracle Quote to Order | |
|---------------|-------|----------------------------------|----------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|--------------------|
| Select | Order | Document Name | Navigation | Description | Date Last Modified |
| | 1 | Transaction | Actions List | Main (Header Level) Commerce Document - serves as Quote/Order depending on step in process flow | 03/06/2019 9:02 AM |
| | | Transaction Line | Attributes List | Line Level Document - Captures pricing and data at the line level | 03/06/2019 9:02 AM |

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- For a Document, select **Actions** from the Navigation drop-down and then click **List**. The Action List page displays.
- Click on the **Submit** action link. The Admin Action page displays.

Admin Action (submit_t) Document : Oracle Quote to Order > Transaction

General
Modify
Integration
Document Views
Performance

*Label:

*Variable Name: [Submit Attributes](#)

Description:

Submits the transaction for approval. If no approvals are defined or triggered for the transaction, the status will move directly to the approved step.

Action Icon:

Show Loading Dialog: No Yes

Action Timeout: minutes

Execute Action If Associated Integrations Timeout:

Approval Sequence: Use Approvals Use Remote

Edit Approvals

JET Layout Path:

- PANEL.Transaction > TAB.Troubleshooting and Support Controls
- Sticky Action Bar

Mobile Layout Path:

- TAB.Transaction > GROUP.Troubleshooting and Support Controls
- Sticky Action Bar

Run Validation Before Modify:

Advanced Modify - Before Formulas: No Advanced Modify - Before Formulas Define Advanced Modify - Before Formulas

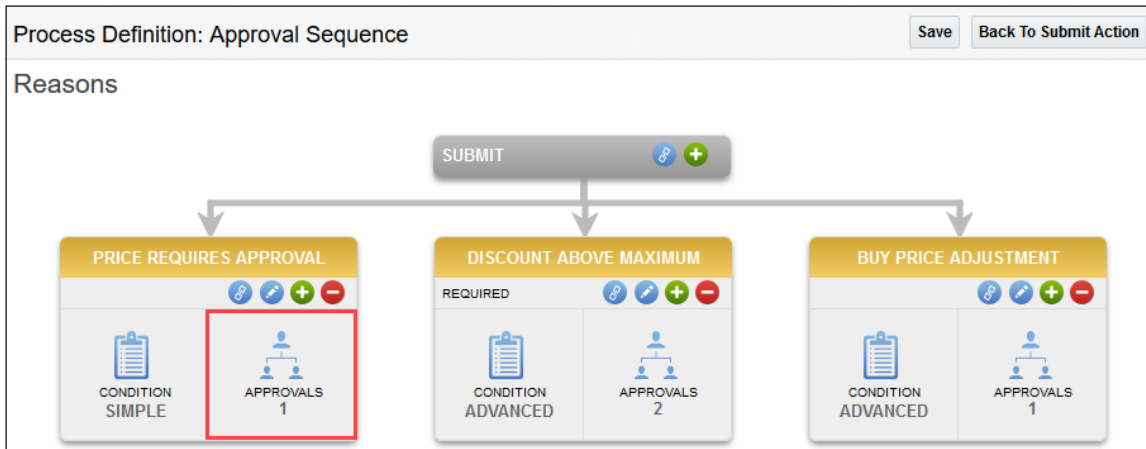
Advanced Modify - After Formulas: No Advanced Modify - After Formulas Define Advanced Modify - After Formulas

Advanced Validation: Simple Validations Define Validation Rules (deprecated - use Commerce Rules) Save Without Validating Modify Without Saving or Validating

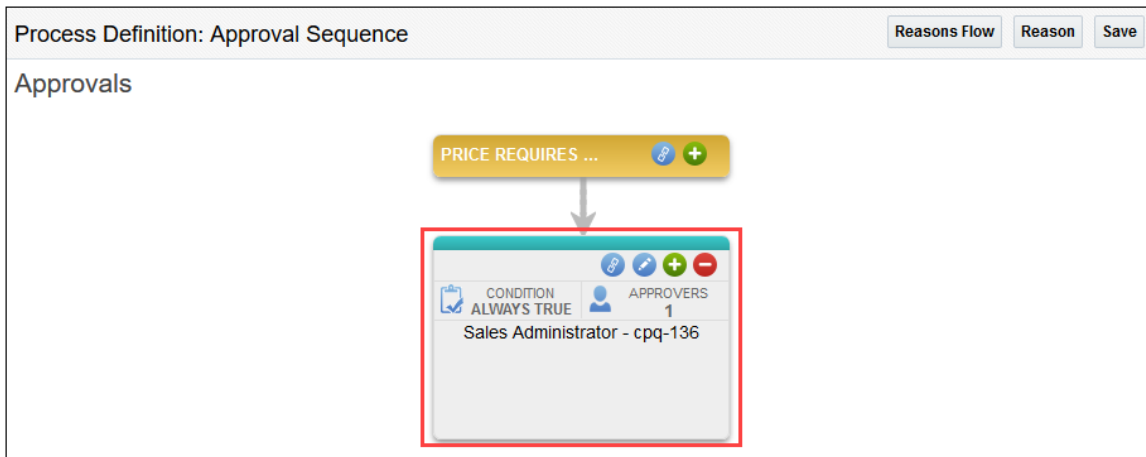
* Changes to the document will not be saved when the action is performed, and transition rules will not trigger.

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5. Click **Edit Approvals** under Approval Sequence. The Process Definition: Approval Sequence Reasons page displays.



6. For each approval reason, click into **Approvals** box.



- Click into the **Approvals** box. The Approval Details screen displays.

The screenshot shows the 'Approval Details' screen for a process definition named 'Approval Sequence'. The main title is 'Price Requires Approval' with the ID 'priceRequiresApproval'. The screen is divided into several sections:

- Required In Sequence**: A checkbox with a help icon.
- Notification To Approver**: Radio buttons for 'None', 'Approver Template' (selected), and 'Advanced'.
- Approver Template**: A dropdown menu currently showing 'Default', which is highlighted with a red box.
- Approver Reminder (in days)**: A dropdown menu currently showing 'No Reminder'.
- Approver Attachment**: A dropdown menu currently showing 'None'.
- Conditions**: Radio buttons for 'Always True' (selected), 'Simple Condition', and 'Advanced Condition'.
- Approver Selection**: A section on the right showing '1 APPROVER'. It has radio buttons for 'Simple' (selected) and 'Advanced'. Below is a 'Find Approvers' search box and a list of approvers, including 'Sales Administr... cpq-136' with a red minus sign to its right.

At the top right, there are tabs for 'Reasons Flow', 'Reason', 'Approvals Flow', and 'Save'.

- Select **Approver Template** under Notification To Approver.
- Select **Default** in the **Approver Template** drop-down.
- Click **Save**.

STEPS TO ENABLE

The Default Approval Email Notification requires administrator setup on CPQ Cloud 19B sites. Instructions are included in this document and CPQ Cloud Online help.

TIPS AND CONSIDERATIONS

The Default Notification email is presented to recipients in their preferred languages. However, the token and action are not translatable objects.

CUSTOM APPROVAL EMAIL NOTIFICATION ENHANCEMENTS

Custom Approver Templates built using the Email Designer relocate the system-generated token from the email subject line to the end of the message body. This improves readability and reduces the likelihood the email is flagged as spam or causes the user to be suspicious that the email contains a virus.

The Email Designer allows administrators to add dynamic Approve and Reject mailto links to their email templates. Refer to [Email Approval Response Enhancements](#).

From: support@yourcompany.com <support@.com>
Sent: Friday, May 3, 2019 3:20 PM
To: Lisa Jones <lisajones@yourcompany.com>
Subject: Transaction CPQ-606 has been submitted for approval.

Transaction CPQ-606 has been submitted for approval.

[Approve](#) [Reject](#)

Customer Name: Acme Inc.
Transaction Total: \$1,482.30
Discount Total: \$74.70

Do not modify the text below:
Token #BUxKxfd6LSN+7X8kn8zvB5mbNAekU+fyrdkRltvm9JstgQbPCmpq+BfKsLddSFKb8MW2e62+Vn0ZhC0ktUoVg==

Sample Custom Approval Email Notification

To enable HTML approval email notifications, complete the following steps:

1. Navigate to the Commerce Options page.

Admin Home > Commerce and Documents > Commerce Settings

Commerce Options

Options - Commerce

| | |
|---------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| Number of Milliseconds to Wait Before Showing the Loading Dialog for Ajax Rules | <input type="text" value="1000"/> |
| Allow Commerce Processes and Invocations to be Deployed and Undeployed | <input checked="" type="radio"/> Yes <input type="radio"/> No |
| Allow Commerce Processes to be Cloned and Migrated | <input checked="" type="radio"/> Yes <input type="radio"/> No |
| Allow the Transaction ID to be included in the Commerce Search | <input checked="" type="radio"/> Yes <input type="radio"/> No |
| Commerce Pricing Behavior | <input checked="" type="radio"/> From Catalog <input type="radio"/> Version 1 <input type="radio"/> Version 2 |
| Transfer Advanced Pricing Profiles JSON to Commerce | <input checked="" type="radio"/> Yes <input type="radio"/> No |
| Enable sticky header for line item grid | <input type="radio"/> Yes <input checked="" type="radio"/> No |
| Number of columns to freeze on line item grid | <input type="text" value="0"/> |
| Enable Subscription Ordering for Simple Products | <input type="radio"/> Yes <input checked="" type="radio"/> No |
| Enable HTML Approval Email | <input checked="" type="radio"/> Yes <input type="radio"/> No |

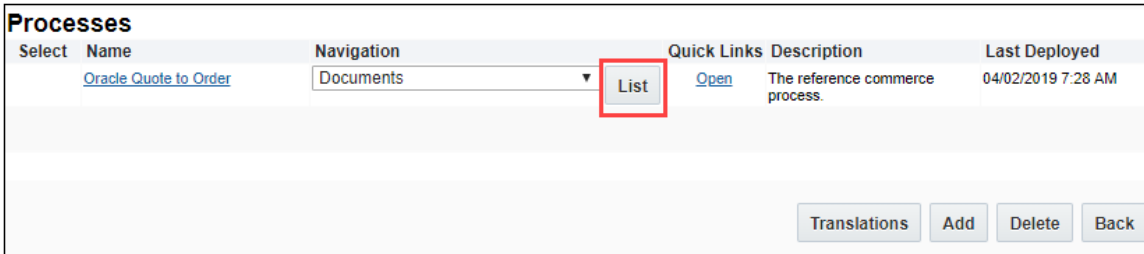
2. Select **Yes** to set the **Enable HTML Approval Email** option.

3. Click **Update**.

IMPORTANT: Once the HTML Approval Email is enabled, all new approval email notifications will be sent using the new token location. All in-progress approvals that were sent using the old format can be approved or rejected using the legacy response format.

If you have not defined your approval process and want to create a process that uses a custom notification, complete the following steps:

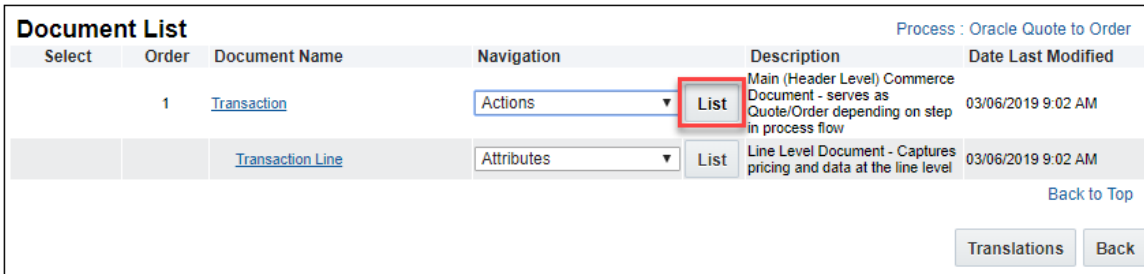
1. Navigate to the **Processes** page.
Admin Home > Commerce and Documents > Process Definitions



| Select | Name | Navigation | Quick Links | Description | Last Deployed |
|--------|---------------------------------------|------------|-------------------------------------------|---------------------------------|--------------------|
| | Oracle Quote to Order | Documents | List Open | The reference commerce process. | 04/02/2019 7:28 AM |

Translations Add Delete Back

2. For a process, select **Documents** from the Navigation drop-down and then click **List**. The Documents List page displays.



| Select | Order | Document Name | Navigation | Description | Date Last Modified |
|--------|-------|----------------------------------|------------|-------------------------------------------------------------------------------------------------|--------------------|
| | 1 | Transaction | Actions | Main (Header Level) Commerce Document - serves as Quote/Order depending on step in process flow | 03/06/2019 9:02 AM |
| | | Transaction Line | Attributes | Line Level Document - Captures pricing and data at the line level | 03/06/2019 9:02 AM |

Process : Oracle Quote to Order

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3. For a Document, select **Actions** from the Navigation drop-down and then click **List**. The Action List page displays.

4. Click on the **Submit** action link. The Admin Action page displays.

Admin Action (submit_t) Document : Oracle Quote to Order > Transaction

General **Modify** **Integration** **Document Views** **Performance**

*Label:

*Variable Name: [Submit Attributes](#)

Description:

Submits the transaction for approval. If no approvals are defined or triggered for the transaction, the status will move directly to the approved step.

Action Icon:

Show Loading Dialog: No Yes

Action Timeout: minutes

Execute Action If Associated Integrations Timeout:

Approval Sequence: Use Approvals Use Remote

Edit Approvals

JET Layout Path:

- PANEL:Transaction > TAB:Troubleshooting and Support Controls
- Sticky Action Bar

Mobile Layout Path:

- TAB:Transaction > GROUP:Troubleshooting and Support Controls
- Sticky Action Bar

Run Validation Before Modify

Advanced Modify - Before Formulas: No Advanced Modify - Before Formulas Define Advanced Modify - Before Formulas

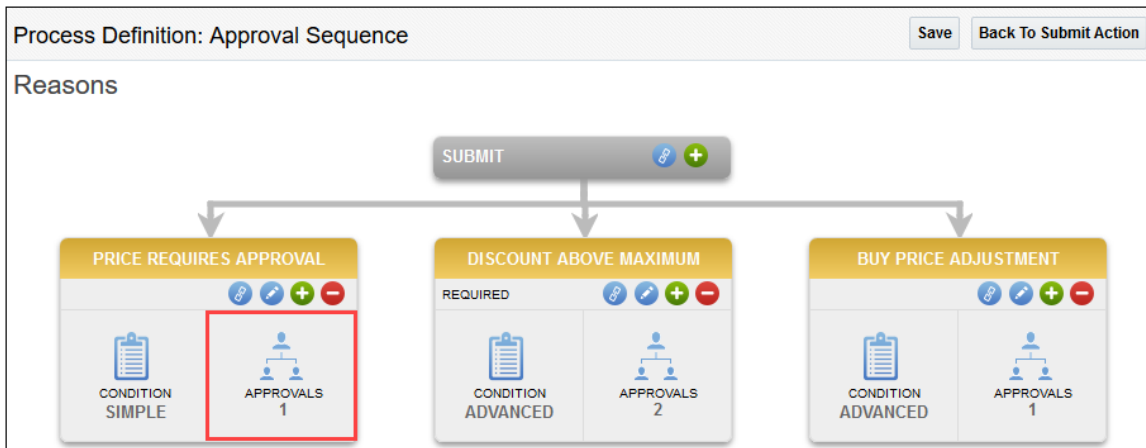
Advanced Modify - After Formulas: No Advanced Modify - After Formulas Define Advanced Modify - After Formulas

Advanced Validation: Simple Validations Define Validation Rules (deprecated - use [Commerce Rules](#)) Save Without Validating Modify Without Saving or Validating

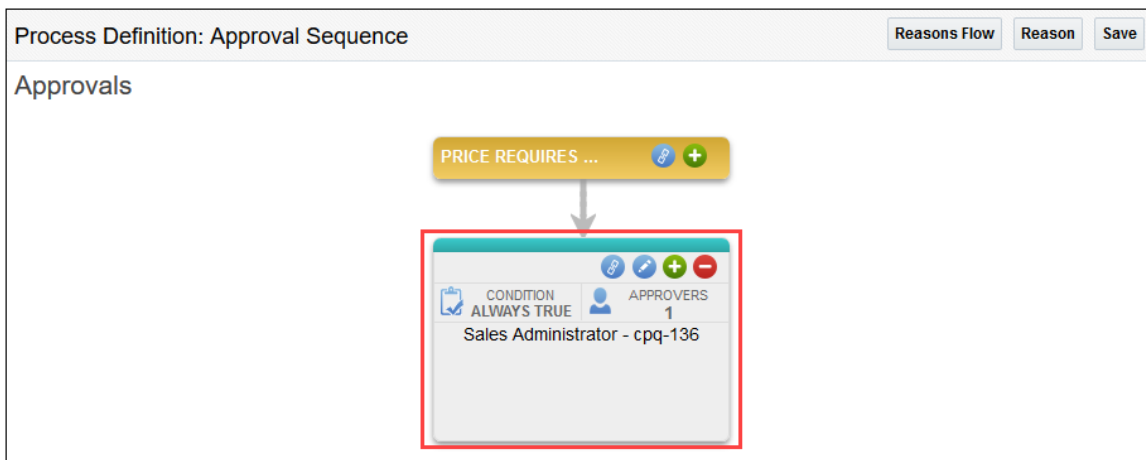
* Changes to the document will not be saved when the action is performed, and transition rules will not trigger.

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5. Click **Edit Approvals** under Approval Sequence. The Process Definition: Approval Sequence Reasons page displays.



6. For each approval reason, click into **Approvals** box.



- Click into the **Approvals** box. The Approval Details screen displays.

Process Definition: Approval Sequence Reasons Flow Reason Approvals Flow Save

Approval Details

Price Requires Approval priceRequiresApproval

Required In Sequence ?

Notification To Approver ?

None
 Approver Template
 Advanced

Approver Template Discount Approval

Approver Attachment None

Approver Reminder (in days) No Reminder

Conditions ?

Always True
 Simple Condition
 Advanced Condition

Approver Selection ?

Simple
 Advanced

Find Approvers

Sales Administr... cpq-136

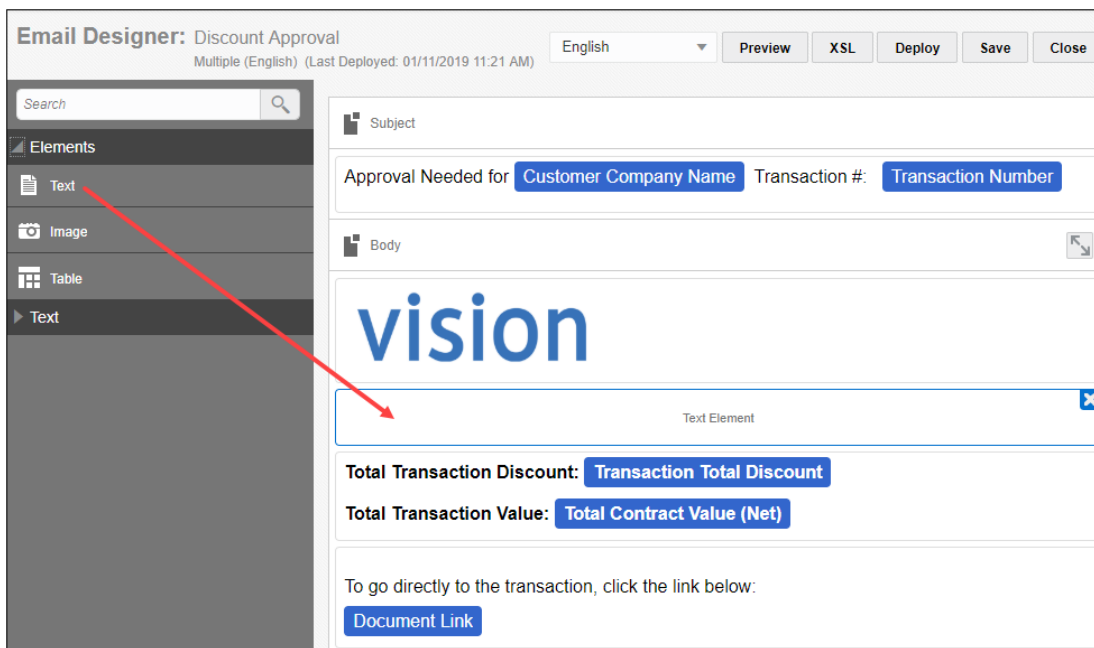
- Select **Approver Template** under Notification To Approver.
- Select **your Custom Email Template** in the **Approver Template** drop-down.
- Click **Save**.

To add the dynamic Approve and Reject mailto links to your existing Email Template, complete the following steps:

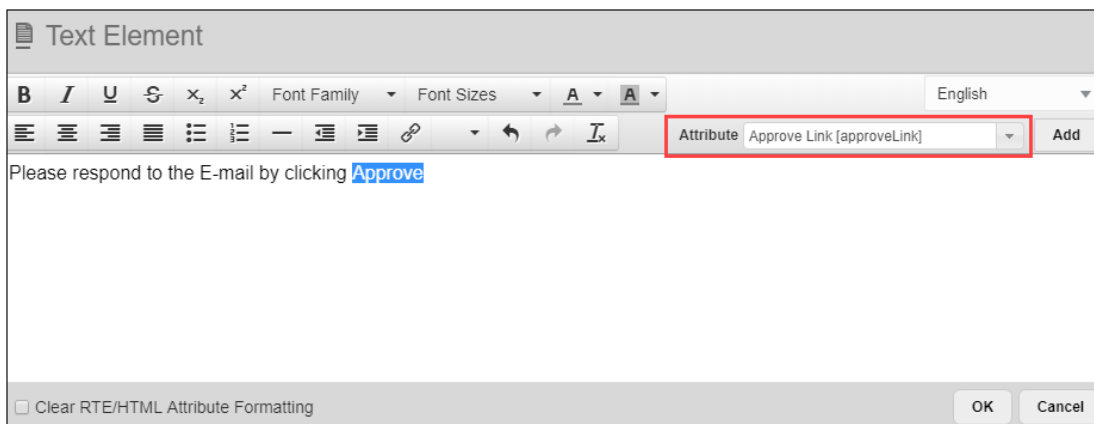
- Navigate to the Email Designer Templates page.
Admin Home > Commerce and Documents > Email Designer

| Email Designer Templates | | | | | |
|-----------------------------------------------------|-----------------------|-----------------------|-------------------------|-------------------|---------------------|
| Process | Oracle Quote to Order | + Create | References | Copy | Delete |
| Name | Language | Last Modified | Last Deployed | | |
| <input type="checkbox"/> PRM Buy Price Adj Approval | Multi_English | 01/11/2019 11:21 AM | 01/11/2019 11:21 AM | | |
| <input type="checkbox"/> Discount Approval | Multi_English | 01/11/2019 11:21 AM | 01/11/2019 11:21 AM | | |

- Select the Template you want to add the Accept and Reject mailto links to. The Email Designer: Template page displays.
If you need to create a new Text Element section, complete [steps 3-4](#).
If you have an existing Text Element, skip to [step 5](#).
- Click **Elements** in the Properties panel to expand the Elements pane.



4. Click and drag the Element you wish to add to the template into the Body in the Template Flow.
5. Double-click on the **Element** to open the Text Element page.
6. Enter any content you wish to include and select the **Approve Link** and **Reject Link** attributes from the **Attribute** drop-down.



7. Click **Add** to add the link to the text element.
8. Click **Ok** to save the Text Element and return to the Email Designer page.
9. Click **Preview** if you wish to see the change to the template.
10. Click **Save**.

STEPS TO ENABLE

The Custom Approval Email Notification requires administrator setup on CPQ Cloud 19B sites. Instructions are included in this document and CPQ Cloud Online help.

ADVANCED APPROVAL EMAIL NOTIFICATION ENHANCEMENTS

Advanced Approver Templates built using BML relocate the system-generated token from the email subject line to the end of the message body. This improves readability and reduces the likelihood the email is flagged as spam or causes the user to be suspicious that the email contains a virus.

In CPQ Cloud 19B, a new BML enhancement allows administrators to choose two new rule input variables for inserting Approve and Reject mailto links into Advanced Approval Notifications. These new rule input variables are dynamically replaced with the appropriate mailto links when the notification is sent. Refer to [Email Approval Response Enhancements](#).

To enable the HTML email notifications, complete the following steps:

1. Navigate to the **Commerce Options** page.

Admin Home > Commerce and Documents > Commerce Settings

The screenshot shows the 'Commerce Options' configuration page. The 'Enable HTML Approval Email' option is highlighted with a red box and is set to 'Yes'. Other options include 'Number of Milliseconds to Wait Before Showing the Loading Dialog for Ajax Rules' (1000), 'Allow Commerce Processes and Invocations to be Deployed and Undeployed' (Yes), 'Allow Commerce Processes to be Cloned and Migrated' (Yes), 'Allow the Product ID to be included in the Commerce Search' (Yes), 'Commerce Pricing Behavior' (From Catalog), 'Transfer Advanced Pricing Profiles JSON to Commerce' (Yes), 'Enable sticky header for line item grid' (No), 'Number of columns to freeze on line item grid' (0), and 'Enable Subscription Ordering for Simple Products' (No). Buttons for 'Apply', 'Update', and 'Back' are visible at the bottom right.

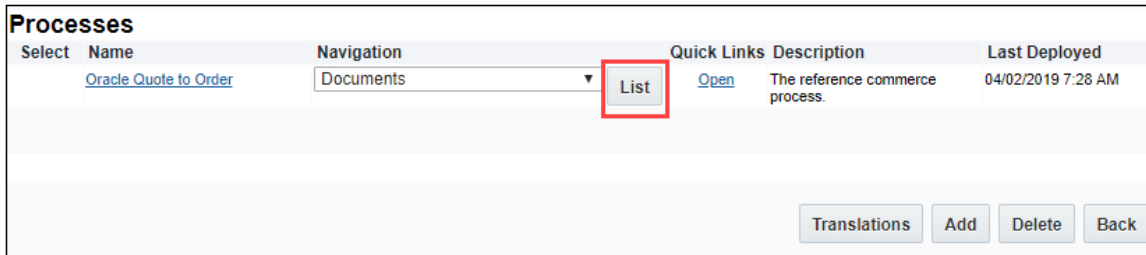
2. Select **Yes** to set the **Enable HTML Approval Email** option.
3. Click **Update**.

IMPORTANT: Once the HTML Approval Email is enabled, all new approval email notifications will be sent using the new token location. All in-progress approvals that were sent using the old format can be approved or rejected using the legacy response format.

To add an Advanced Notification Template, complete the following steps:

1. Navigate to the Processes page.

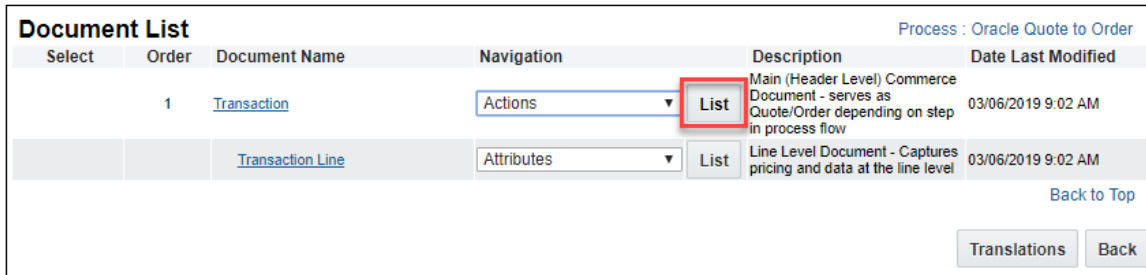
Admin Home > Commerce and Documents > Process Definitions



| Select | Name | Navigation | Quick Links | Description | Last Deployed |
|--------|---------------------------------------|------------|----------------------|---------------------------------|--------------------|
| | Oracle Quote to Order | Documents | Open | The reference commerce process. | 04/02/2019 7:28 AM |

Translations Add Delete Back

2. For a process, select **Documents** from the Navigation drop-down and then click **List**. The Documents List page displays.



| Select | Order | Document Name | Navigation | Description | Date Last Modified |
|--------|-------|----------------------------------|------------|-------------------------------------------------------------------------------------------------|--------------------|
| | 1 | Transaction | Actions | Main (Header Level) Commerce Document - serves as Quote/Order depending on step in process flow | 03/06/2019 9:02 AM |
| | | Transaction Line | Attributes | Line Level Document - Captures pricing and data at the line level | 03/06/2019 9:02 AM |

Process : [Oracle Quote to Order](#)

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3. For a Document, select **Actions** from the Navigation drop-down and then click **List**. The Action List page displays.

4. Click on the **Submit** action link. The Admin Action page displays.

Admin Action (submit_t) Document : Oracle Quote to Order > Transaction

General | **Modify** | **Integration** | **Document Views** | **Performance**

*Label:

*Variable Name: [Submit Attributes](#)

Description:

Submits the transaction for approval. If no approvals are defined or triggered for the transaction, the status will move directly to the approved step.

Action Icon:

Show Loading Dialog: No Yes

Action Timeout: minutes

Execute Action If Associated Integrations Timeout:

Approval Sequence: Use Approvals Use Remote

JET Layout Path:

- PANEL:Transaction > TAB:Troubleshooting and Support Controls
- Sticky Action Bar

Mobile Layout Path:

- TAB:Transaction > GROUP:Troubleshooting and Support Controls
- Sticky Action Bar

Run Validation Before Modify:

Advanced Modify - Before Formulas: No Advanced Modify - Before Formulas Define Advanced Modify - Before Formulas

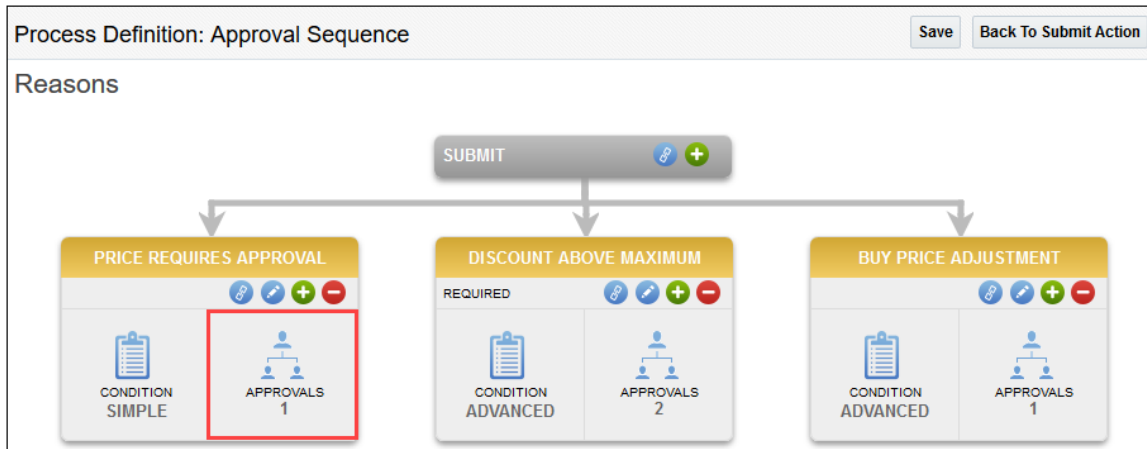
Advanced Modify - After Formulas: No Advanced Modify - After Formulas Define Advanced Modify - After Formulas

Advanced Validation: Simple Validations Define Validation Rules (deprecated - use Commerce Rules)
 Save Without Validating
 Modify Without Saving or Validating

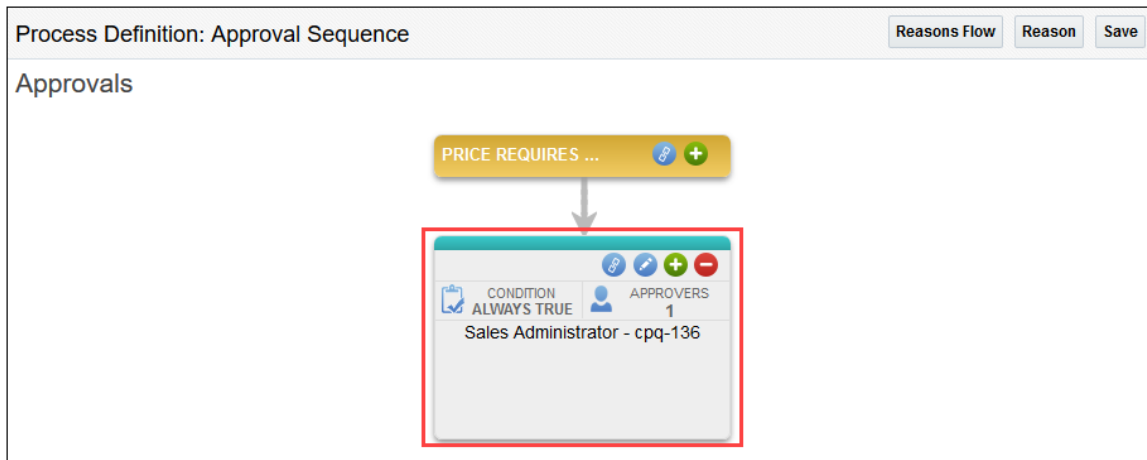
* Changes to the document will not be saved when the action is performed, and transition rules will not trigger.

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5. Click **Edit Approvals** under Approval Sequence. The Process Definition: Approval Sequence Reasons page displays.



6. For each approval reason, click into **Approvals** box.



7. Click into the **Approvals** box. The Approval Details screen displays.

- Click **Edit Approvals** under Approval Sequence. The Process Definition: Approval Sequence page displays.

Process Definition: Approval Sequence

Reasons Flow Reason Approvals Flow Save

Approval Details

Price Requires Approval priceRequiresApproval

1 APPROVER

Required In Sequence ?

Notification To Approver ?

None Approver Template **Advanced**

ADVANCED NOTIFICATION

Approver Reminder (in days)

No Reminder

Conditions ?

Always True Simple Condition Advanced Condition

Approver Selection ?

Simple Advanced

Find Approvers

Sales Administr... cpq-136

- Select **Advanced** under Notification To Approver. If associated BML has not been defined for the Advanced Notification, complete [steps 1-11](#) for adding the rule input variables for the mailto links.
- Click **Save**.

To add the rule input variables for the mailto links to your Advanced Notifications, complete the following steps:

1. Navigate to the Process Definition: Approval Details page. Complete [steps 1-10](#) for adding an Advanced Notification Template.

Process Definition: Approval Sequence Reasons Flow Reason Approvals Flow Save

Approval Details

Price Requires Approval priceRequiresApproval 1 APPROVER

Required In Sequence ?

Notification To Approver ?

None Approver Template Advanced

ADVANCED NOTIFICATION Approver Reminder (in days)
No Reminder

Approver Selection ?

Simple Advanced

Find Approvers

Sales Administr... cpq-136

Conditions ?

Always True Simple Condition Advanced Condition

2. Click **Advanced Notification**. The Select Attribute page displays.
3. Go to the appropriate **Variable Name** tab.
4. Select the **Approve Link** and **Reject Link** attribute checkboxes. For example, transaction_approve_link or transaction_reject_link.

Select Attributes Approver Notification : Oracle Quote to Order > Transaction > Submit > Submit > Price Requires Approval > approver

| System Variable Name | Variable Name for (Transaction) | Variable Name for (Transaction Line) | Library Function(s) | |
|-------------------------------------|---------------------------------|--------------------------------------|---------------------|-------------------------------------------------------------------------------------------------------|
| | Variable Name for (Transaction) | Label | Type | Description |
| <input type="checkbox"/> | _transaction_document_number | Document Number | String | Unique doc number to be used as document identifier in a process |
| <input type="checkbox"/> | createdBy_t | Created By | String | The person that created the transaction. |
| <input type="checkbox"/> | transaction_price_book | Price Book | String | The Price Book used for the transaction. |
| <input type="checkbox"/> | party... | | | |
| <input type="checkbox"/> | orderId | Order Id | String | |
| <input checked="" type="checkbox"/> | _transaction_approve_link | Approve Link | String | Links to auto-generate approve response. This is only populated in advanced notification email rules. |
| <input checked="" type="checkbox"/> | _transaction_reject_link | Reject Link | String | Links to auto-generate reject response. This is only populated in advanced notification email rules. |

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Next Close

5. Click **Next**. The BML Editor page displays.
6. Create the HTML for the email notifications using the BML editor. The BML function must return a string. The following sample HTML body text provided for reference.

```

str = "";
str = str + "<html><body><table>";
str = str + "<tr></td>Hi " + _main_next_approver + ",</br></td> </tr>";
str = str + "<tr></td>Could you please approve the transaction " + bsid + "</br></td>
</tr>";
str = str + "<tr></td>You could use the below links to auto-generate the
response<br> </td></tr>";
str = str + "<tr></td>" + _main_approve_link + "|" + _main_reject_link +
"</br></td></tr>";
str = str + " </table></body></html>";
return str;

```

Sample Advanced Notification BML

7. Place the cursor in the BML editor where you want the Approve Link to be inserted.
8. Click on the **transaction_approve_link** to add it to the BML function.

The screenshot shows the BML Editor interface. At the top, the title bar reads "BML Editor" and the breadcrumb path is "Approver Notification : Oracle Quote to Order > Transaction > Submit > Submit > Price Requires Approval > approver". Below the title bar are two tabs: "BML" (selected) and "Debugger".

A table lists variables for the transaction:

| Variable Name for (Transaction) | Type | Description |
|---------------------------------|--------|--------------|
| transaction_approve_link | String | Approve Link |
| transaction_reject_link | String | Reject Link |

Below the table, the "Expected return type - String" is indicated. The main editor area contains a code editor with the following code:

```

1 str = "";
2 str = str + "<html><body><table>";
3 str = str + "<tr></td>Hi " + _main_next_approver + ",</br></td> </tr>";
4 str = str + "<tr></td>Could you please approve the transaction " + bs
5 str = str + "<tr></td>You could use the below links to auto-generate
6 str = str + "<tr></td>" + _main_approve_link + "|" + _main_reject_lin
7 str = str + " </table></body></html>";
8 return str;
9

```

The code editor includes a toolbar with operators (+, -, *, /, (,), =, <, >, <=, >=, ==, MOD, AND, NOT, OR) and a "Functions" list on the right. The "Functions" list is currently empty, and an "Add" button is visible below it. The status bar at the bottom shows "Position: Ln 6, Ch 26" and "Total: Ln 9, Ch 447".

9. Place the cursor in the BML editor where you want the Reject Link to be inserted.
10. Click on the **transacton_reject_link** to add it to the BML function.
11. Click **Save**.

STEPS TO ENABLE

The Advanced Approval Email Notification requires administrator setup on CPQ Cloud 19B sites. Instructions are included in this document and CPQ Cloud Online help.

TRANSITION RULE NOTIFICATION ENHANCEMENTS

Step transitions in CPQ can trigger Email Notifications. When HTML Approval Email is enabled the system-generated token is relocated from the subject line to the end of the message body for all step transition notifications. This improves readability and reduces the likelihood the email is flagged as spam or causes the user to be suspicious that the email contains a virus.

From: support_approvals@yourcompany.com
Sent: Thu 4/25/2019 10:47 AM
To: John Smith <john.smith@yourcompany.com>
Subject: Transition Steps Email Notification

Quote #12345 has been accepted by the customer and finalized by Lisa Jones. Reply with the keyword "Order" to send this transaction to Order Management.

Token #eo6+GGyTzOCAWZ8qTHmYt3Bf+ZGPY7yRimD7y56KTyC6bHdONcNO07c90

Sample Transition Rule Approval Email Notification

To enable the HTML email notifications, complete the following steps:

1. Navigate to the **Commerce Options** page.

Admin Home > Commerce and Documents > Commerce Settings

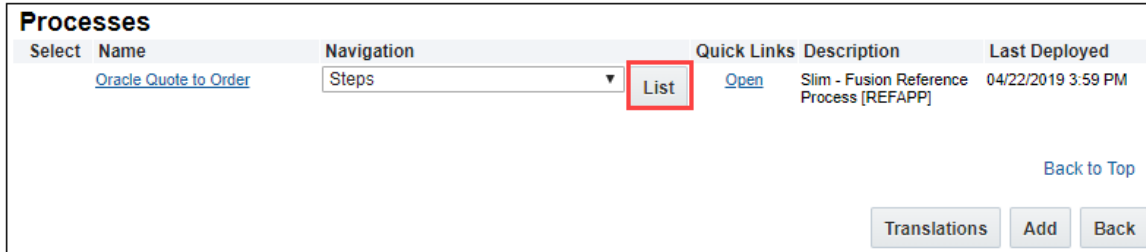
The screenshot shows the 'Commerce Options' configuration page. The 'Enable HTML Approval Email' option is highlighted with a red box and is set to 'Yes'. Other options include 'Number of Milliseconds to Wait Before Showing the Loading Dialog for Ajax Rules' (1000), 'Allow Commerce Processes and Invocations to be Deployed and Undeployed' (Yes), 'Allow Commerce Processes to be Cloned and Migrated' (Yes), 'Allow the Transaction ID to be included in the Commerce Search' (Yes), 'Commerce Pricing Behavior' (From Catalog), 'Transfer Advanced Pricing Profiles JSON to Commerce' (Yes), 'Enable sticky header for line item grid' (No), 'Number of columns to freeze on line item grid' (0), and 'Enable Subscription Ordering for Simple Products' (No). Buttons for 'Apply', 'Update', and 'Back' are visible at the bottom right.

2. Select **Yes** to set the **Enable HTML Approval Email** option.
3. Click **Update**.

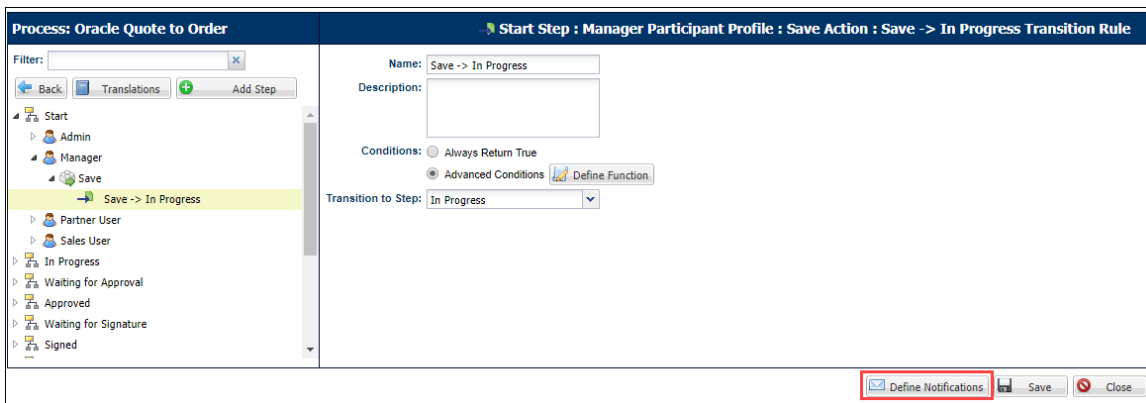
IMPORTANT: Once the HTML Approval Email is enabled, all new step transition notifications are sent using the new token placement. Responses to these notifications continue to use the same format as prior release.

If you have not defined an email notification for a step transition and want to create one, complete the following steps:

1. Navigate to the **Process** page.
Admin > Process Definition > Processes



2. For a process, select **Steps** from the Navigation drop-down and then click **List**. The Process Steps List page displays.
3. Select a **Transition Rule** you wish to add an Email Notification. The Transition Rule detail panel displays.



4. Click **Define Notifications**. The Add Notification Rule page displays.
5. Select the **Send Email** checkbox. The Email Information displays.

ORACLE CPQ Cloud

Add Notification Rule Action : Oracle Quote to Order > Start > Manager > Save

Select Method(s) of Notification

Send XML:

Send Email:

Email Information

Allow Approval:

Allow response to trigger an action

Sender:

Simple Sender Email Address:

Advanced Sender Email Address:

Recipient(s):

Simple Recipient Email Address(es):

Advanced Recipient Email Address(es):

Attachments:

Transaction formatted with an XSL file:

Attachment name with Smart Tags:

Attach PDF Document (attachPDFDocument_t) Output Document - Attach PDF to Document

eSignature File Attachment[eSignature Attribute Set] (_eSignatureAttributeSet_esig_file_attachment) The File Attachment attribute holds the documents to be sent to the eSignature Vendor

OSC File Attachment (oRCL_OSC_FileAttachment_t) The file attachment containing the Proposal Document that can be viewed within OSC.

Attach PO (attachPO_t)

6. Select the **Allow response to trigger an action** checkbox.

IMPORTANT: If you do not select the Allow response to trigger an action checkbox, a token is not added to the notification because it is not needed.

7. Click **Save**.

STEPS TO ENABLE

The Transition Rule Notification enhancement requires an administrator to enable for CPQ Cloud 19B sites. Instructions are included in this document and CPQ Cloud Online help.

TIPS AND CONSIDERATIONS

Mailto links are not supported with Transition Rule Notifications. Do not use an Email Template which contains mailto links with Transition Rules.

EMAIL APPROVAL RESPONSE ENHANCEMENTS

CPQ Cloud 19B improves the way approvers can respond to email notifications to Approve or Reject quotes via email. These enhancements reduce the likelihood of an approver mistyping an Approve or Reject keywords or improperly formatting the response causing an error which slows down the approval process.

When the HTML Approval Emails setting is enabled, the response email includes mailto links for your Approve and Reject actions. The mailto links automatically generate your email response which includes the Approve or Reject labels and their associated action variable name, moves the token to the message body, and provides space for approver comments.

IMPORTANT: Approver comments are saved only if provided in the first line of the email message. Any text after the first line, such as automatic email signatures, is discarded and not recorded in the Approval History.

```
From: Lisa Jones
Sent: Friday, April 12, 2019 12:07 PM
To: John Smith <john.smith@yourcompany.com>
Subject: RE: Pending Approval Notification

Good Job!

--- Please provide your comments above this line. Do not modify the text below ---

Status: Approve

Token
#rBUxKxf6LSN+7X8kn8zvB5mbNAekU+fyrdkRltvm9JXvVQYu7vpl/IQ6Plor+HJ/oGSQY86PtqkO9sTCgY9iQ==

Action #approve_submit
```

Sample Email Approval Response

STEPS TO ENABLE

The Email Approval Response Notification requires administrator to enable the HTML email notifications in the Commerce Setting page on CPQ Cloud 19B sites. Instructions are included in this document and CPQ Cloud Online help.

TIPS AND CONSIDERATIONS

An email response generated by a mailto link is presented to recipients in their preferred languages. However, the token and action are not translatable objects.

SUBSCRIPTION MANAGEMENT SOLUTION ENHANCEMENTS

In 19A, CPQ Cloud introduced a Subscription Management solution. This solution allows customers to create and manage products and services in a subscription model. The subscription model supports managing a given product or service as a recurring and usage-based price item. Supported by Oracle Subscription Management Cloud, Oracle Integration Cloud, and attributes, actions, and BML functions created within the CPQ Cloud platform, the solution enables sales users to capture subscription orders and perform subscription management activities throughout the lifecycle of these customer relationships.

In CPQ Cloud 19B, we enhance the Subscription Management solution by including the following functionality:

- Subscription Workbench
- Subscription Workbench Layout Editor Support Enhancement
- Account REST API Services

SUBSCRIPTION WORKBENCH

CPQ Cloud 19B enhances the Customer Assets List page, now known as the Subscription Workbench, to provide sales users with a centralized location to easily access subscription information by account ID or account name. In CPQ Cloud 19A or earlier, customer's leveraging CPQ Subscription Ordering functionality are restricted to a predefined flow for users. To see the list of assets owned by a given account, a sales user was required to access a Transaction first. This enhancement decouples the Subscription Workbench page from the Transaction UI and allows users to view the assets/subscriptions belonging to a given account directly through a navigation link.

To view the Subscription Workbench, a user-defined link must be set up. If the user-defined link is not set up, the Subscription Workbench is only viewable from the Transaction.

Subscription Workbench: [?](#) Back

▲ Account Information

Account Name Computer Service and Rentals

Account Id 1001

Computer Service and Rentals

View ▼ | | Modify Terminate Suspend Resume Renew

| Product | Product Description | Service Identifier | Root Asset Id | Start Date | End Date |
|---------------------|---------------------|-----------------------|------------------------|--------------------|----------|
| sm_18D_cloudSupport | | sm_18D_cloudSuppor... | abo_0986a568-6b2e-... | 09/30/2018 6:00 PM | |
| sm_18D_cloudSupport | | sm_18D_cloudSuppor... | abo_3de27a6c-a9f8-4... | 10/02/2018 6:00 PM | |
| sm_18D_cloudSupport | | sm_18D_cloudSuppor... | abo_1718834e-9dff-4... | 10/02/2018 6:00 PM | |
| sm_18D_cloudSupport | | sm_18D_cloudSuppor... | abo_57d43b78-a278-... | 10/02/2018 6:00 PM | |
| sm_18D_cloudSupport | | sm_18D_cloudSuppor... | abo_708acc05-df5f-4... | 10/02/2018 6:00 PM | |
| sm_18D_cloudSupport | | sm_18D_cloudSuppor... | abo_e1b65a89-c82f-4... | 10/07/2018 6:00 PM | |
| sm_18D_cloudSupport | | sm_18D_cloudSuppor... | abo_dbef8c45-2b6e-4... | 10/07/2018 6:00 PM | |
| sm_18D_cloudSupport | | sm_18D_cloudSuppor... | abo_6eabbe11-13a1-... | 10/07/2018 6:00 PM | |
| sm_18D_cloudSupport | | sm_18D_cloudSuppor... | abo_2d081159-0aec-... | 10/07/2018 6:00 PM | |
| sm_18D_cloudSupport | | sm_18D_cloudSuppor... | abo_e01e8d6a-a6cb-... | 10/07/2018 6:00 PM | |
| sm_18D_cloudSupport | | sm_18D_cloudSuppor... | abo_dac4a285-7267-... | 10/07/2018 6:00 PM | |
| sm_18D_cloudSupport | | sm_18D_cloudSuppor... | abo_eef984c4-7db0-4... | 10/08/2018 6:00 PM | |
| sm_18D_cloudSupport | | sm_18D_cloudSuppor... | abo_9db3160e-948a-... | 10/08/2018 6:00 PM | |
| sm_18D_cloudSupport | | sm_18D_cloudSuppor... | abo_a75e76f6-c622-4... | 10/09/2018 6:00 PM | |
| sm_18D_cloudSupport | | sm_18D_cloudSuppor... | abo_af376022-cabd-4... | 10/09/2018 6:00 PM | |

Page 1 of 4 (1-15 of 60 items) | K < 1 2 3 4 > X

Sample Subscription Workbench

To setup a user-defined Link for accessing the Subscription Workbench, complete the following steps:

1. Navigate to Admin Home page.
2. Click **Navigation Menus** under Styles and Templates. The Navigation Menus page displays.

Navigation Menus

Sidebar / Top Navigation / Alta Navigation

Top Navigation
 Side Navigation
 Alta Navigation

Navigation Menus

| | |
|--------------------|-------------------------------------------|
| Admin | <input type="button" value="List Links"/> |
| Commerce | <input type="button" value="List Links"/> |
| Quick Registration | <input type="button" value="List Links"/> |
| Subheader | <input type="button" value="List Links"/> |
| Subfooter | <input type="button" value="List Links"/> |

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- Click **List Links** for **Commerce**. The Navigation Items List – Commerce page displays.
- Select the **User Defined** tab.

Navigation Items List - Commerce

| Delete | Link Label | URL | |
|--------------------------|-------------------------------------------|-------------------------------------------------------------------------------|-------------------------------------|
| <input type="checkbox"/> | Oracle Quote to Order - Manager | /commerce/buyside/commerce_manager.jsp?bm_cm_process_id=36244034&from_hp=true | <input type="button" value="Edit"/> |
| <input type="checkbox"/> | Oracle Quote to Order - Reporting Manager | /commerce/buyside/reports/report_manager.jsp?process_id=36244034&from_hp=true | <input type="button" value="Edit"/> |

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- Click on **Add**. The Link Editor page displays.

Link Editor

Label:

URL:

Show As: Link Tab

Display: Label Icon Both

[Back to Top](#)

- Enter **Subscription Workbench** for the Label.
- Enter a valid **URL**. For example,
`/commerce/subscription?process_varname={PROCESS_VARNAME}`
 where `process_varname` is the valid Commerce process.

8. Select **Link** for Show As.
9. Select **Label** for Display.
10. Click **Add**. The Navigation Items List - Commerce page displays.

Navigation Items List - Commerce

Internal User Defined

| Delete | Link Label | URL | |
|--------------------------|-------------------------------------------|-------------------------------------------------------------------------------|------|
| <input type="checkbox"/> | Oracle Quote to Order - Manager | /commerce/buyside/commerce_manager.jsp?bm_cm_process_id=36244034&from_hp=true | Edit |
| <input type="checkbox"/> | Oracle Quote to Order - Reporting Manager | /commerce/buyside/reports/report_manager.jsp?process_id=36244034&from_hp=true | Edit |
| <input type="checkbox"/> | Subscription Workbench | /commerce/subscription?process_vaname=oraclecpqo | Edit |

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Translations **Customize Menus** Add Delete Back

11. Click **Customize Menus** within the **User Defined** tab. The Customize Links for Commerce page displays.

Customize Links for Commerce

Company Type: FullAccessWithESales User Type: FullAccess Go

Hidden Links Add/Remove Link

Subscription Workbench
Home Page (Internal)
Favorites (Internal)

Left **Add** Remove Association

Top Navigation Side Navigation

Top Navigation Alignment and Ordering

Column Width: 33% Column Width: 33% Column Width: 33%

Hide Hide Hide

[Back to Top](#)

Add Apply Update Back

12. Select **Subscription Workbench** from the Hidden Links list and then click **Add**. The Subscription Workbench link is moved to under the Top Navigation Tab.

13. (Optional) Click the arrows to move the **Subscription Workbench** link to the desired location to display on the UI.

14. Click **Update** to get back to Navigation Items List – Commerce page

15. Click **Back** to get to the Navigation Menus page.

16. Click **Deploy** to deploy the Subscription Workbench to the User-Defined Navigation Menu UI.

To enable the Accounts Lookup Library function for Integrations with CRMs, complete the following steps:

1. Navigate to the Admin Home page.
2. Select **Commerce Settings** under Commerce and Documents. The Commerce Options page displays.
3. Select an **Account Lookup BML script** from the **Accounts Lookup Library Function** drop-down.

| Commerce Options | |
|----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| Options - Commerce | |
| Number of Milliseconds to Wait Before Showing the Loading Dialog for Ajax Rules | <input type="text" value="1000"/> |
| Allow Commerce Processes and Invocations to be Deployed and Undeployed | <input checked="" type="radio"/> Yes <input type="radio"/> No |
| Allow Commerce Processes to be Cloned and Migrated | <input type="radio"/> Yes <input checked="" type="radio"/> No |
| Allow the Transaction ID to be included in the Commerce Search | <input checked="" type="radio"/> Yes <input type="radio"/> No |
| Hide Commerce Invocation Buttons on Add From Catalog | <input type="radio"/> Yes <input checked="" type="radio"/> No |
| Hide Add To Cart Button on Add From Catalog | <input type="radio"/> Yes <input checked="" type="radio"/> No |
| Show Select Language Preference menu for Print, Email and Export Actions | <input type="radio"/> Yes <input checked="" type="radio"/> No |
| Dialog Dimensions - Commerce Search | <input type="text" value="800"/> Width <input type="text" value="600"/> Height |
| Dialog Dimensions - Quick Links | <input type="text" value="400"/> Width <input type="text" value="900"/> Height |
| Error Box Behavior | <input checked="" type="radio"/> Default <input type="radio"/> Collapsible |
| Document Engine - Validate page data on save | <input type="radio"/> Yes <input checked="" type="radio"/> No |
| Enable Transaction Total for Mobile Layouts | <input checked="" type="radio"/> Yes <input type="radio"/> No |
| Ignore blank attributes in SOAP API Payload for modify action | <input checked="" type="radio"/> Yes <input type="radio"/> No |
| Display Part Number on Part Display Quick Key Search Results | <input checked="" type="radio"/> Yes <input type="radio"/> No |
| Doc Designer - Preserve line feeds for XSL snippets. Documents must be deployed for any change to take effect. | <input type="radio"/> Yes <input checked="" type="radio"/> No |
| Enable Company Associations on Part Display Search | <input checked="" type="radio"/> Yes <input type="radio"/> No |
| Commerce Timeout Action | <input type="radio"/> Kill and Log <input checked="" type="radio"/> Log Only <input type="radio"/> No Action <input type="text" value="2"/> minutes |
| Allow Users to Select Currency for Quotes Created from the Transaction Manager | <input type="radio"/> Yes <input checked="" type="radio"/> No |
| Transfer Advanced Pricing Profiles JSON to Commerce | <input checked="" type="radio"/> Yes <input type="radio"/> No |
| Enable sticky header for line item grid | <input type="radio"/> Yes <input checked="" type="radio"/> No |
| Number of columns to freeze on line item grid | <input type="text" value="0"/> |
| Disable Transaction Item Count | <input type="radio"/> Yes <input checked="" type="radio"/> No |
| Accounts Lookup Library Function | <input type="text" value="queryIntegratedAccounts[_account.queryIntegratedAccounts]"/> |
| Enable Subscription Ordering for Simple Products | <input checked="" type="radio"/> Yes <input type="radio"/> No |
| Enable HTML Approval Email | <input type="radio"/> Yes <input checked="" type="radio"/> No |

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4. Click **Apply**.

IMPORTANT: The Accounts Lookup Library Function drop-down is only available for sites that are integrated with a CRM. Refer to the CPQ Online Help for information about the Integration Center.

Administrators need to develop an Account Lookup BML script in order for the lookup feature to know what data to search. A sample BML script is included within the 19B Subscription Management Installation package. The following examples provide the input and output BML format for the accounts lookup script.

```
{
  "fields": ["firstName", "companyName", "customerId"],
  "q": {
    "$and": [{
      "customerId": {
        "$like": "account2%"
      }
    }, {
      "id": {
        "$gte": "21"
      }
    }, {
      "companyName": {
        "$like": "account2%",
        "$options": "I"
      }
    }, {
      "firstName": {
        "$exists": true
      }
    }, {
      "customerRep": {
        "$like": "account2%",
        "$options": "I"
      }
    }, {
      "$or": [{
        "lastName": {
          "$exists": true
        }
      }, {
        "supplierId": {
          "$eq": "123"
        }
      }
    ]
  }
},
  "offset": 0,
  "limit": 10,
  "orderby": ["firstName:ASC", "companyName:DESC"],
  "version": "v8"
}
```

Sample Input BML

```

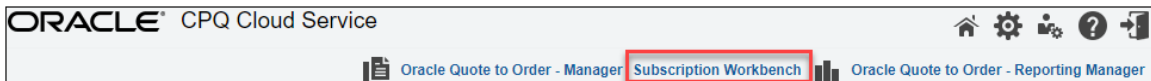
{
  items: [{
    "firstName": "Fname_OSC_account138",
    "lastName": "Lname_OSC_account138",
    "phone": "Phoneno_account138",
    "companyName": "Company_account138",
    "customerId": "account138",
    "id": 4162404,
    "fax": "Fax_account138",
    "email": "first.last@yourcompany.com",
    "_crm_custom_msm": "value1~value2~value3",
    "_crm_custom_ssm": "value1",
    "customerRep": "CR_account138"
  }, {
    "firstName": "Fname_OSC_account139",
    "lastName": "Lname_OSC_account139",
    "phone": "Phoneno_account139",
    "companyName": "Company_account139",
    "customerId": "account139",
    "id": 4162408,
    "fax": "Fax_account139",
    "email": "first.last@yourcompany.com",
    "_crm_custom_msm": "value2~value3",
    "_crm_custom_ssm": "value1",
    "customerRep": "CR_account139"
  }
]
error: {
  system: true
  errorMessage: "tokenized string",
  errorTokenValues: ["a", "b"]
}
}

```


Sample Output BML

To view the Subscription Workbench, complete the following steps:

1. Log in to CPQ, click **Subscription Workbench**. The Subscription Workbench page displays.



Subscription Workbench

2. Perform one of the following steps:
 - Enter the account name in the **Account Name** field.
 - Enter the account ID in the **Account Id** field.
 - Click on the  Look up Key to select an account.

Subscription Workbench

Oracle Quote To Order - Reporting Manager

Subscription Workbench Next

Account Name

Account Id

- Click **Next**. The Subscription Workbench showing the list of assets/subscriptions for that account displays.

Subscription Workbench: Back

Account Information

Account Name Computer Service and Rentals

Account Id 1001

Computer Service and Rentals

View + + + +
Modify
Terminate
Suspend
Resume
Renew

| Product | Product Description | Service Identifier | Root Asset Id | Start Date | End Date |
|---------------------|---------------------|-----------------------|------------------------|--------------------|----------|
| sm_18D_cloudSupport | | sm_18D_cloudSuppor... | abo_0986a568-6b2e-... | 09/30/2018 6:00 PM | |
| sm_18D_cloudSupport | | sm_18D_cloudSuppor... | abo_3de27a6c-a9f8-4... | 10/02/2018 6:00 PM | |
| sm_18D_cloudSupport | | sm_18D_cloudSuppor... | abo_1718834e-9dff-4... | 10/02/2018 6:00 PM | |
| sm_18D_cloudSupport | | sm_18D_cloudSuppor... | abo_57d43b78-a278-... | 10/02/2018 6:00 PM | |
| sm_18D_cloudSupport | | sm_18D_cloudSuppor... | abo_708acc05-df5f-4... | 10/02/2018 6:00 PM | |
| sm_18D_cloudSupport | | sm_18D_cloudSuppor... | abo_e1b65a89-c82f-4... | 10/07/2018 6:00 PM | |
| sm_18D_cloudSupport | | sm_18D_cloudSuppor... | abo_dbef8c45-2b6e-4... | 10/07/2018 6:00 PM | |
| sm_18D_cloudSupport | | sm_18D_cloudSuppor... | abo_6eabbe11-13a1-... | 10/07/2018 6:00 PM | |
| sm_18D_cloudSupport | | sm_18D_cloudSuppor... | abo_2d081159-0aec-... | 10/07/2018 6:00 PM | |
| sm_18D_cloudSupport | | sm_18D_cloudSuppor... | abo_e01e8d6a-a6cb-... | 10/07/2018 6:00 PM | |
| sm_18D_cloudSupport | | sm_18D_cloudSuppor... | abo_dac4a285-7267-... | 10/07/2018 6:00 PM | |
| sm_18D_cloudSupport | | sm_18D_cloudSuppor... | abo_eef984c4-7db0-4... | 10/08/2018 6:00 PM | |
| sm_18D_cloudSupport | | sm_18D_cloudSuppor... | abo_9db3160e-948a-... | 10/08/2018 6:00 PM | |
| sm_18D_cloudSupport | | sm_18D_cloudSuppor... | abo_a75e76f6-c622-4... | 10/09/2018 6:00 PM | |
| sm_18D_cloudSupport | | sm_18D_cloudSuppor... | abo_af376022-cabd-4... | 10/09/2018 6:00 PM | |

Page of 4 (1-15 of 60 items) K < 1 2 3 4 > X

Sample Subscription Workbench

STEPS TO ENABLE

The Subscription Workbench requires administrator interaction to turn on the user-defined link and enable the lookup to a defined script.

SUBSCRIPTION WORKBENCH LAYOUT EDITOR SUPPORT ENHANCEMENT

Administrators have the ability to edit the Subscription Workbench, formerly Customer Assets List page, and add additional account and asset attributes through the UI Designer Layout Editor.

UI Designer contains a drag-and drop interface that allows administrators to easily customize layouts. In 19B, the UI Designer default layout for Customer Assets is modified for the new Subscription Workbench title and new Account Information panel.

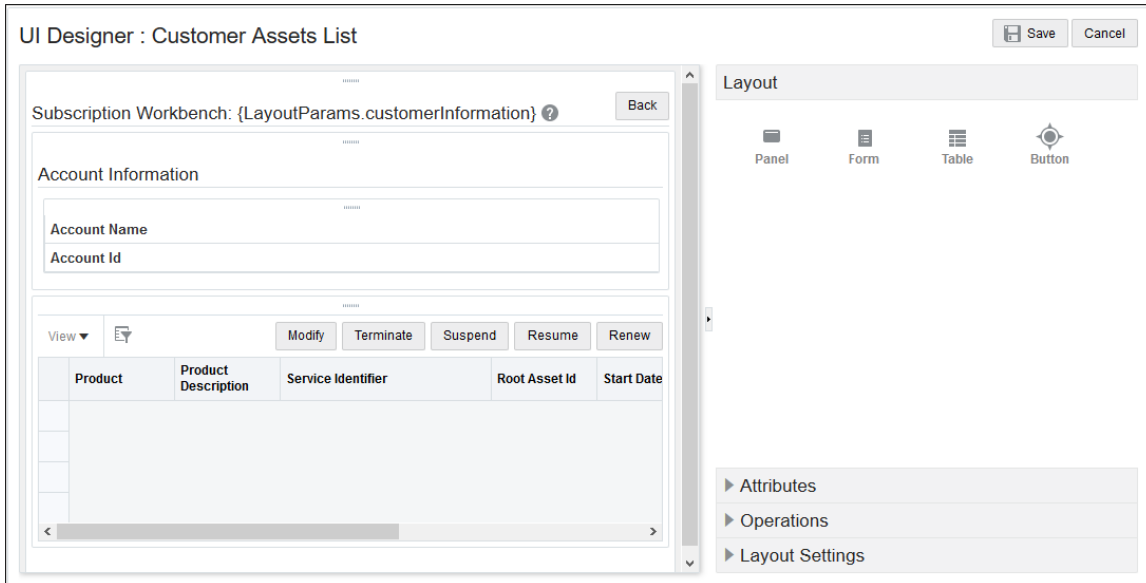
To access the new Customer Assets layout, complete the following steps:

1. Navigate to the UI Designer page.
Admin Home > General > UI Designer

| UI Designer | | |
|----------------------------------------|------------------------------------------------|----------|
| Name | Description | Category |
| Performance Logs List | List page displaying site performance logs | |
| Customer Assets List | List page displaying customer assets | |
| Eligibility Rules List | List page displaying product eligibility rules | |

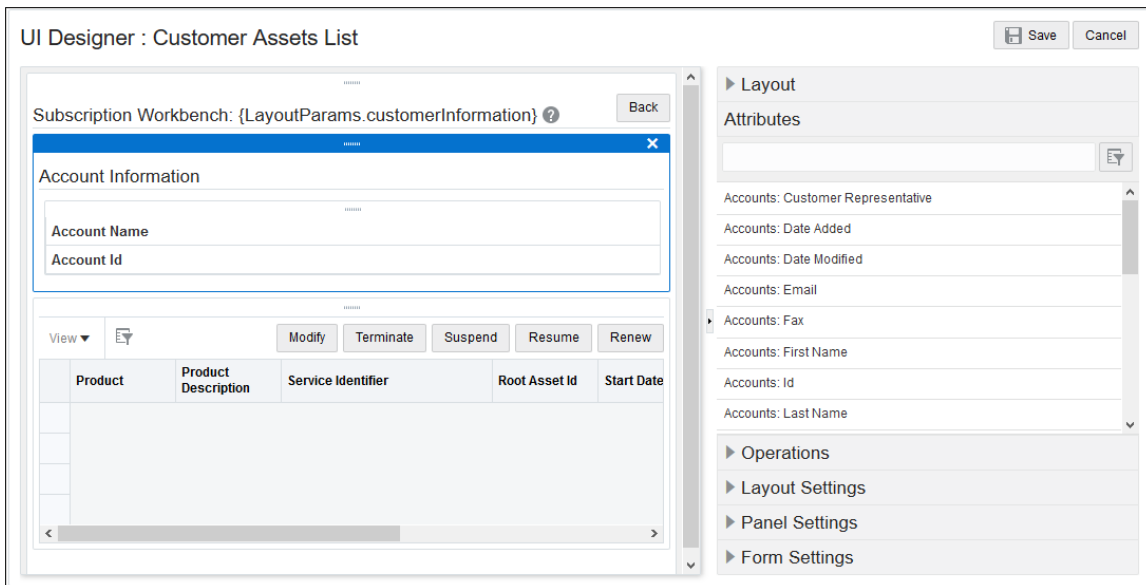
UI Designer Page

2. Click **Customer Assets List** under Name. The UI Designer: Customer Assets List page displays.



UI Designer: Customer Assets List Page

The Customer Assets List layout shows the new Subscription Workbench title and Account Information panel. If you select the Account Information panel, the list of supported asset and account attributes are available. Also, administrators can modify the page and layout labels within the Layout Settings panel. Refer to the UI Designer article in the CPQ Cloud Online Help for details on the UI Designer.



UI Designer: Customer Assets List showing Account Panel Attributes

STEPS TO ENABLE

No steps are required to enable this feature.

TIPS AND CONSIDERATIONS

Administrators can remove the Account Information panel on the Customer Assets List through the UI Designer, if desired.

ACCOUNT REST API SERVICES

Account REST API services are added to support integrating and querying external system accounts. The Accounts REST API is added to the Integration Catalog. The following services are available:

- Get Account
- Get Accounts

Custom Account Attributes

You may need custom account attributes. By default, all customer account deployed custom account attribute types are available in the account object except for the following:

- Single Select Menu with the menu value exceeding 30 characters
- Attribute variable names exceeding 116 characters

All custom account attributes are given the accounts object prefix `_crm_custom`. In the case of native accounts, where CPQ is the source master, Single Select Menu and Multi-select Menu attributes are not searchable and custom attribute filters are required.

The table below defines differences between native and integrated CPQ Cloud Subscription Management custom attribute feature support.

| Feature | Native (CPQ Cloud is Master Source) | Integrated (Integration is Master Source) |
|----------------------------------------------------|----------------------------------------|----------------------------------------------|
| Complex search with more than one level | Supported | Not Supported |
| Custom attribute filters | Supported | Not Supported |
| Search on Multi-select Menu and Single Select Menu | Not Supported | Administrators can extend support in BML |
| Limit | Maximum 1000 characters | Maximum 500 characters |
| hasMore | Supported | Supported with some restrictions |
| Translations | Not Supported | Not Supported |

Get Account

| Get Account | | |
|---------------------------------|------------------------------------------------------------------------|---------------------------------------------------------|
| Description | This action returns the specified account's information | |
| URI Endpoint | /rest/v8/accounts/{customerId} | |
| Endpoint Parameters | customerId | The variable name for the account or customer ID number |
| HTTP Method | GET | |
| Request Body Parameters | None | |
| Response Body Parameters | JSON data containing the account information for the specified account | |

URI ENDPOINT SAMPLE

```
https://sitename.oracle.com/rest/v8/accounts/100
```

SAMPLE RESPONSE BODY

```
{
  "firstName": "Jones Pizza",
  "phone": "2135555555",
  "companyName": "Jones Pizza",
  "customerId": "100",
  "email": "ljones@jonespizza.net",
  "links": [{
    "rel": "self",
    "href": "https://sitename.oracle.com/rest/v8/accounts/100"
  }]
}
```

Get Accounts

| Get Accounts | |
|---------------------------------|----------------------------------------------------------------------------------------------------------|
| Description | This action returns the list of accounts |
| URI Endpoint | /rest/v8/accounts |
| Endpoint Parameters | None |
| HTTP Method | GET |
| Request Body Parameters | None |
| Response Body Parameters | JSON data containing a list of accounts and the account information for each of the accounts in the list |

URI ENDPOINT SAMPLE

```
https://sitename.oracle.com/rest/v8/accounts
```

SAMPLE RESPONSE BODY

```
{
  "hasMore": false,
  "links": [
    {
      "rel": "self",
      "href": "https://sitename.oracle.com/rest/v8/accounts"
    }
  ],
  "items": [
    {
      "firstName": "Jones Pizza",
      "phone": "2135555555",
      "companyName": " Jones Pizza",
      "customerId": "100",
      "email": "ljones@jonespizza.net",
      "links": [
        {
          "rel": "self",
          "href": "https://sitename.oracle.com/rest/v8/accounts/100"
        }
      ]
    },
    {
      "firstName": "Smith Trucking",
      "phone": "8475555555",
      "companyName": "Smith Trucking Incorporated",
      "customerId": "102",
      "email": "jsmith@smithtruck.com",
      "links": [
        {
          "rel": "self",
          "href": "https://sitename.oracle.com/rest/v8/accounts/102"
        }
      ]
    },
    {
      "firstName": "Jackson Rentals",
      "phone": "1235555555",
      "companyName": "Jackson Rentals",
      "customerId": "103",
      "email": "mwjackson@jacksonrental.com",
      "links": [
        {
          "rel": "self",
          "href": "https://sitename.oracle.com/rest/v8/accounts/103"
        }
      ]
    },
    {
      "firstName": "Morris Foods",
      "phone": "3215555555",
      "companyName": "Morris Foods",
      "customerId": "104",
      "email": "jmorris@morrisfoods.net",
      "links": [
        {
          "rel": "self",
          "href": "https://sitename.oracle.com/rest/v8/accounts/104"
        }
      ]
    }
  ]
}
```

STEPS TO ENABLE

The Accounts REST API enhancements are automatically available with CPQ Cloud 19B. Administrators need to update any systems that interact with these CPQ web services to begin using these new features.

SUBSCRIPTION ORDERING ENHANCEMENTS

Companies use Subscription Ordering, often referred to as Asset Based Ordering, to sell tangible assets or subscriptions for services delivered over a period of time. Sales users can create, modify, suspend, resume, renew, and terminate assets in CPQ Cloud. They can also reconfigure an asset or create a follow-on order that modifies an order that was previously quoted in CPQ Cloud.

The following functionality is available in CPQ Cloud 19B:

- Simple Product Support for Subscription Ordering
- Multi-Select Support for Asset Operations
- New Transaction Support for Asset Operations
- Asset REST API Enhancements

IMPORTANT:

- Most of the 19B Subscription Ordering enhancements require installation of the 19B ABO Implementation Package. Exceptions are noted for some multi-select operations.
- If customers using the 18D ABO Implementation Package do not wish to use the 19B Subscription Ordering enhancements, the 18D ABO Implementation Package will continue to work.

SIMPLE PRODUCT SUPPORT FOR SUBSCRIPTION ORDERING

Beginning in CPQ Cloud 19B, customers can enable Subscription Ordering support to directly add simple products to a Commerce Transaction for an asset-based order. A simple product is a product that does not have its part number associated with any of the related configuration models. When enabled, users can use Quick Add to add simple products to a Transaction without navigating away from the Transaction page. They can also add simple products using a parts search.

The screenshot displays the 'Transaction' page in CPQ Cloud. At the top right, there are buttons for 'Save', 'Customer Assets', 'Generate Proposal', and 'Pipeline Viewer'. Below these, the 'Transaction' section is visible, with tabs for 'Transaction Details', 'Customer Details', and 'Pricing Details'. The 'Transaction Details' tab is active, showing fields for 'Transaction Number CPQ-329', 'Version 1', 'Transaction Internal ID 21447334', 'Owner Super User', 'Created Date 03/18/2019', 'Last Updated 03/18/2019 9:56 AM', 'Last Updated By Super User', 'Default Request Date' (with a calendar icon), and 'Customer Id account112'. Below the form fields is a toolbar with icons for 'View', 'Print', 'Refresh', 'Settings', 'Edit', 'Delete', and 'Freeze'. A table below the toolbar lists transaction line items. The first row is highlighted with a red border and contains the following data: Product # CloudStorage, Quantity 1, Action Code Add, Fulfillment Status Created, AssetKey abo_c57f1059-ab04-447e-b82b-2800a3970c6f, bomId SPI, bomPartNum CloudStorage, bomQty 1, and bomLevel 0. At the bottom of the page, there are buttons for 'Add Line Item', 'Remove Transaction Line', 'Update Asset', and 'Customer Assets'. The page footer indicates 'Page 1 of 1 (1 of 1 items)' and a navigation bar with 'K', '<', '1', '>', and '>'.

| Product # | Quantity | Action Code | Fulfillment Status | AssetKey | bomId | bomPartNum | bomQty | bomLevel |
|--------------|----------|-------------|--------------------|------------------------------------------|-------|--------------|--------|----------|
| CloudStorage | 1 | Add | Created | abo_c57f1059-ab04-447e-b82b-2800a3970c6f | SPI | CloudStorage | 1 | 0 |

Simple Product Line Item

When Subscription Ordering for Simple Products is enabled and a simple product is added to a Transaction, the following attributes are automatically populated.

| Line Item Attribute | Simple Product Value |
|---------------------|-------------------------------------------------------------------|
| BOM ID | SPI |
| BOM Part Number | The simple product part number |
| BOM Quantity | 1 |
| BOM Level | 0 |
| Asset Key | A unique ID is generated to track the simple product as an asset. |
| Action Code | Add |

Simple product assets can be modified, suspended, resumed, renewed, and terminated for internal applications.

Enable Subscription Ordering for Simple Products

To enable Subscription Ordering for Simple Products, perform the following steps:

1. Navigate to Commerce Options page.
Admin > Commerce and Documents > Commerce Settings

The screenshot shows the 'Commerce Options' configuration page. The 'Options - Commerce' section contains several settings. The 'Enable Subscription Ordering for Simple Products' option is highlighted with a red box and is currently set to 'Yes'. Other visible options include 'Number of Milliseconds to Wait Before Showing the Loading Dialog for Ajax Rules' (1000), 'Allow Commerce Processes and Invocations to be Deployed and Undeployed' (Yes), 'Allow Commerce Processes to be Cleared and Migrated' (Yes), 'Enable sticky header for line item grid' (Yes), 'Number of columns to freeze on line item grid' (3), 'Disable Transaction Item Count' (No), 'Accounts Lookup Library Function' (dropdown), and 'Enable HTML Approval Email' (No). At the bottom right, there are 'Apply', 'Update', and 'Back' buttons.

2. Set the Enable Subscription Ordering for Simple Products option to **Yes**.
3. Click **Apply** or **Update**.

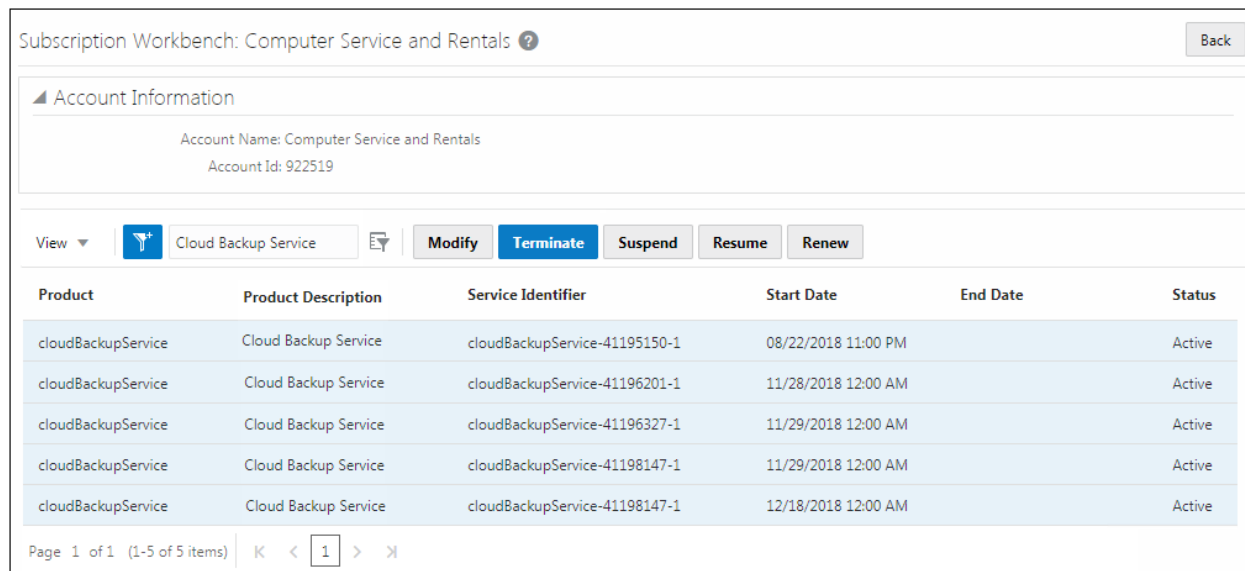
STEPS TO ENABLE

CPQ Cloud strongly recommends that administrators install the 19B ABO Implementation Package to use simple products. Refer to the *19B ABO Implementation Guide* for instructions to use simple products with the 18D ABO Package.

IMPORTANT: Simple Product functionality is not supported in external order implementations such as Oracle Commerce Cloud.

MULTI-SELECT SUPPORT FOR ASSET OPERATIONS

Users can now select multiple assets on the Subscription Workbench (previously called the Customer Assets page) to modify, renew, resume, suspend, or terminate. For Example: A customer needs to terminate cloud backup services for five users effective on the 1st day of next month. The Customer Support Representative identifies the assets to be terminated, selects the assets, then clicks Terminate.



Subscription Workbench: Computer Service and Rentals ? Back

Account Information

Account Name: Computer Service and Rentals
Account Id: 922519

View + Cloud Backup Service ✕ Modify Terminate Suspend Resume Renew

| Product | Product Description | Service Identifier | Start Date | End Date | Status |
|--------------------|----------------------|-------------------------------|---------------------|----------|--------|
| cloudBackupService | Cloud Backup Service | cloudBackupService-41195150-1 | 08/22/2018 11:00 PM | | Active |
| cloudBackupService | Cloud Backup Service | cloudBackupService-41196201-1 | 11/28/2018 12:00 AM | | Active |
| cloudBackupService | Cloud Backup Service | cloudBackupService-41196327-1 | 11/29/2018 12:00 AM | | Active |
| cloudBackupService | Cloud Backup Service | cloudBackupService-41198147-1 | 11/29/2018 12:00 AM | | Active |
| cloudBackupService | Cloud Backup Service | cloudBackupService-41198147-1 | 12/18/2018 12:00 AM | | Active |

Page 1 of 1 (1-5 of 5 items) ⏪ < 1 > ⏩

Subscription Workbench > Multi-Select Terminate

After the Customer Support Representative selects Terminate, the Transaction UI page opens. The selected assets and the appropriate action are displayed.

The screenshot shows the 'Transaction' UI page. At the top, there are buttons for 'Save', 'Customer Assets', 'Generate Proposal', 'Version Transaction', and 'Delete Transaction'. Below these are tabs for 'Transaction Details', 'Customer Details', and 'Pricing Details'. The 'Transaction Details' tab is active, showing fields for Transaction Name, Transaction Number (CPQ-353), Owner (Super User), Status (Created), Created Date (03/19/2019), Last Updated (03/28/2019 11:48 AM), Version (1), Customer Id (account112), and Default Request Date. Below the form is a toolbar with icons for View, Print, Refresh, Settings, Edit, Delete, and Freeze. A table below the toolbar lists assets with columns for Product #, Quantity, Action Code, Fulfillment Status, and AssetKey. The table contains five rows, all with 'Cloud Backup Service' as the product, a quantity of 1, an action code of 'Terminate', and a fulfillment status of 'Created'. The AssetKey values are: abo_f2acece0-698a-4a14-8128-62b83828ca64, abo_8b20cd36-029f-4153-94c6-c8aae95589ec, abo_eb71b889-acbe-4b43-8499-2d28d7d8aefd, abo_6b0c3b27-11fc-4122-80ea-fc2107a73334, and abo_96eba5a6-065d-43d7-ad3a-ef781e9bd8b9.

| Product # | Quantity | Action Code | Fulfillment Status | AssetKey |
|----------------------|----------|-------------|--------------------|------------------------------------------|
| Cloud Backup Service | 1 | Terminate | Created | abo_f2acece0-698a-4a14-8128-62b83828ca64 |
| Cloud Backup Service | 1 | Terminate | Created | abo_8b20cd36-029f-4153-94c6-c8aae95589ec |
| Cloud Backup Service | 1 | Terminate | Created | abo_eb71b889-acbe-4b43-8499-2d28d7d8aefd |
| Cloud Backup Service | 1 | Terminate | Created | abo_6b0c3b27-11fc-4122-80ea-fc2107a73334 |
| Cloud Backup Service | 1 | Terminate | Created | abo_96eba5a6-065d-43d7-ad3a-ef781e9bd8b9 |

Transaction UI Page > Multi-Select Terminate

STEP TO ENABLE

- Administrators must install the 19B ABO Implementation Package to enable Multi-select modify for multiple assets.
- Multi-select suspend, resume, renew, and terminate will work with the 18D ABO package.

NEW TRANSACTION SUPPORT FOR ASSET OPERATIONS

Beginning in CPQ Cloud 19B, customers can perform asset operations from the Subscription Workbench for assets without an associated Transaction ID. When a user invokes an asset operation for an asset without an associated Transaction ID, a new transaction is created and associated with the requested operation. This behavior is also supported in the v8 asset operation REST APIs.

STEPS TO ENABLE

- Administrators must install the 19B ABO Implementation Package to enable New Transaction Support for Asset Operations.
- New Transaction Support is not supported for external applications in CPQ Cloud 19B.

CPQ Cloud 19B introduces new endpoints to provide multi-select support for asset operations. These operations calculate the projected state of the designated assets for the requested date. Projected State Calculation is a step in the subscription ordering process flow, where open orders and current changes made to the quote line items are applied to the existing assets to generate a future projected state of the asset for the requested date.

- **Modify Assets** - This operation calculates the projected state of the designated assets for the requested date. For modify requests the action codes are set to "-" for No Update.
- **Suspend Assets** - This operation merges a suspend request with the projected assets for the requested date, and then stores the results to a Configuration BOM Instance. For suspend requests, the root and subordinate action codes are set to Suspend.
- **Resume Assets** - This operation merges a resume request with the projected asset for the requested date, and then stores the results to a Configuration BOM Instance. For resume requests, the root and subordinate action codes are set to Resume.
- **Renew Assets** - This operation merges a renew request with the projected asset for the requested date, and then stores the results to a Configuration BOM Instance. For renew requests, the root and subordinate action codes are set to Renew.
- **Terminate Assets** - This operation merges a termination request with the projected asset for the requested date, and then stores the results to a Configuration BOM Instance. For termination requests, the root item action code is set to Terminate and subordinate asset action codes are set to Delete.

| Modify, Suspend, Resume, Renew, or Terminate Assets REST API | | |
|--------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Description | These operations calculate the projected state of the designated assets for the requested date and perform the requested operation. | |
| URI Endpoint | <ul style="list-style-type: none"> • /rest/v8/assets/actions/modify • /rest/v8/assets/actions/suspend • /rest/v8/assets/actions/resume • /rest/v8/assets/actions/renew • /rest/v8/assets/actions/terminate | |
| HTTP Method | POST | |
| Request Body Parameters | sourceIdentifier | <p>The identifier for the integration process.</p> <ul style="list-style-type: none"> • "_external_order" for external orders. This is the default value when this parameter is not specified • "{processVarName}" for internal orders. The variable name of the Commerce process (e.g. oraclecprgo) |
| | transactionId | The Commerce Transaction ID associated with the asset(s). When the Transaction ID is not provided, a new Transaction is created and associated with the requested operation. |
| | transactionDate | The date and time that the service request needs to be processed or fulfilled. |
| | returnBom | Optional, set this item is set to "true" to return the BOM structure for the requested assets in the response body. The default value is "false". |
| | flattenHierarchy | "true" returns a flattened BOM structure, this is the default value. "false" returns a hierarchical BOM structure |
| | assetKeys | An array of asset keys selected for the specified operation. When "assetKeys" are used, do not use "selections". |
| | selections | An array of asset ids selected for the specified operation. When "selections" are used, do not use "assetKeys". |
| Response Body Parameters | resultTransactionId | The Commerce Transaction ID, if the Transaction ID is not provided, a new Transaction is created. |
| | navigationURL | For assets that were created via CPQ Cloud, a successful response includes a navigation URL to the Transaction UI. For assets that were created via an external order, a successful response is empty and does not contain a URL. |
| | processedList | When the request is successful, the "assetKeys" or "selections" output contains the processed list of assets. |

MODIFY ASSETS URI ENDPOINT SAMPLE

```
https://sitename.oracle.com/rest/v8/assets/actions/modify
```

MODIFY ASSETS REQUEST SAMPLE

```
{
  "sourceIdentifier": "oraclecpqo",
  "transactionId": "21275813",
  "transactionDate": "2019-01-27 00:00:00",
  "returnBom": false,
  "flattenHierarchy": false,
  "assetKeys": [ "abo_05b05644-82de-4240-86eb-8feee4aa90d6",
    "abo_d60556a9-8639-403b-aea0-d0fbd3d73c29" ]
}
```

MODIFY ASSETS RESPONSE SAMPLE

```
{
  "resultTransactionId": "21275813",
  "navigationURL": "https://sitename.oracle.com/commerce/buyside/document.jsp?formation=cancelAddFromCatalogCookie&bs_id=21479248&actionVarName=_open_transaction&commerceProcess=oraclecpqo&process=oraclecpqo&txnDate=2019-01-27 00:00:00&transactionId=21275813",
  "processedList": [ {
    "lineId": "8",
    "assetKey": "abo_05b05644-82de-4240-86eb-8feee4aa90d6"
  }, {
    "lineId": "11",
    "assetKey": "abo_d60556a9-8639-403b-aea0-d0fbd3d73c29"
  }
  ]
}
```

STEPS TO ENABLE

The Assets REST API enhancements are automatically available with v8 web services in CPQ Cloud 19B. Administrators need to update any systems that interact with these CPQ web services to begin using these new features.

KEY RESOURCES

To implement 19B ABO Package, refer to the *CPQ Cloud 19B Asset-Based Ordering Implementation Guide*, available on [My Oracle Support Doc ID 2182966.1](#)

TRANSACTION ARRAY ENHANCEMENTS

Organizations using CPQ rely heavily on CPQ Commerce to sell their product offerings to customers and capture the orders. In the quote life cycle, there is a lot of information that needs to be captured at the Transaction and Transaction Line level. Some information, such as revenue time periods or locations, is repetitive, but dynamically varies from one Transaction to another. Transaction Arrays allow customers to group multiple array elements using a single data structure that can capture repeatable data. The array attributes can then be instantiated multiple times at runtime without explicitly defining each instance.

The following functionality is available in CPQ Cloud 19B:

- Add Transaction Arrays to Document Designer and Email Designer documents
- Transaction Array UI Enhancements
- Simplified Add All Attributes to JET Layout

ADD TRANSACTION ARRAYS TO DOCUMENT DESIGNER AND EMAIL DESIGNER DOCUMENTS

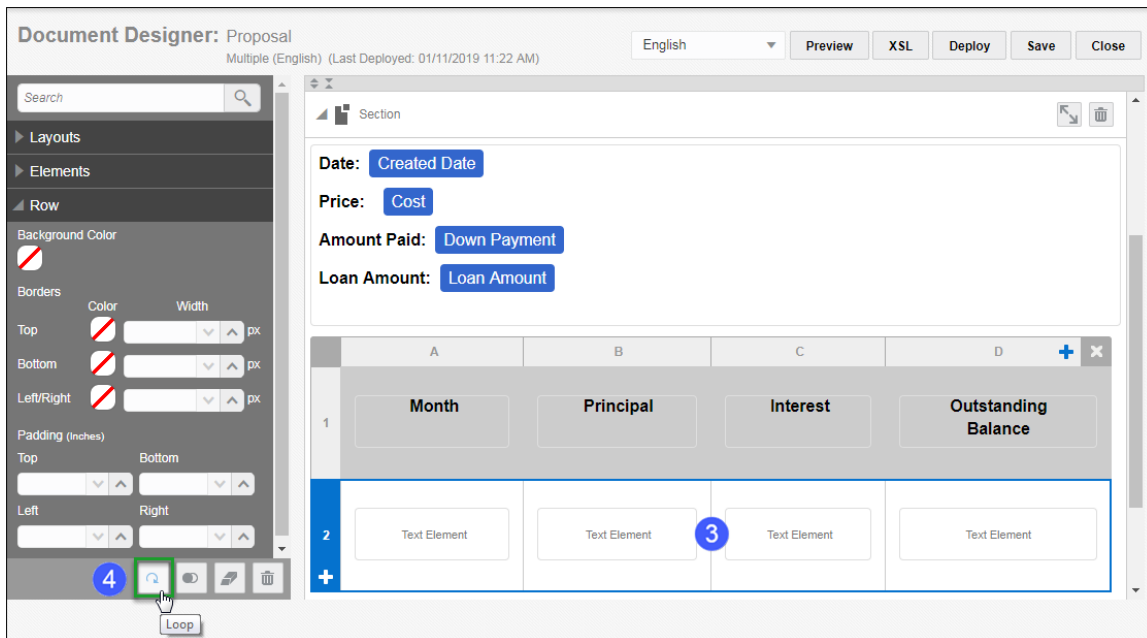
Transaction Array attributes can be added to Document Designer and Email Designer templates, for both main documents and sub-documents. Administrators can also iterate over the transaction array data set through loop editors, and add corresponding array attributes in relevant template elements.

- To add a main document transaction array attribute, a loop for the array must be created on a section, table, table row, text element, or XSL snippet element.
- To add a sub-document transaction array attribute, a loop for the array must be nested within a sub-document (i.e. Line Item) loop. The "outer" loop must exist on a section or a table row, and it must loop over Line Items (model or part). The nested loop can be created on a table row, a text element, or an XSL snippet element.

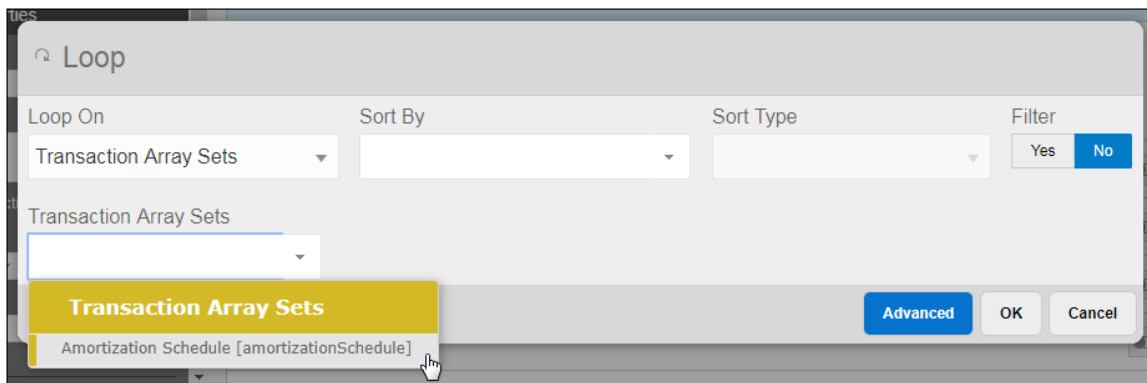
Add a Main Document Transaction Array

To add a transaction array to a main document and configure a loop over the array set items, perform the following steps:

1. Navigate to the Document Designer templates.
Admin > Commerce and Documents > Document Designer
2. Select the Commerce Process, then click the applicable document link, the Document Designer Editor opens.
3. Select a Section, Table, Table Row, Text Element, or XSL Snippet Element.



4. Click the Loop button in the Dynamic Content Bar. The Loop editor opens.
5. Select **Transaction Array Sets** from the Loop On drop-down.



6. Select the applicable array set from the Transaction Array Sets drop-down.
7. Optionally select an attribute to sort by from the Sort By drop-down.

8. Optionally select a sort type from the Sort Type drop-down.
9. Optionally add a Filter to the Loop by clicking **Yes** for Filter, then define the filter criteria.
10. Optionally click **Advanced** to convert a Loop to an Advanced Loop that displays in XSL format.


The screenshot shows a dialog titled "Advanced Loop" with a text area containing XSL code:

```

1 <xsl:for-each select="/transaction/data_xml/document[@document_number='1']/_commerce_array_set_attr_info[@setName='amortizationSchedule']/_array_
2 <xsl:variable name="_dsTxnArray" select="."/>
3 <!-- CONTENT_REPLACE_TOKEN tag will be replaced by Component Content -->
4 <CONTENT_REPLACE_TOKEN/>
5 </xsl:for-each>

```

At the bottom of the dialog are five buttons: "Simple", "Delete Loop", "Validate", "OK", and "Cancel".

11. Click **OK** to save the Loop. The Loop icon  is added to the template element.
12. Add the Transaction Array Attributes.

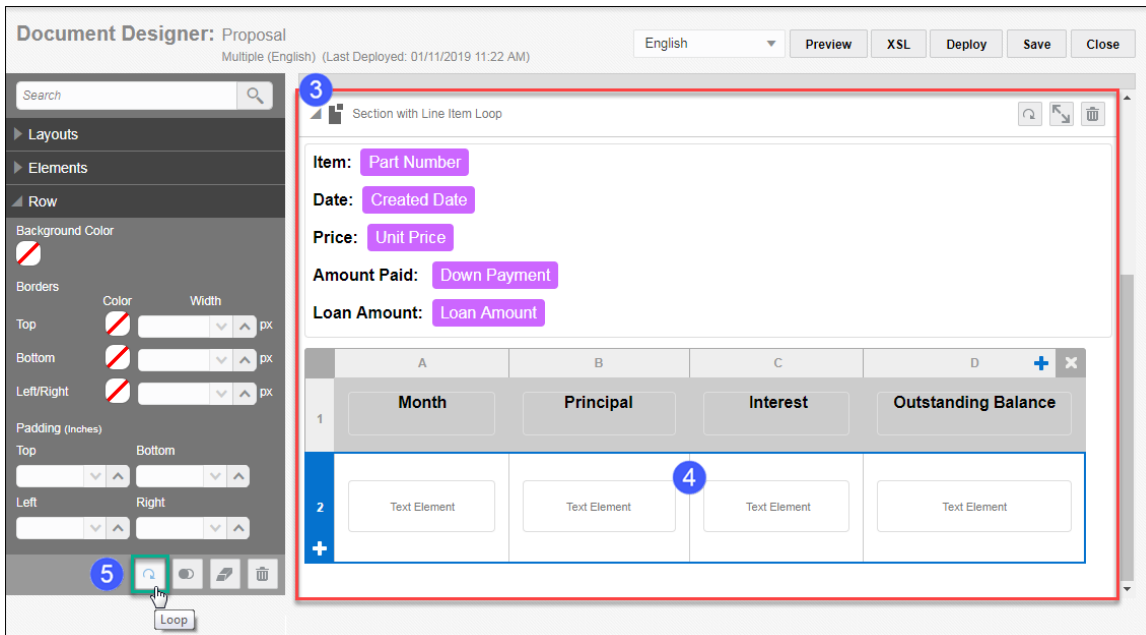
The screenshot shows the "Text Element" editor interface. At the top, there is a rich text editor toolbar with options for bold, italic, underline, strikethrough, and font settings. Below the toolbar, there is a text area and a list of attributes. One attribute, "month", is selected, and a dropdown menu is open showing "Transaction Array Attributes" with a sub-item "Month [month]". At the bottom of the editor, there are buttons for "Principal", "Interest", and "Outstanding Balance".

13. Save and Deploy the template.

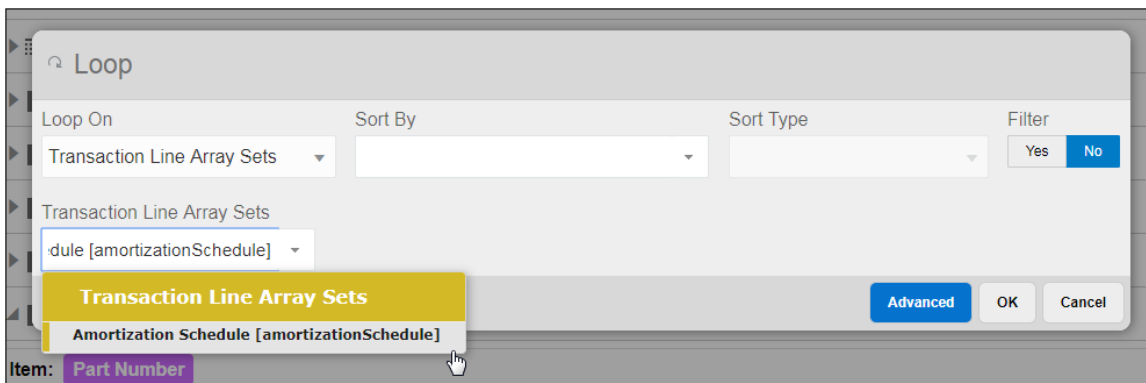
Add a Sub-Document Transaction Array

To add a sub-document transaction array and configure the nested Loop to loop over the array set items perform the following steps:

1. Navigate to the Document Designer templates.
Admin > Commerce and Documents > Document Designer
2. Select the Commerce Process, then click the applicable document link. The Document Designer Editor opens.
3. Navigate to the element with a Line Item Loop.




4. Select a Section, Table, Table Row, Text Element, XSL Snippet Element within the Line Item Loop.
5. Click the Loop button in the Dynamic Content Bar. The Loop editor opens.
6. Select **Transaction Line Array Sets** from the Loop On drop-down.

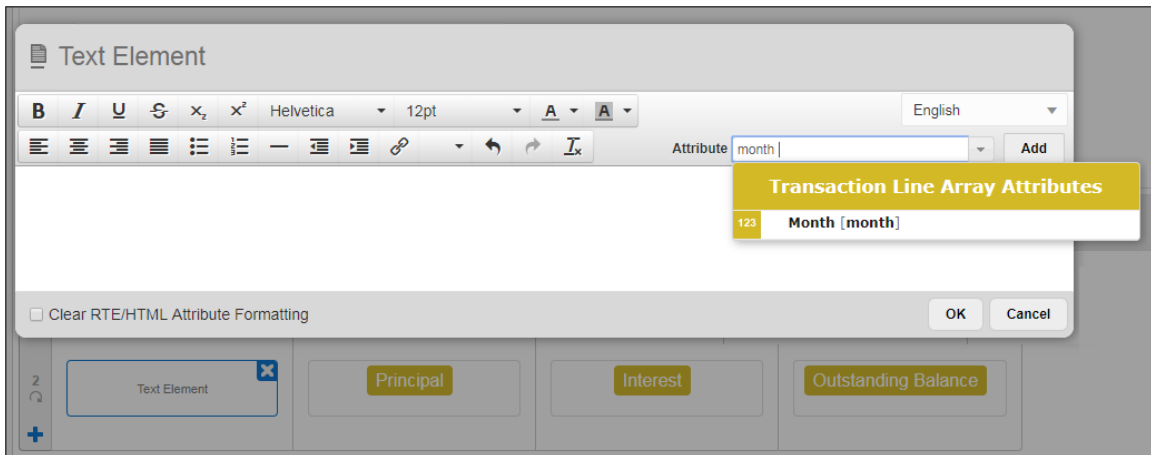


7. Select the applicable array set from the Transaction Line Array Sets drop-down.

8. Optionally select an attribute to sort by from the Sort By drop-down.
9. Optionally select a sort type from the Sort Type drop-down.
10. Optionally add a Filter to the Loop by clicking **Yes** for Filter, then specify the filter criteria.
11. Optionally click **Advanced** to convert a Loop to an Advanced Loop that displays in XSL format.



12. Click **OK** to save the Loop. The Loop icon  is added to the template element.
13. Add the Transaction Line Array Attributes.



14. Save and Deploy the template.

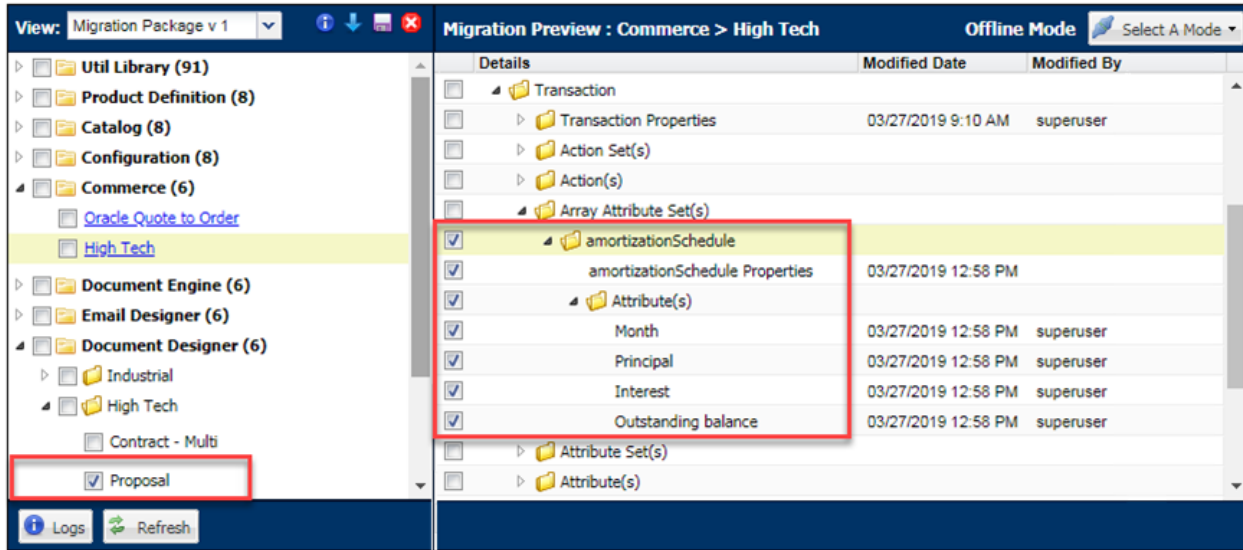
STEPS TO ENABLE

No steps are required to enable this feature.

TIPS AND CONSIDERATIONS

When migrating Document Designer or Email Designer templates that contain transaction arrays, administrators should ensure that the array set and all array set attributes are also migrated.

For example, the following image shows a migration package containing the Document Designer "Proposal" document, note that the "amortizationSchedule" array set and all of its child attributes are also selected.



Migration Package with Document Designer Document and Transaction Array Attributes

TRANSACTION ARRAY UI ENHANCEMENTS

In Release 19B, CPQ provides several usability improvements for users of CPQ's JET Transaction Arrays. Users can change their Transaction Array table to view only specified columns or resize columns. These user preferences are saved in the browser session. When a user returns to a Transaction that displays this element during the current browser session, they will observe the Transaction Array with their display preferences.

STEPS TO ENABLE

No steps are required to enable this feature.

SIMPLIFIED ADD ALL ATTRIBUTES TO JET LAYOUT

This enhancement provides administrators with a single step option to add all array set attributes for a Transaction Array to the JET layout at the same time. Previously, when array set attributes were removed from the layout, administrators had to remove the array set from the layout, save the layout, exit the JET Responsive Layout Editor, re-enter the JET Responsive Layout Editor, and then add the array set back to the layout to expose removed attributes.

Beginning in CPQ Cloud 19B, administrators can simply click **Add All Attributes** on the Array Set Table dialog to expose and add all array set attributes for a Transaction Array.

| Label | Attribute Mapping | Editable | Display Cur... | Alignment | | Width | | |
|---------------------|---------------------|--------------------------|--------------------------|-----------|-------|-------------------------------------|----|---|
| | | | | Label | Value | Auto | px | |
| Month | Month | <input type="checkbox"/> | | Left | Left | <input checked="" type="checkbox"/> | | ✕ |
| Principal | Principal | <input type="checkbox"/> | <input type="checkbox"/> | Left | Left | <input checked="" type="checkbox"/> | | ✕ |
| Interest | Interest | <input type="checkbox"/> | <input type="checkbox"/> | Left | Left | <input checked="" type="checkbox"/> | | ✕ |
| Outstanding Balance | Outstanding Balance | <input type="checkbox"/> | <input type="checkbox"/> | Left | Left | <input checked="" type="checkbox"/> | | ✕ |

Display Add Button
 Display Remove Button
Table Height (in rows):

Array Set Table Dialog

STEPS TO ENABLE

No steps are required to enable this feature.

DIFFERENTIATE

The following CPQ Cloud 19B enhancements pioneer the next generation selling platform:

- Collaborative Quoting
- System Configuration Enhancements

COLLABORATIVE QUOTING

For many customers, creating a quote is a team effort that requires several people with different knowledge, responsibilities, and concerns. There are often situations where these multiple stakeholders need to simultaneously work together on the same Transaction to complete it quickly. The entire sales team may need to collaborate to deliver a quote before a fiscal deadline, a holiday, or key milestone in a sales cycle.

In previous versions of CPQ, it was not possible for multiple users to simultaneously work on the same Transaction without conflicts resulting in lost changes and frequent page refreshes. Transaction Locking was introduced to prevent these conflicts by ensuring that only one user could edit a quote at a time. However, this meant users essentially had to take turns editing a quote.

CPQ Cloud Update 19B introduces Collaborative Quoting which supports multiple users collaborating in real-time on a single Transaction without conflict. In addition to allowing multiple users to simultaneously work on a Transaction, this feature also allows inbound integrations and email approvals to complete without disrupting active users.

The following functionality is available in CPQ Cloud 19B:

- Concurrent Editing of Quotes
- Current Editor Display
- Real-Time Activity Display
- Lock Action
- Granular Activity History Changes
- Commerce REST API Enhancements

CONCURRENT EDITING OF QUOTES

The principal benefit of Collaborative Quoting is that it allows multiple users to concurrently edit a single Transaction. These users are able to work together on a shared version of the Transaction and each user's changes are merged as they are saved. Also, a Transaction can be updated by an external system, usually via web services, and these changes can be merged without disrupting users actively editing the Transaction in the UI.

When a user creates or opens a Transaction a collaboration session begins. Other users can join this collaboration session and they will all be viewing the latest version of the document. The collaboration session ends when all users have left.

With collaboration, user edits are sent to the server when the user clicks off the attribute. These edits are seen immediately by other users, but they are not saved to the Transaction until a user invokes a modify action. Unsaved changes are preserved on the Transaction as long as one or more users are collaborating on it. When the collaboration session ends all unsaved changes are discarded.

Collaborating user edits and actions are executed in the same order in which they are performed. If there is a long running action, all subsequent changes will wait until the previous action completes. Transaction updates from email approvals, integrations, web services, and timer based actions are queued along with actions performed by users and everyone viewing the Transaction will see the results of those changes as they complete.

Users can configure and reconfigure different model lines at the same time with collaboration, but only one user can reconfigure each line at a time. When a line is being reconfigured it is locked and cannot be reconfigured by other users. When users invoke a Reconfigure or Add from Catalog action they remain active in the collaboration session unless they are in configuration longer than the session time out.

Enable Collaborative Editing

Complete the following steps to enable collaborative editing and configure unlock behavior for a Commerce Process.

1. Navigate to the Commerce Processes Page.
Admin > Commerce and Documents > Process Definition
2. Select the applicable Commerce process.

3. Select the **Collaborative Editing** option.

Process Administration

General Integration

Process Manager Settings

*Process Name: Oracle Quote to Order

*Variable Name: oraclecpqo

Description:

Execute Action If Associated Integrations Timeout:

Tab Label: Transaction : Transaction Number (transactionID_t) ▼

*Page Length: 50 ▼

Auto Fill Options: Accounts Information ▼

Fiscal Year Start Date: 1 / 1 ▼

Secure Attribute Encryption Key: Choose File No file chosen

Transaction Editing Mode:

- Collaborative Editing Multiple users can edit a Transaction at the same time
- Transaction Locking Single user can edit a Transaction at a time and it is locked when opened. Additional users can view the locked Transaction but cannot edit.
- Single User Single user can edit a Transaction at a time. Additional users are not blocked from starting a new editing session which supersedes existing sessions.

Let Other Users Perform Unlock Actions:

Actions to Automatically Unlock Transaction:

- Add Signature
- Alternate Order
- Approve
- Attach Proposal to Opportunity
- Back
- Cancel Transaction
- Change Order
- Create Order

Actions that automatically unlock a Transaction when performed by the user who locked the Transaction.

| Enabled | Order Priority | Layout UI | User Definition |
|-------------------------------------|----------------|----------------|-----------------|
| <input checked="" type="checkbox"/> | 1 | JET Responsive | default |
| <input type="checkbox"/> | | Legacy Desktop | none |

[Back to Top](#)

Translations Apply Update Back

4. If desired, select the **Let Other Users Perform Unlock Actions** option.

5. Select unlock actions from the **Actions to Automatically Unlock Transaction** list.

6. Click **Apply** or **Update**.

STEPS TO ENABLE

Administrators must enable the JET Responsive UI and disable the Legacy Desktop UI for all users and remove all secure attributes from the Commerce process before they can enable Collaborative Editing.

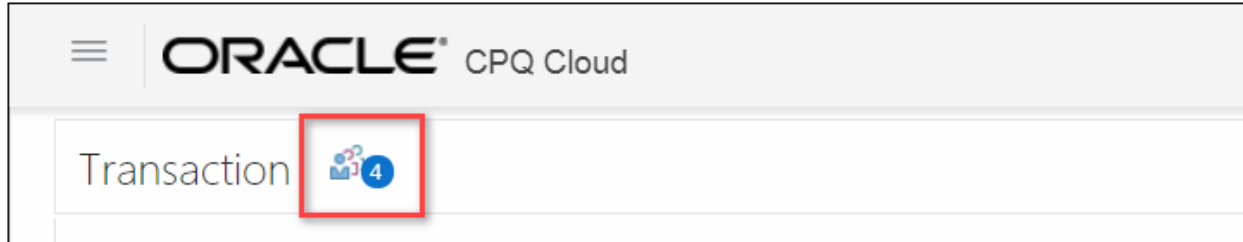
TIPS AND CONSIDERATIONS

Consider the following tips when using Collaborative Quoting:

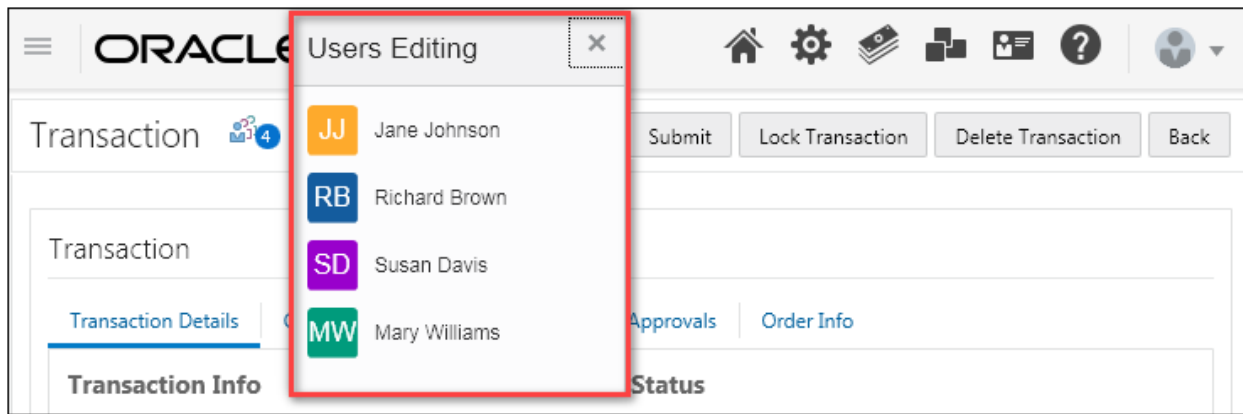
- Secure Attributes are not supported in Collaborative Transactions in CPQ Cloud 19B. Secure Attributes must be removed from the Commerce process when enabling Collaborative Editing.
- History Attributes are not supported in Collaborative Transactions. History attribute data is cleared when an auto update is invoked in a collaborative session. CPQ Cloud recommends removing History Attributes from your Commerce JET Transaction UI layout if enabling Collaborative Editing
- Operations or actions that affect multiple Transactions are not supported in Collaborative Transactions in CPQ Cloud 19B. Other collaboration session users are not affected when these events fail. For example, a SOAP updateTransaction request that updates multiple Transactions will fail if collaboration enabled. SOAP updateTransaction requests to update a single Transaction are still functional.
- When using auto-update to set an array set value, it is important to specify the row number in the JSON. Otherwise, the entire row is removed and recreated which can cause rendering issues.
- When Collaborative Editing is enabled for a Commerce Process the Mobile layout will be replaced with the Commerce JET Transaction UI layout.
- If a user is on a Line Item Detail page and the Line Item is deleted by another user, the record is removed immediately and changes will be lost. The user will need to use browser navigation buttons to return to the main document.
- If a user's collaboration session times out while they are reconfiguring a model, their lock on that model is removed. If another user opens that model the first user will not be able to save it.
- Print and email actions only include attribute values that are saved when the document is generated. Unsaved changes entered by other users after the action is invoked are not included in the output document.
- The Copy action only includes attribute values that are saved when creating a duplicate Transaction. Unsaved changes entered by other users after the action is invoked are not carried over to the new copy.
- If a user enters a value which triggers an immediate error, either due to a Constraint Rule or simple validations on attributes, that value is not shared with other users until it is resolved. Entered values that do not trigger errors until an action is performed will be shared with other users and the error will be displayed when the action runs.

CURRENT EDITOR DISPLAY

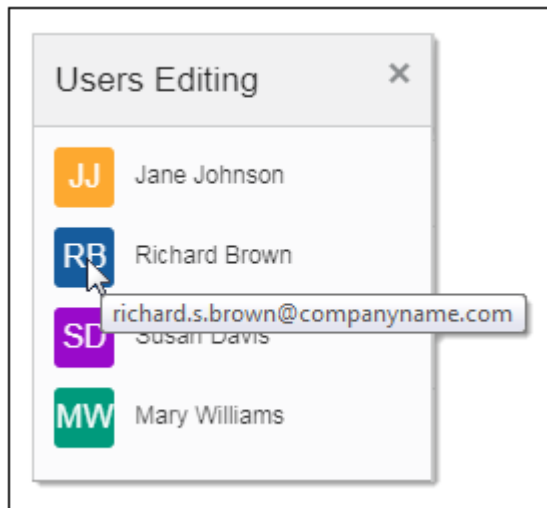
The Current Editor Display shows a list of the other users who are currently working on a Transaction. The collaborative quoting icon is displayed when collaborative quoting is enabled and there are multiple users active on a Transaction. The icon also indicates how many other users are active. For example, the following image displays a collaborative quoting session with four other active users.



Users can click on the collaborative quoting icon to view a list of the other users editing the Transaction. Each user is assigned a color which allows all users to identify who is making changes. The following image shows the active user list with four other users.



As shown in the following image, users can hover over a name in the active user list to view the user's email address. This can help users distinguish between users with similar names.



Users remain on the active user list until they leave the collaboration session by invoking the Back action. If a user navigates away from the Transaction without invoking the Back action, they will remain active in the collaboration session until they are timed out. The collaboration session time out is equal to the login session time out. Typically the login session timeout is set to thirty minutes.

STEPS TO ENABLE

No steps are required to enable this feature.

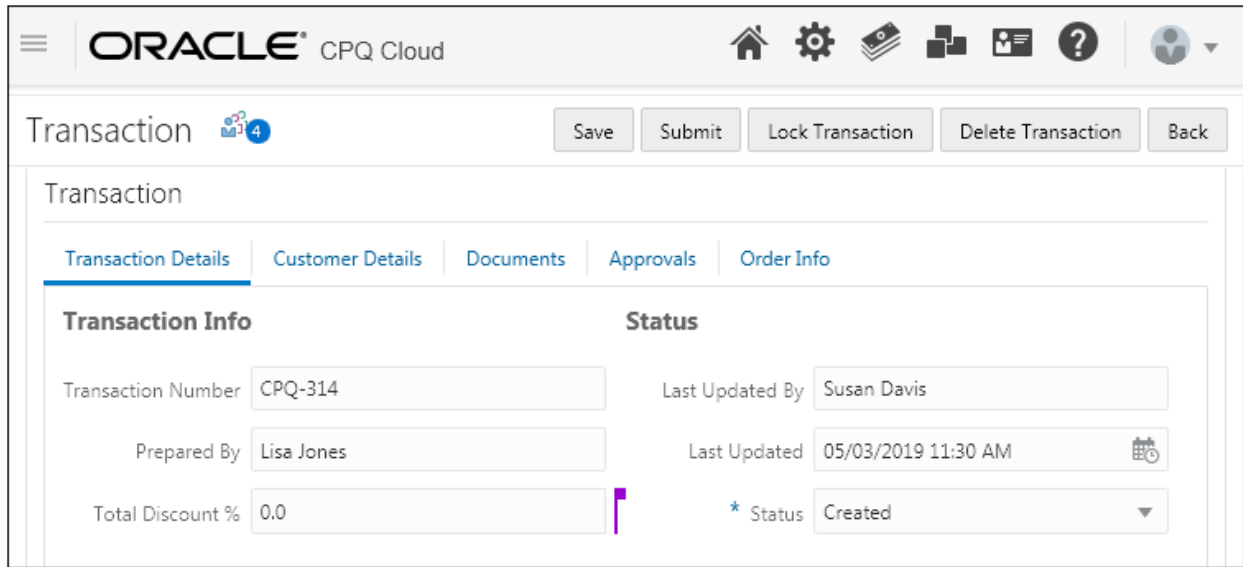
TIPS AND CONSIDERATIONS

Consider the following tips when using the Current Editor Display:

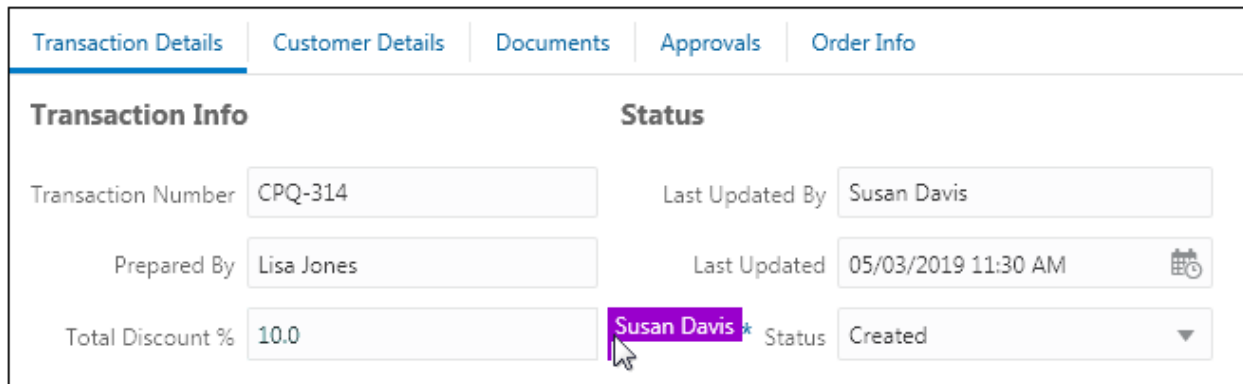
- Users may see a short delay between the time they are timed out and when they are removed from the collaboration session. Users are also removed from a collaboration session if they log out or are logged out due to inactivity.
- Users may see a short delay between when another user joins the quote and when they appear in the current editors list.
- Integration users updating the Transaction via REST or SOAP APIs are not shown in the active user list.
- User updates from Email Approvals are not shown in the active user list.

REAL-TIME ACTIVITY DISPLAY

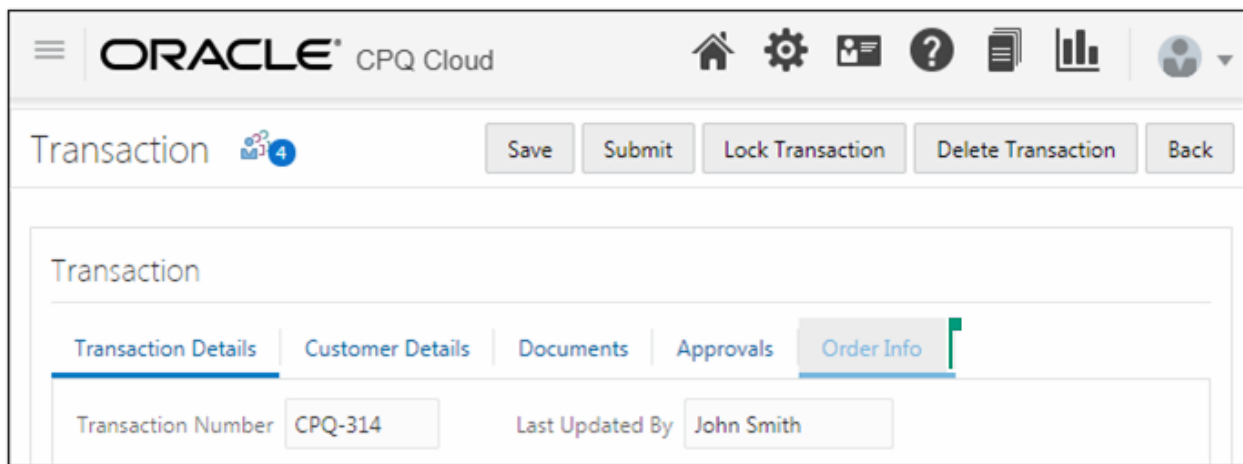
When multiple users are working together on a Transaction it is important that they can see what the other users are editing and what the results of those changes are. They also need an up-to-date view of the most current version of the Transaction at all times. The Real-time Activity Display shows which attribute, product, section, or tab a specific user is editing by flagging it with that user's assigned color. For example, in the following image a flag is displayed to the right of the "Total Discount %" attribute. This indicates another user is currently changing this attribute.



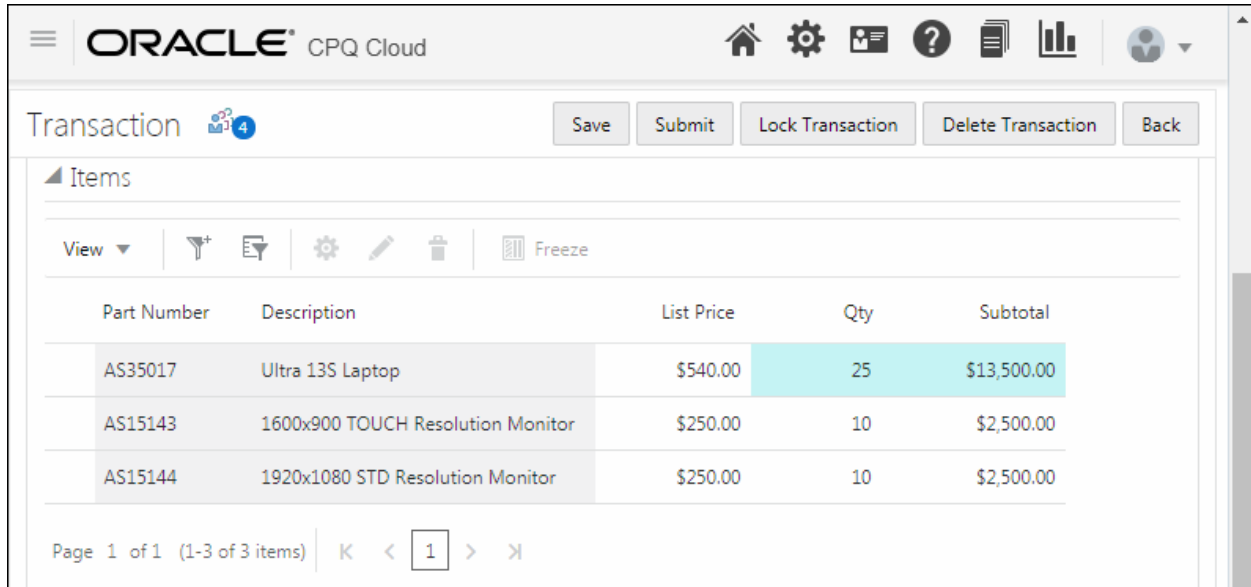
As shown in the following image, users can hover over the flag to display the name of the user making updates.



When another user is changing attributes on a different tab a flag is displayed to the right of that tab. For example, the following image shows another user is making changes on the "Order Info" tab.



Collaborative Quoting constantly polls for changes and highlights any updated values that are the result of another user's changes. For example, in the following image another user updated the quantity for the Ultra 135 Laptop. The quantity field and any fields updated by auto-update are highlighted for all users until the changes are saved. This ensures that everyone working on the Transaction can keep track of what is changing.



The screenshot shows the Oracle CPQ Cloud interface. At the top, there is a navigation bar with the Oracle logo and 'CPQ Cloud' text. Below this, there are several icons for home, settings, messages, help, and a user profile. The main content area is titled 'Transaction' and includes a notification icon with the number '4'. Below the title, there are buttons for 'Save', 'Submit', 'Lock Transaction', 'Delete Transaction', and 'Back'. The main area contains a table with the following data:

| Part Number | Description | List Price | Qty | Subtotal |
|-------------|-----------------------------------|------------|-----|-------------|
| AS35017 | Ultra 13S Laptop | \$540.00 | 25 | \$13,500.00 |
| AS15143 | 1600x900 TOUCH Resolution Monitor | \$250.00 | 10 | \$2,500.00 |
| AS15144 | 1920x1080 STD Resolution Monitor | \$250.00 | 10 | \$2,500.00 |

At the bottom of the table, there is a pagination control showing 'Page 1 of 1 (1-3 of 3 items)' and navigation arrows.

STEPS TO ENABLE

No steps are required to enable this feature.

TIPS AND CONSIDERATIONS

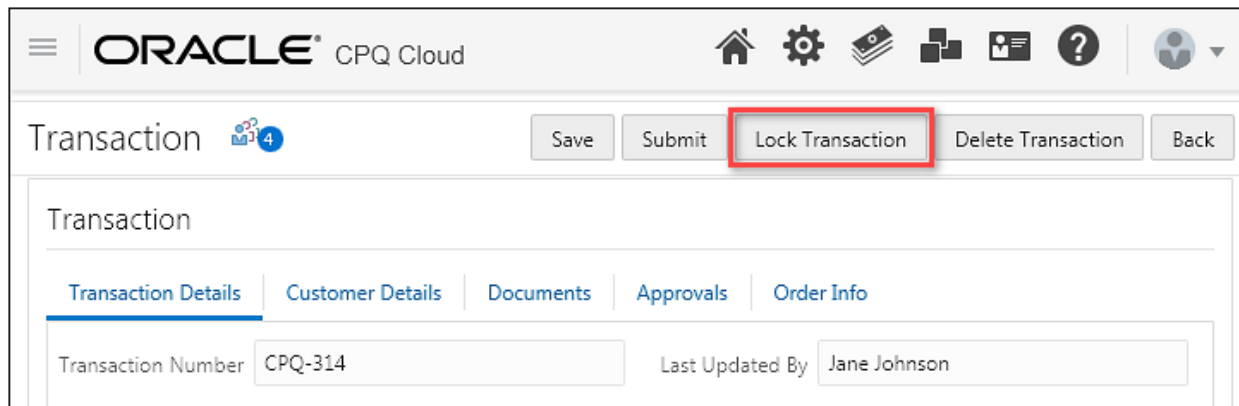
Consider the following tips when using the Real-time Activity Display:

- Users may see a short delay between when another user clicks on a attribute and when the user activity flag appears. Users may also see a short delay between when another user makes a change and when the updated values are received. Open a ticket on [My Oracle Support](#) if you would like to adjust the responsiveness of your site.
- Users should avoid editing an item in the Line Item Grid while another user is actively editing that line.

- Activity flags are not displayed when users are interacting with the following attribute types:
 - File attachment attributes
 - Boolean attributes
 - Date attributes updated using the date picker
 - Integer attributes updated using spinner controls
 - Menu items displayed as radio buttons
 - Multi Select Menu items displayed as checkboxes

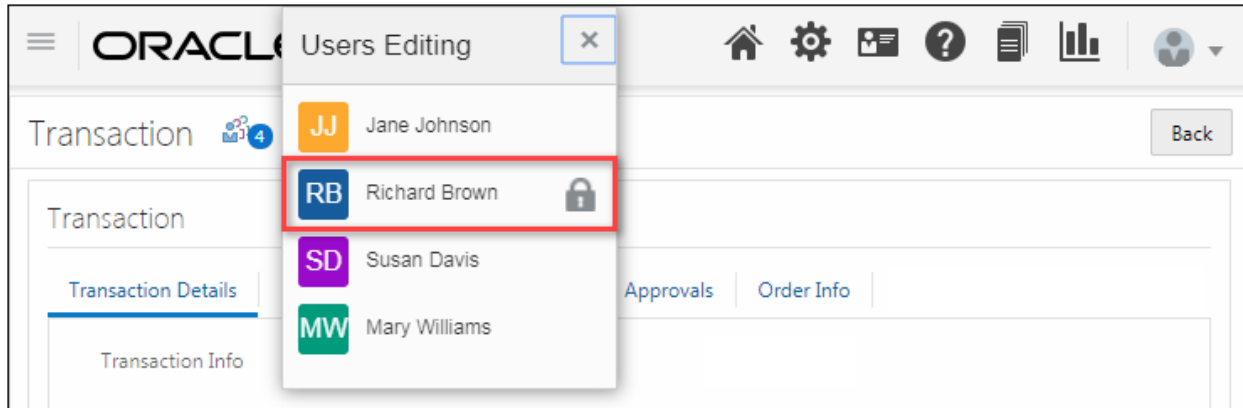
LOCK ACTION

When Collaborative Quoting is enabled there may be situations when a Transaction owner needs to freeze activity on the Transaction and prevent any further changes. Examples include, prior to submitting a quote for approval or when finalizing a quote and converting it to an order. The Lock Action is a new Commerce action type, available on main documents, that allows a user to lock the Transaction. When a Transaction is locked, only the locking user can make changes. Other users are only able to view the Transaction in read-only mode. For example, in the following image the user can click the Lock action on the Transaction.



The Lock action is not automatically available on the JET Transaction UI. Administrators must create a lock action and then add the action to the Commerce JET Responsive Layout.

When a user has locked the Transaction the other users can see who locked it by viewing the Concurrent Editors Display as shown in the following image.



The Lock Status column displays in Transaction Manager whenever administrators enable Transaction locking for a Commerce process. An icon displays in the Lock Status column next to each locked Transaction.

| Select | Lock Status | Transaction Number | Version | Account Name | Status | Prepared By | Created Date | Last Updated |
|--------------------------|-------------|-------------------------|---------|------------------------------|----------------------|-------------|--------------|------------------|
| <input type="checkbox"/> | | CPQ-331 | 1 | Computer Service and Rentals | Created | Lisa Jones | 17/12/2018 | 18/04/2019 12:43 |
| <input type="checkbox"/> | | CPQ-314 | 1 | Computer Service and Rentals | Created | Lisa Jones | 05/12/2018 | 05/12/2018 15:45 |
| <input type="checkbox"/> | | CPQ-339 | 1 | Computer Service and Rentals | Subscription Created | Lisa Jones | 21/12/2018 | 21/12/2018 11:40 |
| <input type="checkbox"/> | | CPQ-338 | 1 | Computer Service and Rentals | Subscription Created | Lisa Jones | 21/12/2018 | 21/12/2018 11:29 |

UNLOCKING A TRANSACTION

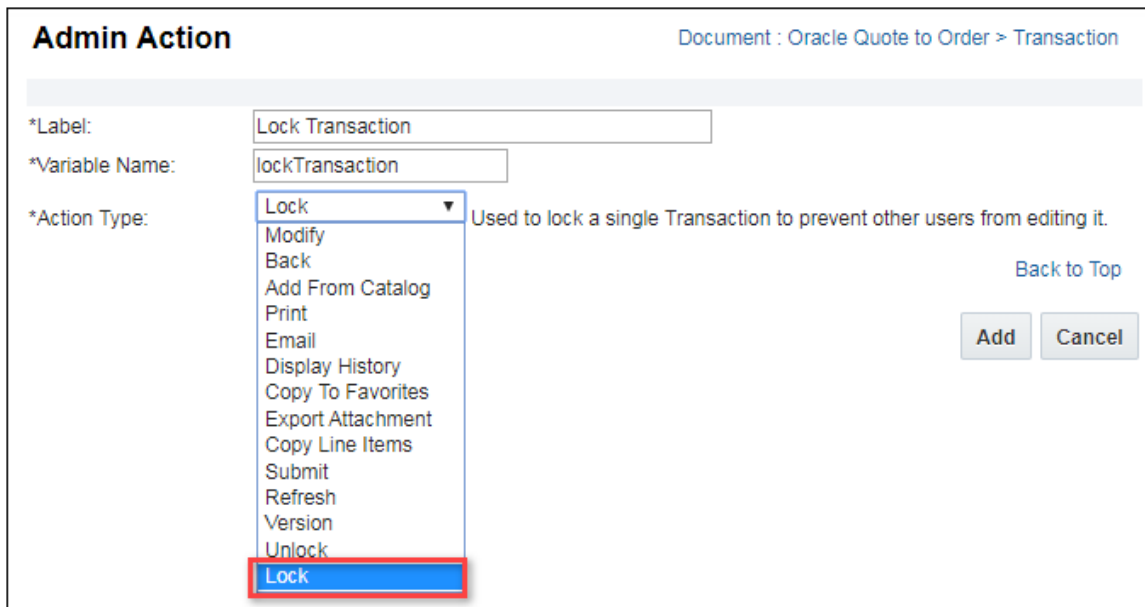
When a Transaction owner performs any of the main document actions selected by an administrator in the Actions to Automatically Unlock Transaction list, a locked Transaction will unlock. For example: If an administrator selects Back and Version as the Actions to Automatically Unlock Transaction, the user who locks a Transaction for editing becomes the Transaction owner and can unlock the Transaction by clicking either Back or Version. When the Transaction owner logs out of CPQ Cloud or their CPQ Cloud session times out, the locked Transaction automatically unlocks.

When an administrator selects the Let Other Users Perform Unlock Actions checkbox on the Process Administration page, users other than the Transaction owner can unlock a locked Transaction when the main document has an Unlock type action that is available to those users via their Participant Profiles.

Create a Commerce Lock Action

Complete the following steps to create a Commerce Lock action.

1. Navigate to the Commerce Processes page:
Admin > Commerce and Documents > Process Definition
2. Select **Documents** from the Navigation drop-down menu, then click **List**.
3. Click **Add** at the bottom of the Actions List page.
4. Enter the action name in **Label** field.
5. Enter a unique **Variable Name**.
The Variable Name field populates automatically. The entry can be changed before saving, but after saving the value is read-only.
6. Select **Lock** from the Action Type drop-down menu.



The screenshot shows the 'Admin Action' configuration page. The title is 'Admin Action' and the breadcrumb is 'Document : Oracle Quote to Order > Transaction'. The form contains the following fields and options:

- *Label: Lock Transaction
- *Variable Name: lockTransaction
- *Action Type: A dropdown menu is open, showing a list of action types. The 'Lock' option is highlighted with a red box. The list includes: Lock, Modify, Back, Add From Catalog, Print, Email, Display History, Copy To Favorites, Export Attachment, Copy Line Items, Submit, Refresh, Version, Unlock, and Lock (highlighted).

To the right of the dropdown menu, there is a text description: 'Used to lock a single Transaction to prevent other users from editing it.' Below this description is a 'Back to Top' link. At the bottom right of the form are two buttons: 'Add' and 'Cancel'.

7. Click **Add**.

Admin Action (lockTransaction) Document : Oracle Quote to Order > Transaction

General Document Views Performance

*Label: Lock Transaction

*Variable Name: lockTransaction

Description:

Action Icon:

Show Loading Dialog: No Yes

JET Layout Path: Unassigned

Mobile Layout Path: Unassigned

8. Enter an action Description, if required.
9. To define an Action Icon, click **Browse**.
10. To define views for the action, click the **Document Views** tab.
11. Click **Apply** or **Update**.

STEPS TO ENABLE

Beginning in CPQ Cloud 19B, the new Commerce Lock type action is available for Commerce processes with Collaborative Quoting or Transaction Locking enabled.

GRANULAR ACTIVITY HISTORY TRACKING

Collaborative Quoting allows multiple users to make changes to different attributes at the same time. The user who changes a value may not be the same user who runs the action and saves it to the database. Granular Activity History Tracking improves the history by logging individual interactions along with the user who made the change. In the following example three entries are shown in the history.

- Richard Brown opens the transaction, which updates the step.
- Susan Davis opens the Transaction, is added to the collaborative session, and makes no changes on open.
- Susan Davis fills in an address, no action is specified because this was an interaction and an action was not invoked.

| Change Log | | | | |
|------------------------------------------------------------------------------------------------------------|-------------------------------------|-----------------|------------|--------------------------------------------------------------------|
| Richard Brown performed Open Transaction action and made the following changes at 08/05/2019 16:12. | | | | |
| Attribute Updated | Attribute Variable | Document Number | Old Value | New Value |
| Current Step | currentStepForTesting_tempDisplay_t | 1 | start_step | pending_process |
| Change Log | | | | |
| Susan Davis performed Open Transaction action and made the following changes at 08/05/2019 16:12. | | | | |
| No changes recorded for this action. | | | | |
| Change Log | | | | |
| Susan Davis performed an interaction and made the following changes at 08/05/2019 16:13. | | | | |
| Attribute Updated | Attribute Variable | Document Number | Old Value | New Value |
| Customer Zip | _customer_t_zip | 1 | -nothing- | 60015 |
| Customer State | _customer_t_state | 1 | -nothing- | IL |
| Customer Email | _customer_t_email | 1 | -nothing- | royalty_us@company.com |
| Customer City | _customer_t_city | 1 | -nothing- | Deerfield |

STEPS TO ENABLE

No steps are required to enable this feature.

TIPS AND CONSIDERATIONS

Display History changes for collaboration do not specify an action varname in the XML. Administrators can adjust the XSL to represent these entries in a clear and concise way.

COMMERCE REST API ENHANCEMENTS

Collaborative Quoting Commerce REST API enhancements provide the ability to communicate which users are editing a specific item and add new collaboration specific error messages. CPQ Cloud 19B introduces the "revisionId" parameter to track changes and the focus object to notify users which items are being changed.

Revision Id Parameter

The "revisionId" parameter can be included in the request and response body for most Commerce action REST APIs. The revisionId is a critical part of client-server communication for collaboration. It enables the server to identify the latest revision from the clients. The most recent revision of a data change is applied on top of the last revision. Without the revision id, it's possible that an out-of-date request from one client could accidentally revert a concurrent change requested by a different client.

Unlike the cacheInstanceId, "-1" is not a valid revisionId value. When loading a Transaction for the first time, the revisionId parameter is omitted from the request. After the first request, the client should retrieve the revisionId from every response, store it on client side, and include it with the next request.

IMPORTANT: The following Commerce actions currently do not accept the revisionId parameter: `_dropCache`, `_send_email`, `_print_document`, `_pipelineViewer`, and `_retrieve_alternate_address`. Do not send the revisionId parameter with these actions.

Focus Object

The focus object identifies when a user is editing a specific item and is sent with Interact calls. It lists active collaboration users and specifies if a user has locked the focused item.

The following describes the server behavior when a request contains the following focus values.

| Focus Value | Server Behavior |
|-------------------|-----------------------------------------------------------------------------------------------------------|
| Attribute Varname | The server sets the user's focus to the corresponding attribute with a five second timeout. |
| Empty String | The server removes the user's focus. |
| Null | The server does not modify or remove the user's focus. Clients should avoid sending null focus values. |

STEPS TO ENABLE

The Commerce REST API enhancements are automatically available with v8 web services in CPQ Cloud 19B. Administrators need to update any systems that interact with these CPQ web services to begin using these new features.

TIPS AND CONSIDERATIONS

Consider the following tips when using Commerce REST APIs with Collaborative Quoting:

- When Collaborative Quoting is enabled, CPQ attempts to determine the state of each client in relation to the shared state of the Transaction. For this reason, calls to the "_interact" endpoint that request CPQ to manage state via cacheinstanceid can see a difference in response after Collaborative Quoting is enabled. When using a headless UI to build collaboration functionality:
 - The revisionId should be included in all Interact requests.
 - Only the attributes that have been changed since the last interact request should be sent.
- When Collaborative Quoting is enabled, line item Sequence Numbers and Group Sequence Numbers can only be updated via the Interact action. Sequence Numbers or Group Sequence Numbers from any other action are ignored. This includes adding ad-hoc parts using a REST API request. Any Sequence Number data from the request are ignored and the items are added at the end of the existing line item list.
- The client should send the user's current focus for all collaboration polling calls, but is expected to omit the user's current focus from other Interact calls.

SYSTEM CONFIGURATION ENHANCEMENTS

System Configuration refers to the manner in which customers use CPQ Cloud to configure and bundle the product or set of products they wish to sell using a group of related models that together define an entire system. A system is a hierarchical arrangement of connected configurable models with a system root containing all of the other models.








The following functionality is available in CPQ Cloud 19B:

- System Navigation Panel Status Display Enhancement
- System Navigation Panel Item Naming Enhancements
- Display System Data JSON in the Configuration Pipeline Viewer
- Favorites Support for BOM-Related Models

SYSTEM NAVIGATION PANEL STATUS DISPLAY ENHANCEMENT

The System Navigation Panel contains model and part icons to show the hierarchy of a system and status icons to identify models requiring user action. CPQ Cloud 19B enhances the system navigation panel to display the status for system configuration models.

The panel will display items that are valid, incomplete, and invalid. It will also indicate if models have warnings or errors. The following table describes possible states for models within the system navigation panel and identifies if invocation is allowed for each state.

| Icon | State | Description | Allow Invocation When Active |
|-------------------------------------------------------------------------------------|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|
|  | Valid Root Configuration | The model is the root model and contains no errors or issues | Yes |
|  | Valid Configuration | The model has been configured and contains no errors or problems | Yes |
|  | Configuration Not Started | The model configuration has been created, but the model details have not been viewed or modified. | Yes |
|  | Invalid | The model configuration is invalid. This could be the result of invalid BOM rules or a missing configuration flow. | Yes |
|  | Warning | The model configuration contains items that should be reviewed, such as reverse BOM mapping errors, altered configuration values, or altered recommended items. | Yes |
|  | Incomplete | The model configuration has multiple nodes and the configuration hasn't progressed to the end node. Users must complete the associated model configuration before proceeding. | No |
|  | Error | The model configuration has constrained values, missing mandatory items, or empty required attributes. When a model has an error, users must correct the associated error before proceeding. | No |

IMPORTANT: If multiple statuses are present on a single model, the order of precedence that determines which icon is displayed is as follows:

- **Root Model:** Invalid > Incomplete > Error > Warning > Valid Root Configuration
- **Child Model:** Invalid > Incomplete > Error > Warning > Configuration Not Started > Valid Configuration

For example: The following image shows a system configuration with five models. The status icons in the system navigation panel indicate valid completed configurations for the Blade Server, Router, and Security models. The status icons for the Rack Server and Backup Device models indicate these items have not been configured.

The screenshot displays a system configuration interface. At the top left, it shows a total cost of \$2,500.00. On the right, there are buttons for 'Update', 'Start Over', and 'Add to Transaction'. The main area is titled 'Model Configuration' and features a navigation panel on the left with a tree view of components. The 'Rack' folder is highlighted with a red box. The tree view includes: Rack (blue folder icon), ARR-S3 (blue folder icon), Rack Server (blue circle icon), Blade Server (green checkmark icon), AASE-3 (blue folder icon), ATBSC (blue folder icon), ATBS-10 (blue folder icon), ATBS-10 (blue folder icon), ATBS-10 (blue folder icon), Router (green checkmark icon), ACR01E (blue folder icon), ACR-100 (blue folder icon), Security (green checkmark icon), ACWSS-1 (blue folder icon), and Backup Device (blue circle icon). The main configuration area shows fields for Rack Width (19), Rack Height (42), Power Supply Count (4), Total Power Available (800), and Component Count (5). Below these fields is a table with 5 rows, each representing a component type and its status:

| Component Type | Status |
|-----------------|------------------------------|
| 1 Rack Server | Invalid (red minus icon) |
| 2 Blade Server | Valid (green checkmark icon) |
| 3 Router | Valid (green checkmark icon) |
| 4 Security | Valid (green checkmark icon) |
| 5 Backup Device | Invalid (red minus icon) |





At the bottom, it shows 'Rack Units Used' as 11 and 'Power Used' as 475.

System Navigation Panel with Status Icons

System Navigation Panel Style Customizations

The default system navigation panel elements can be customized using a CSS file. The root item model has a unique class. The status icons are not applied to the root model. The child models are represented by four different classes to indicate the status of the model configuration. When warnings or errors exist, the applicable class is applied to the relevant model. If desired, administrators can use an alternate CSS file to customize the system navigation panel styles and assign different styles or icons for the specific warning or error classes.

The following table shows the default icons and identifies the CSS class names for the status, warning, and error classes.

| Category | Icon | CSS Class Name | Description |
|----------|-----------------------------------------------------------------------------------|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Root |  | config-root | Root Items |
| Status |  | config-valid | Valid Configuration, this class item is included with the root item and configuration not started. |
| | | config-notstarted | Configuration not started |
| | | config-incomplete | Incomplete Configuration |
| | | config-invalid | Invalid Configuration |
| Warnings |  | config-warning | General configuration warning, this class item is included with all configuration warnings. |
| | | config-reverse-bom-failures | Specific configuration warning that indicates reverse BOM attribute mapping failed. |
| | | config-altered | Specific configuration warning that indicates there are unsaved changes to the item list but the configuration is still valid. |
| Errors |  | config-contains-error | General configuration error, this class item is included with all configuration errors. |
| | | config-constrained | Active constraints |
| | | config-missing-mandatory | Missing mandatory recommended items |
| | | config-empty-required | Empty required attributes |

IMPORTANT:

- The alternate CSS file for system navigation panel customizations should be added to the product stylesheets page. To add the alternate CSS file, administrators navigate to:
Admin > Products > Catalog Definition > Stylesheets
- Administrators must associate the alternate CSS file to each Configuration flow where system navigation panel customizations are desired.
- For details about CSS customization, refer to the CPQ Cloud Administration Online Help.

STEPS TO ENABLE

No steps are required to enable this feature.

SYSTEM NAVIGATION PANEL ITEM NAMING ENHANCEMENTS

The system navigation panel now displays item names that can be defined by a new attribute mapping type in the BOM Attribute Map table. This allows administrators to dynamically name individual instances of a model or part item. In other words, a single item can have different names when it is referenced multiple times within a BOM structure. Additionally, parts in systems now display their "Part Display Number".

For Example: The following image shows a system configuration with BOM attribute mapping item names, which are highlighted in red. In this configuration, two Backup Device models were added. The first "Backup Device" model was renamed "Primary Backup" using the Component Name attribute, which updates the model name in the system navigation panel using the new "DISPLAY_NAME" Target Type in the BOM Attribute Map table. The second "Backup Device" model was also renamed to "Secondary Backup" on the configuration page for that model.

The item highlighted in blue shows a system part, which now displays the Part Display Number (SSD Backup) instead of the Part Number (ASB). For details about the Part Display Number functionality, refer to the CPQ Cloud Administration Online Help.

The screenshot shows a system configuration interface. On the left, a navigation tree lists components: Rack, ARR-S1, Primary Backup (highlighted in red), AODB, Secondary Backup (highlighted in red), and SSD Backup (highlighted in blue). The main area displays the configuration for 'Primary Backup', showing attributes like Component Height (1), Component Power Draw (10), Component Type (ACME Optical Disk Backup), Component Name (Primary Backup), and Backup Media (Optical Disk). A 'BOM Attribute Mapping Item Name' callout points to the 'Primary Backup' value. On the right, a 'Price' summary shows a Total Price of BOM of \$1,200.00 and a Grand Total of \$1,200.00. Below that, a 'Bill of Materials' table is shown with columns for Select, Part Number, Display Name, Quantity, and Price. The table lists items: Rack, ARR-S1, Backup Device (Primary Backup), AODB, Backup Device (Secondary Backup), and ASB (SSD Backup). A 'Part Display Number' callout points to the 'SSD Backup' value in the Display Name column.

The following image shows the Backup Device entry in the BOM Attribute Map table.

The screenshot shows the Oracle_BomAttrMap table in a database interface. The table has columns for VariableName (Key), TargetType, SourceType, ConfigAttr/VarName, BomItemMap/VarName, and RootBomMap/VarName. Row 5 is highlighted in red, showing the backupDeviceName entry.

| # | VariableName (Key) | TargetType | SourceType | ConfigAttr/VarName | BomItemMap/VarName | RootBomMap/VarName |
|---|--------------------|--------------|------------------|--------------------|--------------------|-------------------------------------------------------------------|
| 1 | routerName | DISPLAY_NAME | CONFIG_ATTRIBUTE | componentName | 7400 | aCMERacks.rackComponents.routerComponents.routerMapping |
| 2 | rackServerName | DISPLAY_NAME | CONFIG_ATTRIBUTE | componentName | 7100 | aCMERacks.rackComponents.rackServerComponents.rackServerMapping |
| 3 | bladeServerName | DISPLAY_NAME | CONFIG_ATTRIBUTE | componentName | 7300 | aCMERacks.rackComponents.bladeServerComponents.bladeServerMapping |
| 4 | securityServerName | DISPLAY_NAME | CONFIG_ATTRIBUTE | componentName | 7500 | aCMERacks.rackComponents.securityComponents.securityMapping |
| 5 | backupDeviceName | DISPLAY_NAME | CONFIG_ATTRIBUTE | componentName | 7600 | aCMERacks.rackComponents.backupComponents.backupMapping |

Items renamed using BOM attribute mapping item names or the Part Display Number will display the updated names in the Bills of Materials panel, Recommended Items panel, Favorites, and the Commerce Transaction UI.

The following table shows the order of precedence for naming items in the system navigation panel.

| Models | Part Numbers |
|---------------------------------|---------------------------------|
| BOM Attribute Mapping Item Name | BOM Attribute Mapping Item Name |
| BOM Model Name | Part Display Number |
| | Part Number |

Line BOM Display Name Attribute

CPQ Cloud 19B introduces the `_line_bom_display_name` Commerce sub-document system attribute to support BOM Attribute Mapping Item Naming.

- This attribute holds the value of the Display Name set in Configuration.
- This attribute is only available via BML. Administrators must output this value into an attribute that accepts strings in order for it to be visible on a buy-side Commerce transaction.
- If a display name is not defined, the attribute value will be blank.

Display Item Names Using BOM Attribute Mapping

To implement BOM attribute mapping Item names the following tasks must be completed.

1. Create a Configuration attribute to capture the new item name.
2. Add the attribute to the Configuration Flow page for the applicable model.
3. Add a row to the BOM Attribute Map table and enter the applicable data for the fields displayed in the following table:

| Field | Value |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TargetType | DISPLAY_NAME |
| SourceType | Select one of the following options: CONFIG_ATTRIBUTE Select this option to set the target to the value of the configuration attribute CONDITIONAL_STATIC_ENTRY Select this option to set the target if the specified attribute's value matches the value in the Static Entry column of the Attribute Mapping table. Multiple entries can be created to display different names based on which defined options are selected. STATIC_ENTRY Select this option to set the target to a specific value. |
| ConfigAttrVarName | The variable name of the configuration attribute used to designate the new item name. |
| BomItemMapVarName | The BOM Item ID of the parent item, this value is listed in the "VariableName" column of the BOM Item Mapping table. This value designates which BOM item will be renamed. |
| RootBomMapVarName | The variable name of the BOM Map configuration rule, this value is listed in the "ParentBomMapVarName" field in the BOM Item Map table. |

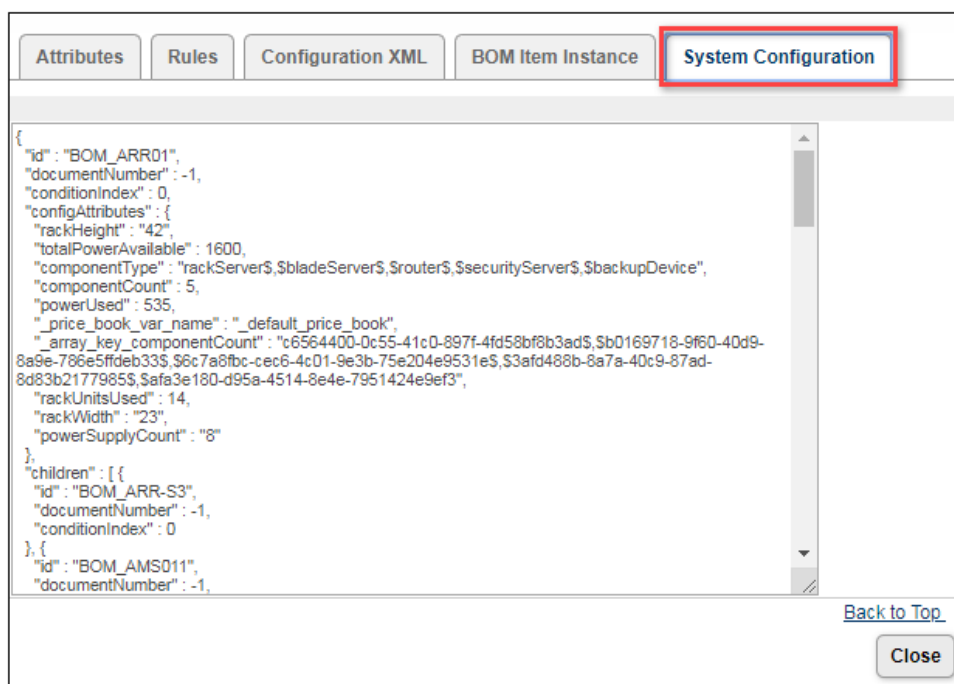
IMPORTANT: If the BOM Attribute Map table does not exist on your site, refer to the BOM Implementation Guide for information about adding and implementing this table.

STEPS TO ENABLE

No steps are required to enable this feature.

DISPLAY ENTIRE SYSTEM DATA JSON IN THE CONFIGURATION PIPELINE VIEWER

The Configuration Pipeline Viewer can help administrators confirm configuration set-ups when implementing or maintaining system configurations. Beginning in CPQ Cloud 19B, the entire system data JSON is displayed in the Configuration Pipeline Viewer **System Configuration** tab. This provides administrators with a hierarchical JSON structure representing the entire system, along with the key components of all configured models in the system. The BOM Item Instance tab still displays the JSON for the current model.



Pipeline Viewer System Configuration Tab

STEPS TO ENABLE

No steps are required to enable this feature.

FAVORITES SUPPORT FOR BOM-RELATED MODELS

Favorites allow each user to list their Favorite products and parts for quick access and quote creation in a Favorites List. Favorite lists are maintained independently of catalog and parts. Beginning in CPQ Cloud 19B, users can save BOM-related models and system configurations as Favorites. Associated parts and models are displayed in their hierarchical order. A system configuration can be added to Favorites from Configuration or Commerce. The only BOM item that can be chosen is the root. However, recommended items from either the root model or any descendant model can be independently added as Favorites from Commerce. From within Configuration, the entire system will be added as a Favorite along with all of the currently selected recommended items. When optional and mandatory recommended items are added to Favorites they will appear directly below the model that added them.

When non-BOM Favorites are added to a Transaction, the items are added exactly as they are saved in Favorites. The behavior for non-BOM items and previously saved Favorites are not changed in CPQ 19B.

When BOM-based Favorites are added to a Transaction, the items may differ from Favorites since they go through invocation prior to being added to a Transaction. This behavior is different than the existing Favorites functionality.

When a model has a defined BOM Mapping Rule, any changes to Recommended Item Rules or pricing will impact what gets added to the Transaction. Therefore, what is seen in Favorites may not match what is added to the Transaction. Updated items can be synchronized to Favorites by reconfiguring and saving the modified items. The following circumstances cause changes to occur:

- If a Recommended Items Rule that is active on the BOM-related Favorite has item changes, the BOM items are updated to reflect the items defined in the rule.
- If a Recommendation Rule that is active on the BOM-related Favorite has item changes, the recommendation will fire on invocation according to its new condition requirements, action attributes, and values.
- If a Pricing Rule that is active on a model included in a BOM-type Favorite is changed, the prices will be updated.
- If Attribute Value Pricing (AVP) is changed, the prices are updated according to the current AVP prices.

Under some circumstances invocation is blocked and the BOM-related Favorites must be reconfigured before the items can be added to a Transaction. The following circumstances cause invocation to fail:

- If the BOM hierarchy is changed and doesn't match the BOM-related Favorites.
- If system updates cause constraint errors on the root or child models.

Favorites List Page

Favorite entries are created for the entire system configuration and all potential recommended items. These entries are all visible on the Favorites page.

The following BOM-related information is displayed in the Favorites list:

- **Name:** the attribute mapping item name or BOM model name for models and the attribute mapping item name, part display name, or part number for parts
- **Quantity:** the effective or exploded quantity, i.e. multiplied by the parent Quantity
- **Total Price:** For BOM models, line quantity can be more than one, the total price uses this quantity when calculating the total price for the Favorites item. This is different from the standard Configuration total price, where the unit price assumes the model quantity is one.

| Select | Status | Label | Product Type | Name | Quantity | Total Price | Price Book | Date Added |
|--------------------------|--------|-----------------------|--------------|-------------------------|----------|------------------------------|------------|---------------------|
| <input type="checkbox"/> | | Model | ACME Racks | Rack | 1 | US Dollar price not defined. | Base Price | 04/10/2019 12:18 PM |
| <input type="checkbox"/> | | Part | Part | ARR-S3 | 1 | \$2,500.00 | Base Price | 04/10/2019 12:18 PM |
| <input type="checkbox"/> | | Model | ACME Racks | Rack Server | 1 | US Dollar price not defined. | Base Price | 04/10/2019 12:18 PM |
| <input type="checkbox"/> | | Part | Part | ACME Missile Server 100 | 1 | \$2,000.00 | Base Price | 04/10/2019 12:18 PM |
| <input type="checkbox"/> | | Model | ACME Racks | Blade Server | 1 | US Dollar price not defined. | Base Price | 04/10/2019 12:18 PM |
| <input type="checkbox"/> | | Part | Part | AASE-3 | 1 | \$800.00 | Base Price | 04/10/2019 12:18 PM |
| <input type="checkbox"/> | | Part | Part | ATBSC | 1 | On Request | Base Price | 04/10/2019 12:18 PM |
| <input type="checkbox"/> | | Part | Part | ATBS-10 | 1 | \$1,000.00 | Base Price | 04/10/2019 12:18 PM |
| <input type="checkbox"/> | | Part | Part | ATBS-10 | 1 | \$1,000.00 | Base Price | 04/10/2019 12:18 PM |
| <input type="checkbox"/> | | Part | Part | ATBS-10 | 1 | \$1,000.00 | Base Price | 04/10/2019 12:18 PM |
| <input type="checkbox"/> | | Model | ACME Racks | Router | 1 | US Dollar price not defined. | Base Price | 04/10/2019 12:18 PM |
| <input type="checkbox"/> | | Part | Part | ACR01E | 1 | On Request | Base Price | 04/10/2019 12:18 PM |
| <input type="checkbox"/> | | Part | Part | ACR-100 | 1 | \$6,000.00 | Base Price | 04/10/2019 12:18 PM |
| <input type="checkbox"/> | | Model | ACME Racks | Security | 1 | US Dollar price not defined. | Base Price | 04/10/2019 12:18 PM |
| <input type="checkbox"/> | | Part | Part | ACWSS-1 | 1 | \$3,000.00 | Base Price | 04/10/2019 12:18 PM |
| <input type="checkbox"/> | | Model | ACME Racks | Backup Device | 1 | US Dollar price not defined. | Base Price | 04/10/2019 12:18 PM |
| <input type="checkbox"/> | | Part | Part | SSD Backup | 1 | \$2,000.00 | Base Price | 04/10/2019 12:18 PM |

Favorites Details Page

The Favorites Detail page provides information for the selected Favorites line item. The following table describes the sections on this page and indicates if the section is available for root items, child models, or parts.

| Section | Availability | Description |
|-------------------------------------------------------------|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Description | Root Items, Child Models, and Parts | This section contains a "Label" item that allows users to rename the Favorites line item. |
| General Information | Root Items, Child Models, Parts | This section displays the supplier, product type, quantity, total price, currency preference, language preference, and price book information. |
| Model Information | Root Items and Child Models | This section displays the line BOM display name, segment name, product line name, and model name. |
| System Configuration Information -OR- BOM Information | Root Items | This section displays a visual representation of the system navigation. This section is called "BOM Information" when none of the child items are configurable. |
| Configurable Attributes | Root Items and Child Models | This section provides a list of configurable attributes within the model. The Reconfigure option is only provided in this section for the system configuration root item. This option allows users to reconfigure system configuration Favorites. |
| Part Information | Parts | This section contains information about parts items, such as: part number, lead time, price type, etc. |

The following image shows the Favorite Detail page for a system configuration root item.

ORACLE CPQ Cloud

Favorite Detail

Description

Label Rename

General Information

| | |
|----------------------|------------------------------|
| Supplier: | cpq-136 |
| Product Type: | ACME Racks |
| Quantity: | 1 |
| Total Price: | US Dollar price not defined. |
| Currency Preference: | US Dollar |
| Language Preference: | English |
| Price Book: | Base Price |

Model Information

Line BOM: Rack
 Display Name: Rack
 Segment Name: ACME Racks
 Product Line Name: Equipment Racks
 Model Name: Rack

System Configuration Information

- Rack
 - ARR-S3
 - Rack Server
 - ACME Missile Server 100
 - Blade Server
 - AASE-3
 - ATBSC
 - ATBS-10
 - ATBS-10
 - ATBS-10
 - Router
 - ACR01E
 - ACR-100
 - Security
 - ACWSS-1
 - Backup Device
 - SSD Backup

Configurable Attributes

| | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Config Upgrade Name: componentCount [1] = 1e68336d-8585-4ad2-a06e-60d7f2a17650, [2] = a543d2de-7767-41af-8917-8548928dc316, array key: [3] = 2faacf23-8fe3-47a7-883b-3e85593e21ea, [4] = 9f445ab9-1556-4e50-b011-f188db5e80c0, [5] = 024f2df2-a2af-441d-82fe-9934847f4618 Rack Height: 42 Total Power Available: 1000 Power Used: 530 Power Supply Count: 5 | Configuration Id: Rack Width: 23 Component Count: 5 Rack Units Used: 14 Component Type: [1] = rackServer, [2] = bladeServer, [3] = router, [4] = securityServer, [5] = backupDevice |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

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The following image shows the Favorite Detail page for a system configuration child model.

| Favorite Detail | | | |
|-------------------------------------|------------------------------------|---------------------------------------|--------------------------------------------|
| Description | | | |
| Label | <input type="text" value="Model"/> | <input type="button" value="Rename"/> | |
| General Information | | | |
| Supplier: | cpq-136 | | |
| Product Type: | ACME Racks | | |
| Quantity: | 1 | | |
| Total Price: | On Request | | |
| Currency Preference: | US Dollar | | |
| Language Preference: | English | | |
| Price Book: | Base Price | | |
| Model Information | | | |
| Line BOM Display Name: | Router | | |
| Segment Name: | ACME Racks | | |
| Product Line Name: | Rack Components | | |
| Model Name: | Router | | |
| Configurable Attributes | | | |
| Config Upgrade Name: | | Configuration Id: | |
| Component Height: | 4 | Component Power Draw: | 200 |
| Component Type: | ACME C4 Router 100 | Component Name: | |
| Number of Router Ports: | 6 | numberOfRouterSlots array key: | [1] = f2921f00-cfc8-4e04-8671-30c4d2c2252a |
| Number of Router Slots: | 1 | Router Card Type: | [1] = Ethernet Interface Card |
| Needs Card Cage: | false | | |
| Back to Top | | | |
| <input type="button" value="Back"/> | | | |

The following image shows the Favorite Detail page for a part within a system configuration.

Favorite Detail

Description

| | | |
|-------|-----------------------------------|------------------------|
| Label | <input type="text" value="Part"/> | Rename |
|-------|-----------------------------------|------------------------|

General Information

| | |
|----------------------|------------|
| Supplier: | cpq-136 |
| Product Type: | Part |
| Quantity: | 1 |
| Total Price: | \$2,000.00 |
| Currency Preference: | US Dollar |
| Language Preference: | English |
| Price Book: | Base Price |

Part Information

| | |
|-------------------------|-------------------------|
| Part Number: | AMS-100 |
| Part Lead Time: | N/A |
| Part Description: | ACME Missile Server 100 |
| Line BOM Display Name: | ACME Missile Server 100 |
| Price Type: | |
| Product Group: | Rack Server |
| Cost: | 0.0 |
| Max discount %: | 5 |
| Price Period: | |
| Max Manager Discount %: | |
| Volume Pricing?: | |
| Part Image: | |
| Weight (lbs): | 0.0 |

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STEPS TO ENABLE

No steps are required to enable this feature.

TIPS AND CONSIDERATIONS

The following Commerce system variables, which were added in previous releases, were converted to Commerce system sub-document attributes:

- `_line_bom_model_path` (added in 18B)
- `_line_bom_condition_index` (added in 18D)
- `_line_bom_sequence_index` (added in 18D)

IMPORTANT: Any use of those variables to default Commerce sub-document attributes will be automatically converted to a BML function that provides the same functionality.

Any other use of those system variables must be updated to the new Commerce system sub-document attribute.

CUSTOMER REQUESTED FEATURES AND ENHANCEMENTS

The CPQ Cloud 19B introduces the following customer requested features and enhancements:

- Approval Justification Text Entry
- Clone Commerce Action
- Supported Currency Enhancement
- Select All Columns with BMQL JOIN Clause
- Transaction Count Setting

APPROVAL JUSTIFICATION TEXT ENTRY

In 19B the approval justification comment text entry is increased from 1000 to 4000 characters. This allows users to enter more detailed justification information.

STEPS TO ENABLE

No steps are required to enable this feature.

CLONE COMMERCE ACTION

CPQ Cloud 19B supports cloning of Commerce Actions and all of the associated action properties.

To clone a Commerce action, complete the following steps:

1. Navigate to the Processes page.
Admin Home > Commerce and Documents > Process Definitions

| Select | Name | Navigation | Quick Links | Description | Last Deployed | |
|--------------------------|---------------------------------------|------------|----------------------|----------------------|---------------------------------|--------------------|
| <input type="checkbox"/> | Oracle Quote to Order | Documents | List | Open | The reference commerce process. | 04/02/2019 7:28 AM |

[Translations](#) [Add](#) [Delete](#) [Back](#)

- For a process, select **Documents** from the Navigation drop-down and then click **List**. The Documents List page displays.

| Document List | | | | | | Process : Oracle Quote to Order |
|---------------|-------|----------------------------------|----------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|--------------------|---------------------------------|
| Select | Order | Document Name | Navigation | Description | Date Last Modified | |
| | 1 | Transaction | Actions List | Main (Header Level) Commerce Document - serves as Quote/Order depending on step in process flow | 03/06/2019 9:02 AM | |
| | | Transaction Line | Attributes List | Line Level Document - Captures pricing and data at the line level | 03/06/2019 9:02 AM | |

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Translations Back

- For a Document, select **Actions** from the Navigation drop-down and then click **List**. The Action List page displays.
- From the Admin List page, click a checkbox to select a Commerce action:
 - Select the checkbox next to the Commerce action you wish to clone and then click **Clone**.

| Action List | | | | | | | Document : Oracle Quote to Order > Transaction |
|-------------------------------------|---------------------------------------|----------------------|-----------------------|-------------------------------------------------------------------------------|---------------------|---------------|------------------------------------------------|
| Select | Action Name | Action Variable Name | Type | Description | Date Last Modified | Related Rules | |
| <input type="checkbox"/> | Add Line Item | addLineItem_1 | Add From Catalog | Displays the Parts Search UI to enable users to add parts to the transaction. | 11/14/2018 12:50 PM | | |
| <input type="checkbox"/> | View History | revisionHistory | Display History | Transitions the transaction. | | | |
| <input type="checkbox"/> | View | _view_crm_action | View Account Profile | Action to view accounts information in a new window | 09/20/2018 11:13 AM | | |
| <input checked="" type="checkbox"/> | Zero Discounts | zeroDiscounts | Modify | The eSignature Action Set | 09/20/2018 11:13 AM | | |
| <input type="checkbox"/> | eSignature Action Set | | eSignature Action Set | The eSignature Action Set | 11/17/2017 5:54 PM | | |

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Translations Add Delete Clone Back

IMPORTANT: Only one Commerce action can be selected to clone at a time. Selecting multiple actions from the Admin List page results in an error message.

- Click on the Commerce action you wish to clone. When the Admin Action page displays, click **Clone**.

Admin Action (zeroDiscounts) Document : Oracle Quote to Order > Transaction

General Modify Destination Integration Document Views Performance

*Label: Zero Discounts
 *Variable Name: zeroDiscounts
 Email Notification Keyword: All possible values can be separated with a tilde (e.g.: Accept-Approve)
 Approval Comment Mapping:
 Description:
 Action Icon: Browse
 Show Loading Dialog: No Yes
 Action Timeout: minutes
 Execute Action If Associated Integrations Timeout:
 Desktop Layout Path:
 • PANEL:Items > TAB:Line Item Information Save and Edit Desktop Layout
 Mobile Layout Path: Unassigned Save and Edit Mobile Layout
 Run Validation Before Modify:
 Advanced Modify - Before Formulas: No Advanced Modify - Before Formulas Define Advanced Modify - Before Formulas Define Function
 Advanced Modify - After Formulas: No Advanced Modify - After Formulas Define Advanced Modify - After Formulas Define Function
 Advanced Validation: Simple Validations Define Validation Rules (deprecated - use Commerce Rules) Define Function Save Without Validating Modify Without Saving or Validating
 * Changes to the document will not be saved when the action is performed, and transition rules will not trigger.
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Translations Apply **Clone** Update Update and New Back

The Admin Action page for the newly cloned action displays.

Admin Action Document : Oracle Quote to Order > Transaction

*Label: Copy Of Zero Discounts
 *Variable Name: zeroDiscounts_bmClone_1
 *Action Type: Modify Used to modify
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Clone Cancel

5. Enter a label in the **Label** field for the new cloned action.

6. Enter a unique variable name or accept the default variable name in the **Variable Name** field for the new cloned action.

Admin Action Document : Oracle Quote to Order > Transaction

*Label:

*Variable Name:

*Action Type: Modify Used to modify

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7. Click **Clone**. The Admin Action page for the new cloned action displays.
8. Modify the new cloned action using the Admin Action page as desired.

STEPS TO ENABLE

No steps are required to enable this feature.

SUPPORTED CURRENCY ENHANCEMENT

This enhancement provides standard and globally accepted Currency codes for the Supported Currency list. CPQ Cloud 19B includes currency code and definition updates as shown in the following table:

| New 19B Currency and Currency Code | Previous Currency and Currency Code |
|------------------------------------|-------------------------------------|
| Belarusian Ruble (BYN) | Belarusian Ruble (BYR) |
| Mauritanian Ouguiya (MRU) | Mauritanian Ouguiya (MRO) |
| Sao Tome and Principe Dobra (STN) | Sao Tome and Principe Dobra (STD) |
| Venezuelan Bolivar (VES) | Venezuelan Bolivar (VEF) |

To update to the 19B currency codes, complete the following steps:

1. Navigate to the Company Administration page.
Admin Home > General > Hosted Company Info
or
Admin Home > Partner Organization > Company Administration List > Select Company Name
2. Click to enable a currency from the **Supported Currencies** list.

| *Supported Currencies: | Currency | Enable | Precision | Format | Currency | Enable | Precision | Format |
|------------------------|----------|-------------------------------------|-----------|---------------|----------|-------------------------------------|-----------|---------------|
| | AED | <input type="checkbox"/> | 2 | AED1,234.12 | LBP | <input type="checkbox"/> | 2 | 1,234.12 ل.ل |
| | AFN | <input type="checkbox"/> | 2 | Afs1,234.12 | LKR | <input type="checkbox"/> | 2 | LKR1,234.12 |
| | ALL | <input type="checkbox"/> | 2 | Lek1,234.12 | LRD | <input type="checkbox"/> | 2 | LRD1,234.12 |
| | AMD | <input type="checkbox"/> | 2 | AMD1,234.12 | LSL | <input type="checkbox"/> | 2 | M1,234.12 |
| | ANG | <input type="checkbox"/> | 2 | NAf1,234.12 | LTL | <input type="checkbox"/> | 2 | 1,234.12 € |
| | AOA | <input type="checkbox"/> | 2 | Kz1,234.12 | LVL | <input type="checkbox"/> | 2 | 1,234.12 € |
| | ARS | <input type="checkbox"/> | 2 | \$1,234.12 | LYD | <input type="checkbox"/> | 3 | 1,234.123 ل.د |
| | AUD | <input checked="" type="checkbox"/> | 2 | \$1,234.12 | MAD | <input type="checkbox"/> | 2 | 1,234.12 م.د |
| | AWG | <input type="checkbox"/> | 2 | Afl.1,234.12 | MDL | <input type="checkbox"/> | 2 | MDL1,234.12 |
| | AZN | <input type="checkbox"/> | 2 | man.1,234.12 | MGA | <input type="checkbox"/> | 2 | MGA1,234.12 |
| | BAM | <input type="checkbox"/> | 2 | KM1,234.12 | MKD | <input type="checkbox"/> | 2 | Den 1,234.12 |
| | BBD | <input type="checkbox"/> | 2 | BBD1,234.12 | MMK | <input type="checkbox"/> | 2 | MMK1,234.12 |
| | BDT | <input type="checkbox"/> | 2 | BDT1,234.12 | MNT | <input type="checkbox"/> | 2 | MNT 1,234.12 |
| | BGN | <input type="checkbox"/> | 2 | лe1,234.12 | MOP | <input type="checkbox"/> | 2 | MOP 1,234.12 |
| | BHD | <input type="checkbox"/> | 3 | BD1,234.123 | MRU | <input checked="" type="checkbox"/> | 2 | UM1,234.12 |
| | BIF | <input type="checkbox"/> | 0 | FBu1,234 | MUR | <input type="checkbox"/> | 2 | MUR1,234.12 |
| | BMD | <input type="checkbox"/> | 2 | BDS1,234.12 | MVR | <input type="checkbox"/> | 2 | MVR1,234.12 |
| | BND | <input type="checkbox"/> | 2 | BND1,234.12 | MWK | <input type="checkbox"/> | 2 | MWK1,234.12 |
| | BOB | <input type="checkbox"/> | 2 | Bs.1,234.12 | MXN | <input checked="" type="checkbox"/> | 2 | \$1,234.12 |
| | BOV | <input type="checkbox"/> | 2 | BS1,234.12 | MXV | <input type="checkbox"/> | 2 | \$1,234.12 |
| | BRL | <input checked="" type="checkbox"/> | 2 | RS1,234.12 | MYR | <input type="checkbox"/> | 2 | RM1,234.12 |
| | BSD | <input type="checkbox"/> | 2 | BS1,234.12 | MZN | <input type="checkbox"/> | 2 | MT1,234.12 |
| | BTN | <input type="checkbox"/> | 2 | Nu.1,234.12 | NAD | <input type="checkbox"/> | 2 | NAD1,234.12 |
| | BWP | <input type="checkbox"/> | 2 | P1,234.12 | NGN | <input type="checkbox"/> | 2 | NGN1,234.12 |
| | BYN | <input checked="" type="checkbox"/> | 2 | Br1,234.12 | NIO | <input type="checkbox"/> | 2 | CS1,234.12 |
| | | | | | NOK | <input type="checkbox"/> | | |
| | KWL | <input type="checkbox"/> | 3 | 1,234.123 ل.د | | <input type="checkbox"/> | 2 | R1,234.12 |
| | KYD | <input type="checkbox"/> | 2 | \$1,234.12 | ZMW | <input type="checkbox"/> | 2 | ZK1,234.12 |
| | KZT | <input type="checkbox"/> | 2 | KZT 1,234.12 | ZWL | <input type="checkbox"/> | 2 | \$1,234.12 |
| | LAK | <input type="checkbox"/> | 2 | LAK1,234.12 | | | | |

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3. Click **Update**.

STEPS TO ENABLE

The Supported Currency enhancement requires a Service Request (SR) to enable on CPQ Cloud 19B sites.

SELECT ALL COLUMNS WITH BMQL JOIN CLAUSE

CPQ Cloud 19B supports the Select * function for columns in BMQL JOIN clauses for Data Table queries with two or more tables. For Data Tables with large number of columns, this greatly simplifies BMQL statements and reduces the risk of missing columns in Data Table queries.

To use the Select * function with a Data Table JOIN statements, the following is required:

- Must have two deployed Data Tables to JOIN
- Both Data Tables have a column with matched data
- At least one joined column must be indexed

The following example shows a SELECT statement for joining two tables.

```
SELECT Order.OrderId, Products.ProductId, Products.Name,
Products.UnitPrice FROM Products INNER JOIN Orders ON Products.ProductId =
Orders.ProductId
```

By using SELECT *, this statement can be simplified as shown in the following example.

```
SELECT * FROM Products INNER JOIN Orders ON Products.ProductId =
Orders.ProductId
```

STEPS TO ENABLE

No steps are required to enable this feature.

TIPS AND CONSIDERATIONS

Administrators need to keep in mind that their JOINS mean that changing either of the two Data Tables can affect one query.

TRANSACTION COUNT SETTING

A new Disable Transaction Count setting is added to the Commerce Settings page. Administrators have the ability to determine if the system performs an exact Transaction count when the Transaction Manager is displayed. Disabling the Transaction count, when there are a large number of Transactions, may improve the time required for the Transaction Manager to load.

When the Disable Transaction Count setting is selected, the Transaction count displayed on the page does not provide the exact total number of Transactions but rather indicates “of Many”. For example, the Transaction count at the bottom of the page may indicate 1 – 25 of Many, 1 – 50 of Many, or 51 – 100 of Many.

| Select | Lock Status | Transaction ID | Transaction Number | Version Number | Account Name | Transaction Name | Status | Prepared By | Created Date | Last Updated | Total (One-Time) | Annual Contract Value |
|--------------------------|-------------|----------------|-------------------------|----------------|-----------------|------------------------|-----------|--------------|--------------|---------------------|------------------|-----------------------|
| <input type="checkbox"/> | | CPQ-394 | CPQ-394 | 1 | Crest Unlimited | 11/09 BJP 11092018 002 | Ordered | David Wilson | 11/09/2018 | 11/09/2018 9:58 AM | \$0.00 | \$0.00 |
| <input type="checkbox"/> | | CPQ-374 | CPQ-374 | 1 | Crest Unlimited | 10/22 BJP 10222018 001 | Ordered | David Wilson | 10/22/2018 | 10/22/2018 9:36 AM | \$464.00 | \$0.00 |
| <input type="checkbox"/> | | CPQ-388 | CPQ-388 | 1 | Crest Unlimited | 10/26 Premier | Ordered | David Wilson | 10/26/2018 | 10/26/2018 10:00 AM | \$7,438.00 | \$0.00 |
| <input type="checkbox"/> | | CPQ-15 | CPQ-15 | 1 | Crest Unlimited | 08/31 BJP 08312018 001 | Scheduled | David Wilson | 08/31/2018 | 08/31/2018 3:58 PM | \$364.00 | \$0.00 |
| <input type="checkbox"/> | | CPQ-162 | CPQ-162 | 1 | Crest Unlimited | 08/31 BJP 08072018 001 | Created | David Wilson | 08/31/2018 | 08/31/2018 1:29 PM | \$29,810.00 | \$2,280.00 |
| <input type="checkbox"/> | | CPQ-177 | CPQ-177 | 1 | Crest Unlimited | 09/07 BJP 08072018 001 | Quoted | David Wilson | 09/07/2018 | 09/07/2018 11:13 AM | \$364.00 | \$0.00 |

Select All Select Folder: [Default] Move 1 - 50 of Many | [Next 50 >](#) | [Back to Top](#)

Example for Disable Transaction Count

To disable Transaction Counts, complete the following steps:

1. Navigate to the Commerce Options page.
Admin Home > Commerce and Documents > Commerce Settings
2. Click **Yes** for **Disable Transaction Item Count**.

Commerce Options

Options - Commerce

Number of Milliseconds to Wait Before Showing the Loading Dialog for Ajax Rules

Allow Commerce Processes and Invocations to be Deployed and Undeployed Yes No

Allow Commerce Processes to be Cloned and Migrated Yes No

Allow the Transaction ID to be included in the Commerce Search Yes No

Hide Commerce Invocation Buttons on Add From Catalog Yes No

Hide Add To Cart Button on Add From Catalog Yes No

Show Select Language Preference menu for Print, Email and Export Actions Yes No

Dialog Dimensions - Commerce Search Width Height

Dialog Dimensions - Quick Links Width Height

Error Box Behavior Default Collapsible

Document Engine - Validate page data on save Yes No

Enable Transaction Total for Mobile Layouts Yes No

Ignore blank attributes in SOAP API Payload for modify action Yes No

Display Part Number on Part Display Quick Key Search Results Yes No

Doc Designer - Number of eSignature signers

Doc Designer - Preserve line feeds for XSL snippets. Documents must be deployed for any change to take effect. Yes No

Enable Company Associations on Part Display Search Yes No

Commerce Timeout Action Kill and Log Log Only No Action minutes

Allow Users to Select Currency for Quotes Created from the Transaction Manager Yes No

Commerce Pricing Behavior Version 1 Version 2

Transfer Advanced Pricing Profiles JSON to Commerce Yes No

Enable sticky header for line item grid Yes No

Number of columns to freeze on line item grid

Disable Transaction Item Count Yes No

Accounts Lookup Library Function

Enable Subscription Ordering for Simple Products Yes No

Enable HTML Approval Email Yes No

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3. Click **Update**. The Transaction count will not perform an exact Transaction count.

IMPORTANT: The Disable Transaction Count setting default is No.

STEPS TO ENABLE

No steps are required to enable this feature.

TIPS AND CONSIDERATIONS

Customers with a very large number of Transactions and a slow-loading Transaction Manager should consider this feature to improve the Transaction load time.

PRE-UPGRADE CONSIDERATIONS

BEHAVIOR MODIFICATIONS TO KNOWN FUNCTIONALITY

The following changes to known functionality are implemented in CPQ Cloud 19B:

- If an auto-update script updates an attribute to be invalid, based on the simple validations of the attribute, the attribute must be manually updated to a valid value before auto-update can be executed again.
- When modifying a template, FullAccess users as well as SuperUser administrators have the XSL button available in the Admin Action Bar within the Document Designer Editor. Refer to the CPQ Cloud Online Help for details.
- The order of operations for BOM attribute mapping and default values in Commerce is modified so that the attribute mapping value will overwrite the default data. In previous releases, attribute mapped values were overwritten when the attribute also had default data.

MIGRATION

When migrating from one site to another using the Migration Center or Migration Packages, both sites must use the same major update. The migration of content can only occur across minor updates within the same major update. Migration across major updates cannot occur.

- “Major update” = Update 19B
- “Minor update” = Update 19B Patch 1

RESOLVED KNOWN ISSUES

For information on bugs fixed in Update 19B, refer to the CPQ Cloud 19B Resolved Known Issues document available on [My Oracle Support](#) and the CPQ Cloud Online Help.

TRANSLATION

For some system-defined messages and components, strings were removed and others added in CPQ Cloud 19B. If you have created your own implementation-specific translations of system-defined strings, some of these strings may no longer appear. Other strings may appear in English. The strings appearing in English are new and require translation.

Most of these messages and components are on the Administration side of CPQ Cloud, but you should review both your end user and administration pages before deploying your updated installation to confirm that all strings appear in the desired language.

TRANSLATION STATUS

CPQ Cloud supports the consumption of both single and multi-byte character sets. Submit a service request on [My Oracle Support](#) to enable your site for a new language.

For the following languages, a translation of the CPQ Cloud user interface is available for both the platform and the reference application:

- Chinese (Simplified) [China]
- Chinese (Traditional) [Taiwan]
- Czech [Czech Republic]
- Danish [Denmark]
- Dutch [Netherlands]
- English
- Finnish [Finland]
- French
- French [Canada]
- German
- Hungarian [Hungary]
- Italian
- Japanese [Japan]
- Korean [South Korea]
- Norwegian (Bokmål) [Norway]
- Polish [Poland]
- Portuguese [Brazil]
- Romanian [Romania]
- Russian [Russia]
- Spanish (Worldwide)
- Swedish [Sweden]
- Turkish [Turkey]

POST-UPGRADE CONSIDERATIONS

Upgrade and test all test instances on Oracle CPQ Cloud 19B before upgrading to production.

BROWSER SUPPORT

CPQ Cloud supports all browser versions that meet the criteria of the Oracle Software Web Browser Support Policy.

If you experience issues using a supported browser version, open a ticket on [My Oracle Support](#) to resolve the issue. If an issue arises when using a supported browser, use a certified browser version until the delivery of a fix. Certified browsers are selected based on current market share and thoroughly tested to work with the current version's standard functionality.

Certified Browsers

Windows

- Google Chrome 73.x
- Mozilla Firefox 66.x
- Internet Explorer 11.x

IMPORTANT: Compatibility issues with the selected browsers may exist when sites contain additional JavaScript, alternate CSS, or other custom functionality. Customizations may require add-on work. Contact [My Oracle Support](#) to determine the availability of workarounds and minor fixes.

SALESFORCE INTEGRATION SUPPORT

Oracle officially supports version 8 and version 8.1 (installed package version 1.10 and 8.1 respectively) of the Oracle CPQ Connector for Salesforce. We also continue to support version 7.2 of the legacy Oracle CPQ Commerce Integration.

IMPORTANT: Previous versions of these packages are expected to continue to function; however Oracle will not address new issues that arise. We strongly encourage customers to upgrade to the latest supported version.

TRAINING

Please refer to the release documentation for all versions between your current version and the version to which you are upgrading to see all new functionality, resolved known issues, and functional known issues.

Refer to the CPQ Cloud Online Help to become familiar with the new features introduced in Oracle CPQ Cloud 19B. For additional help, see [My Oracle Support](#).

Verify any information not explicitly mentioned in this document as supported by the software against the product help for Oracle CPQ Cloud 19B or the Oracle CPQ Cloud Consulting team.

ADDITIONAL INFORMATION

For more information on Oracle CPQ Cloud, visit the [Oracle CPQ Cloud](#) documentation site.

DISCLAIMER

The details in this document are provided for high-level informational purposes only and are not intended to function as a specification or to replace the Online Help. Upgrading to a subsequent release may require the re-deployment of Commerce Processes, Configuration, or global function settings. Modifications to integration XSL files or APIs may also be required.



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Integrated Cloud Applications & Platform Services