CLOUD READINESS

Oracle CPQ Cloud

Release 18B

What’s New

ORACLE

TABLE OF CONTENTS

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
May 2018	Administrator Access Control	Updated document. Added Note and minor editorial updates.
May 2018	Transaction REST API Enhancements	Updated document. Improved REST API tables and samples.
May 2018	Rating/Pricing Engine	Updated document. Added minor editorial updates.
May 2018		Initial Document Creation.

OVERVIEW

This guide outlines the information you need to know about new or improved functionality in Oracle CPQ Cloud Release 18B 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.

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.

	Action Required to Enable Feature			
Feature	**Automatically Available**	**End User Action Required**	**Administrator Action Required**	**Oracle Service Request Required**
Modern Selling Experience				
Line Item Grid Enhancements	✓			
Accessibility Enhancements	✓			
Enterprise Platform				
Subscription Ordering Enhancements			✓	
Administrator Access Control			✓	
Foreign Key Support for Data Tables	✓			
Single Select Pick List Enhancements	✓			
BOM Mapping Enhancements	✓			
Commerce Cloud Integration Enhancements			✓	
Product Eligibility REST APIs			✓	
Transaction REST API Enhancements	✓			
Additional CPQ Cloud Enhancements	✓			
Differentiate				
Rating/Pricing Engine	✓			
Deal Management Enhancements	✓			
System Configuration Enhancements	✓			
Upgrade Considerations				
Pre-Upgrade Considerations			✓	
Post-Upgrade Considerations		✓		

ORACLE CPQ CLOUD

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.

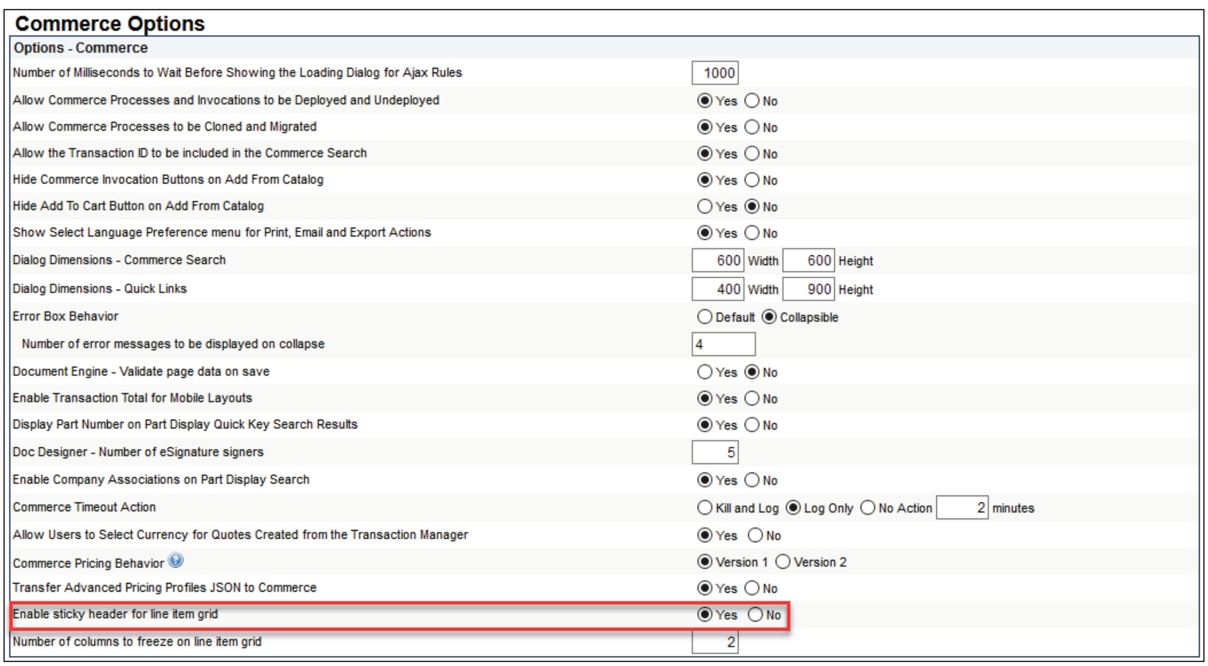
MODERN SELLING EXPERIENCE

Leverage the rich interface and interactive capabilities available in CPQ Cloud to provide an intuitive selling experience using the line item grid enhancements available in the 18B release. Access CPQ with assistive technologies to enable users of all abilities.

LINE ITEM GRID ENHANCEMENTS

The CPQ Cloud Release 18B release introduces the following enhancements to improve usability when large numbers of columns or rows are displayed in a line item grid:

- Adds optional sticky headers in the line item grid so headers are visible while scrolling through the table. Administrators enable/disable sticky headers from the **Commerce Options** screen within the **Commerce Settings** on the Admin Home page**.**

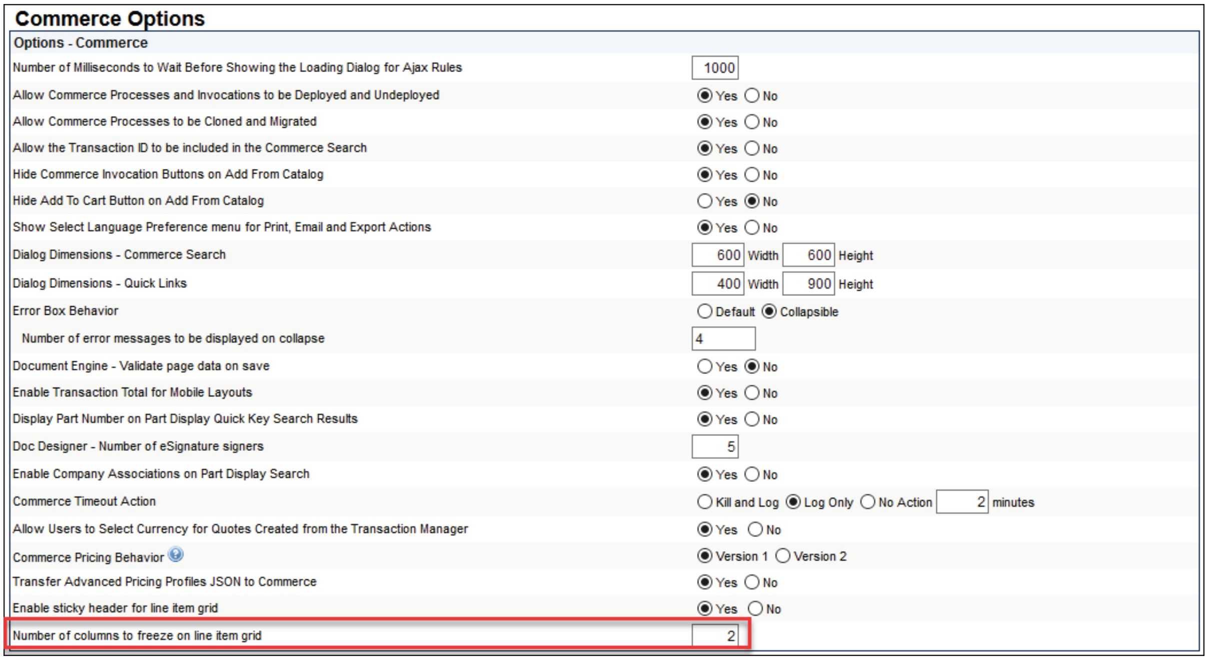


Commerce Options

Options - Commerce	
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 ○ 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	600 Width 600 Height
Dialog Dimensions - Quick Links	400 Width 900 Height
Error Box Behavior	○ Default ◉ Collapsible
Number of error messages to be displayed on collapse	4
Document Engine - Validate page data on save	○ Yes ◉ No
Enable Transaction Total for Mobile Layouts	◉ Yes ○ No
Display Part Number on Part Display Quick Key Search Results	◉ Yes ○ No
Doc Designer - Number of eSignature signers	5
Enable Company Associations on Part Display Search	◉ Yes ○ No
Commerce Timeout Action	○ Kill and Log ◉ Log Only ○ No Action 2 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	2

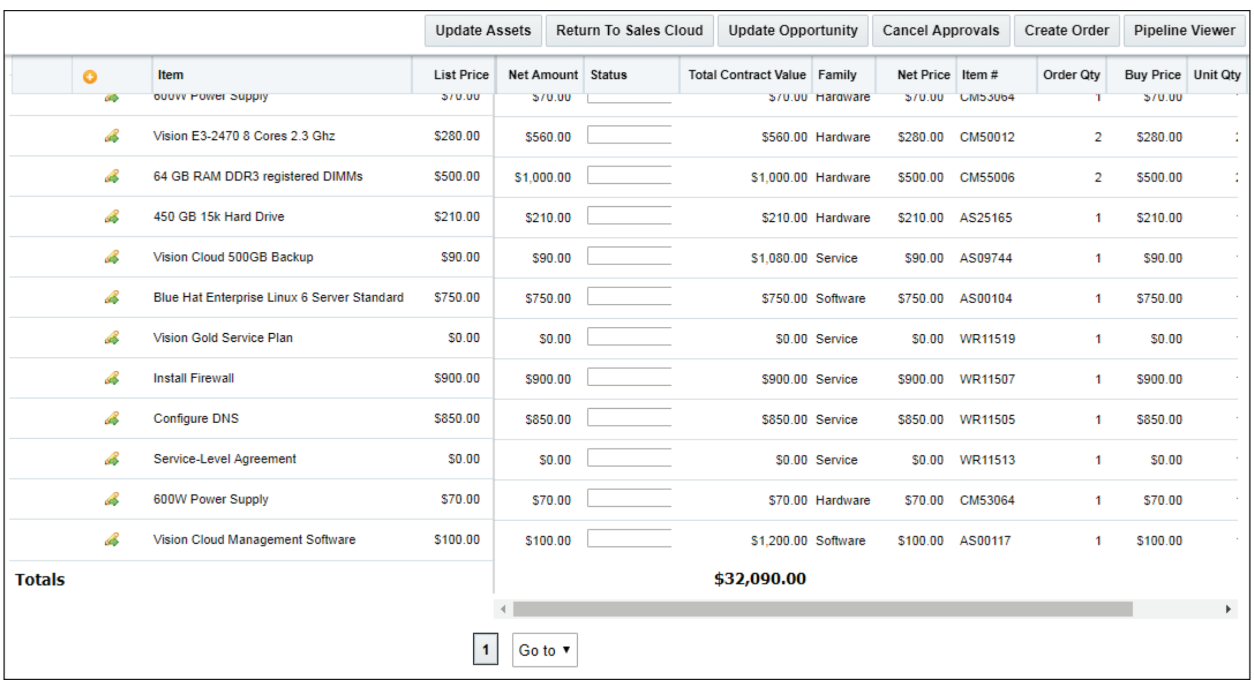
Line Item Grid Sticky Headers Option

- Supports freezing of columns on the left in a line item grid for improved navigation and visibility of data within large tables. This allows for the content of these column(s) to remain fixed while the rest of the line item grid data can be scrolled horizontally. Administrators designate the number of columns to freeze from the **Commerce Options** screen within the **Commerce Settings** on the Admin Home page.



Line Item Grid Column Freeze Option

The following example shows a line item grid with the first two data columns frozen and sticky headers turned on while data is able to be scrolled.



Sticky Header and Column Freeze Line Grid Item Example

STEPS TO ENABLE

Line Item Grid enhancements are automatically available on CPQ Cloud 18B sites.

KEY RESOURCES

Refer to the CPQ Cloud Administration Online Help for additional information.

ACCESSIBILITY ENHANCEMENTS

CPQ Cloud is committed making our product accessible, which includes supporting the use of assistive technology such as screen readers and screen magnifiers. CPQ Cloud Release 18B improves keyboard navigation, button highlight focus, and screen reader support for the following screens:

- Login
- Reset Password
- Change Password
- My Profile
- Part Search and Serial Number Search
- Part Search Results

STEPS TO ENABLE

Accessibility enhancements are automatically available on CPQ Cloud 18B sites.

ENTERPRISE PLATFORM

Cater to the need by large, complex enterprises for a robust, integrated, and performant platform using the following CPQ Cloud 18B features:

- Subscription Ordering Enhancements
- Administrator Access Control
- Foreign Key Support for Data Tables
- Single Select Pick List Enhancements
- BOM Mapping Enhancements
- Commerce Cloud Integration Enhancements
- Product Eligibility REST APIs
- Transaction REST API Enhancements
- Additional CPQ Cloud Enhancements

SUBSCRIPTION ORDERING ENHANCEMENTS

Companies use Subscription Ordering, sometimes referred to as Asset Based Ordering (ABO), to sell tangible assets or subscriptions for services delivered over a period of time. Sales users can create, modify, suspend, resume, renew, and terminate asset-based products using orders stored in CPQ Cloud. They can also reconfigure an order or create a follow-on order to make changes to an existing order stored in CPQ Cloud.

As part of continuing improvements to Subscription Ordering, CPQ Cloud and external applications such as Oracle Commerce Cloud can now directly launch the **Model Configuration** page using URL parameters for ABO operations. This simplifies the Modify and Follow-On order integration scenarios. When users modify an asset or make changes to an existing order not yet fulfilled, the ABO operation now only makes one REST API call as opposed to the two REST calls required in prior releases.

The following enhancements are available in CPQ Cloud Release 18B:

- Add parameters to an external URL to launch the **Model Configuration** page
- Add parameters to an internal URL to launch the **Model Configuration** page

IMPORTANT: The above enhancements require that the ABO Implementation package is implemented.

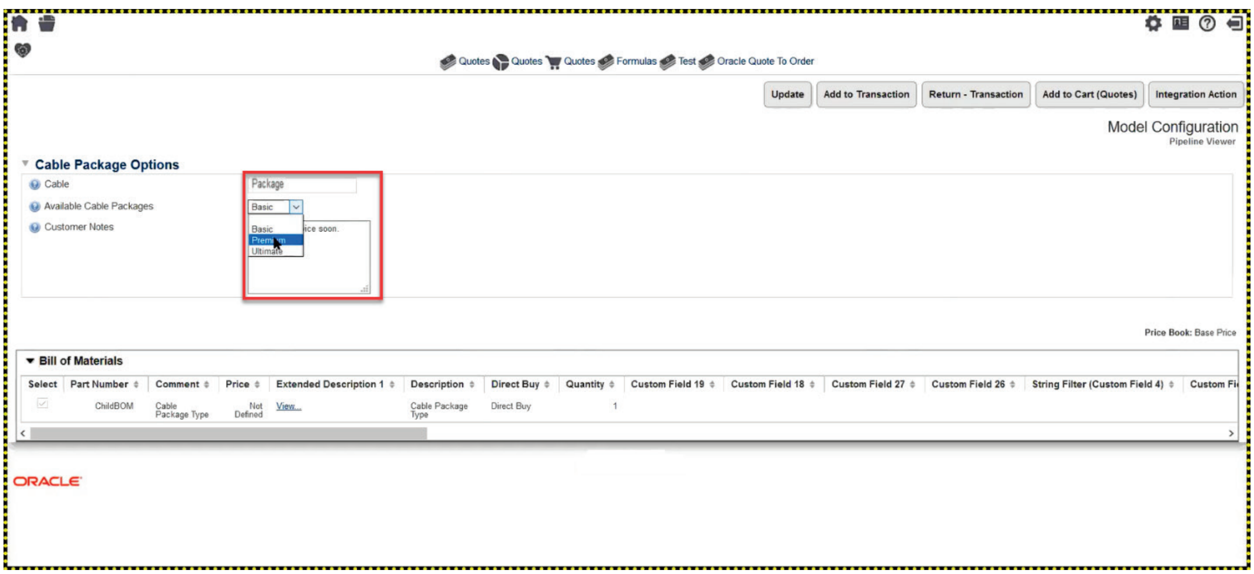
Add Parameters to an External URL to Launch the Model Configuration Page

Add parameters to an external URL to allow external applications, such as Oracle Commerce Cloud, to directly launch the **Model Configuration** page from the external application. Provided below are descriptions of the parameters included in the example:

- **_from_partner=true**: Indicates the **Model Configuration** page is to open from an external URL.
- **assetKey**: The unique identifier for a specific asset. *Required
- **id**: The unique identifier for a Transaction within CPQ Cloud. *Optional
- **sourceIdentifier**: The variable name of the external application identifier. *Optional
  When not supplied, the default value is "_external_order".
- **transactionDate**: The date on which an asset will be modified or a Follow-On order fulfilled. *Optional

```
https://sitename.oracle.com/commerce/new_equipment/products/model_conf
igs.jsp?_from_partner=true&assetKey=abo_da7776e1-g276-55ab-7003-
f80h02hij87b&id=30820066&sourceIdentifier-
external_order&transactionDate=2018-02-16T00:00:00Z
```

When parameters are added to an external URL, the **Model Configuration** page opens in the external application. Users can then modify the Configuration selections. For information about opening the **Model Configuration** page within an iFrame in the external application (as simulated below), refer to the Subscription Ordering Integration Enhancements in the [CPQ Cloud 2017 R1 What's New]() document.



Model Configuration Page Opened from External URL

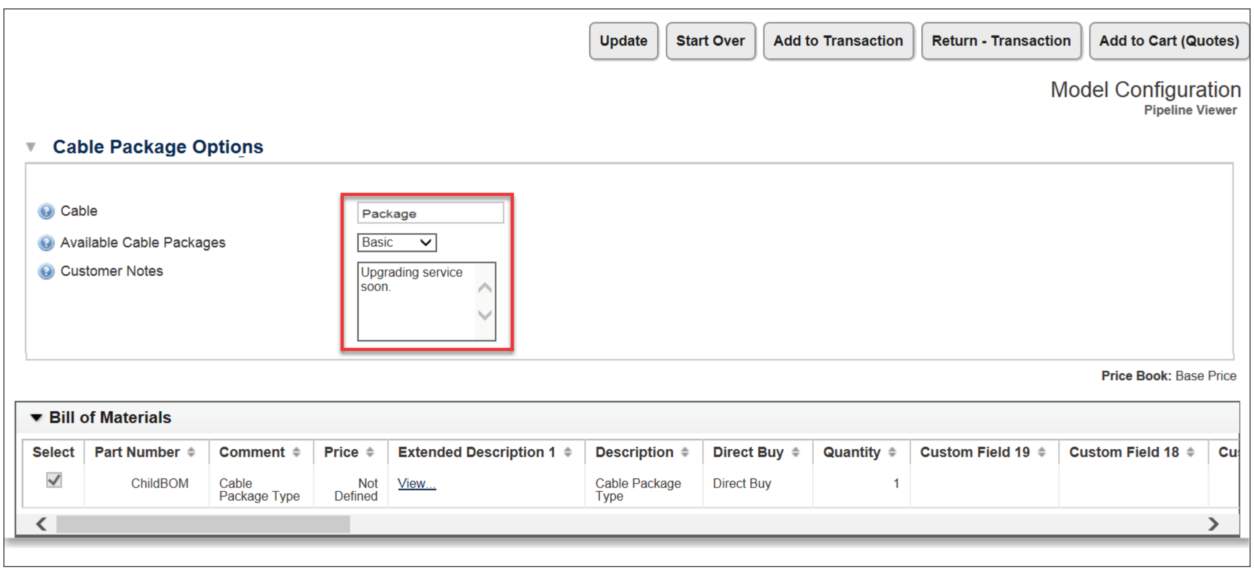
Add Parameters to an Internal URL To Launch the Model Configuration Page

Add parameters to an internal URL to allow users to directly access the **Model Configuration** page from CPQ Cloud to modify an asset. Provided below are descriptions of the parameters included in the below example:

- **_from_punchin=true**: Indicates the **Model Configuration** page is to open from an internal URL.
- **actionVarName**: The variable name of the action used to copy Transaction lines. *Required
- **assetKey**: The unique identifier for a specific asset. *Required
- **id**: The unique identifier for a Transaction within CPQ Cloud. *Required
- **sourceIdentifier**: The variable name of the Commerce process. *Required
- **transactionDate**: The date on which an asset will be modified or a Follow-On order fulfilled. *Optional

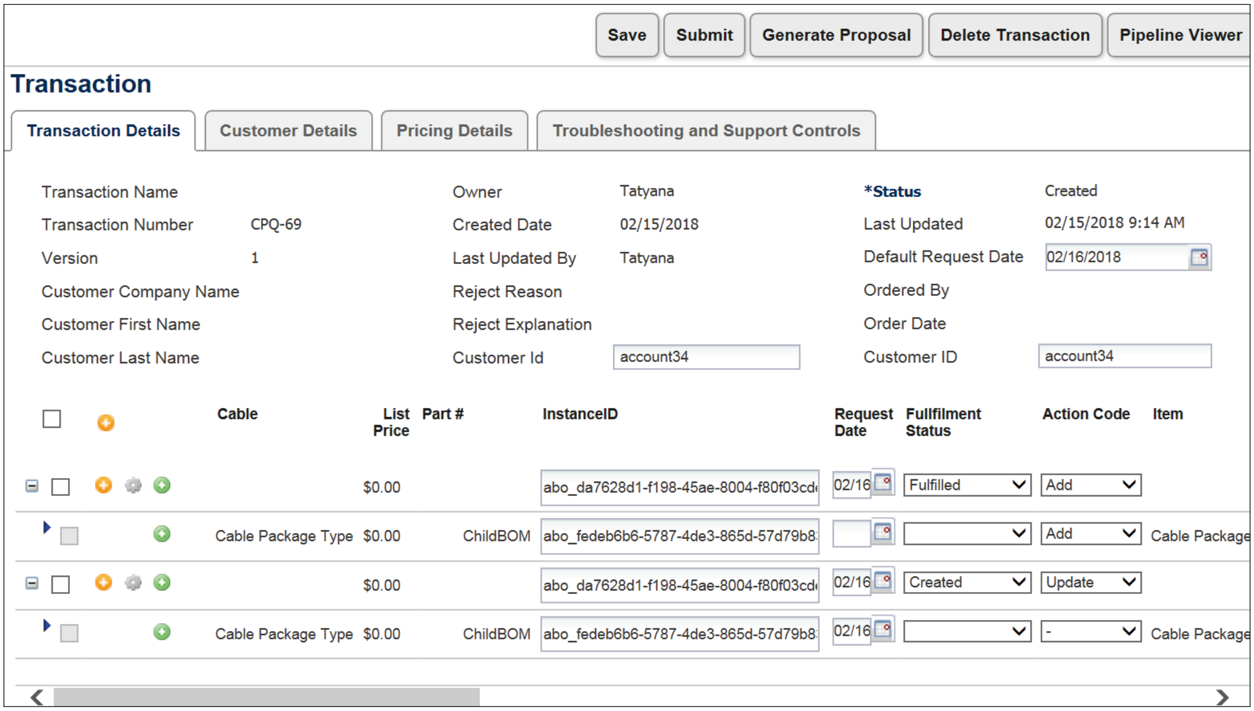
```
https://sitename.oracle.com/commerce/new_equipment/products/model_configs.jsp?_from_punchin=true&actionVarName=addLineItem_t&assetKey=abo_da7776e1-g276-55ab-7003-f80h02hij98b&id=30820066&sourceIdentifier=oraclecpqo&transactionDate=2018-02-16T00:00:00Z
```

When parameters are added to an internal URL, the **Model Configuration** page opens in CPQ Cloud, allowing users to modify the asset's Configuration settings. Users can then click any of the action buttons displayed across the top of the page.



Model Configuration Page

By clicking **Add to Transaction**, the modified asset is added to a Transaction as a line item.



Transaction with Modified Asset as Line Item

STEPS TO ENABLE

Refer to the following:

- *CPQ Cloud Asset Based Ordering Implementation Guide*
- Doc ID 2182966.1 on My Oracle Support

TIPS AND CONSIDERATIONS

Consider the following tips when using the Subscription Ordering enhancements:

- There are no changes to any of the REST APIs supporting the Subscription Ordering integration.

KEY RESOURCES

- *Integrating Oracle Commerce Cloud Service and CPQ Cloud Service Implementation Guide*
- Refer to CPQ Cloud Administration Online Help for additional information

ADMINISTRATOR ACCESS CONTROL

CPQ Cloud is commonly administered by teams of individuals who are responsible for administering different subsets of CPQ Cloud features. Using the Administrator Access Control feature available in CPQ Cloud Release 18B, companies can delegate and restrict access to certain areas of CPQ Cloud's setup and administration. This prevents unauthorized users from introducing unintentional errors, clarifies areas of responsibility, and protects sensitive or proprietary information.

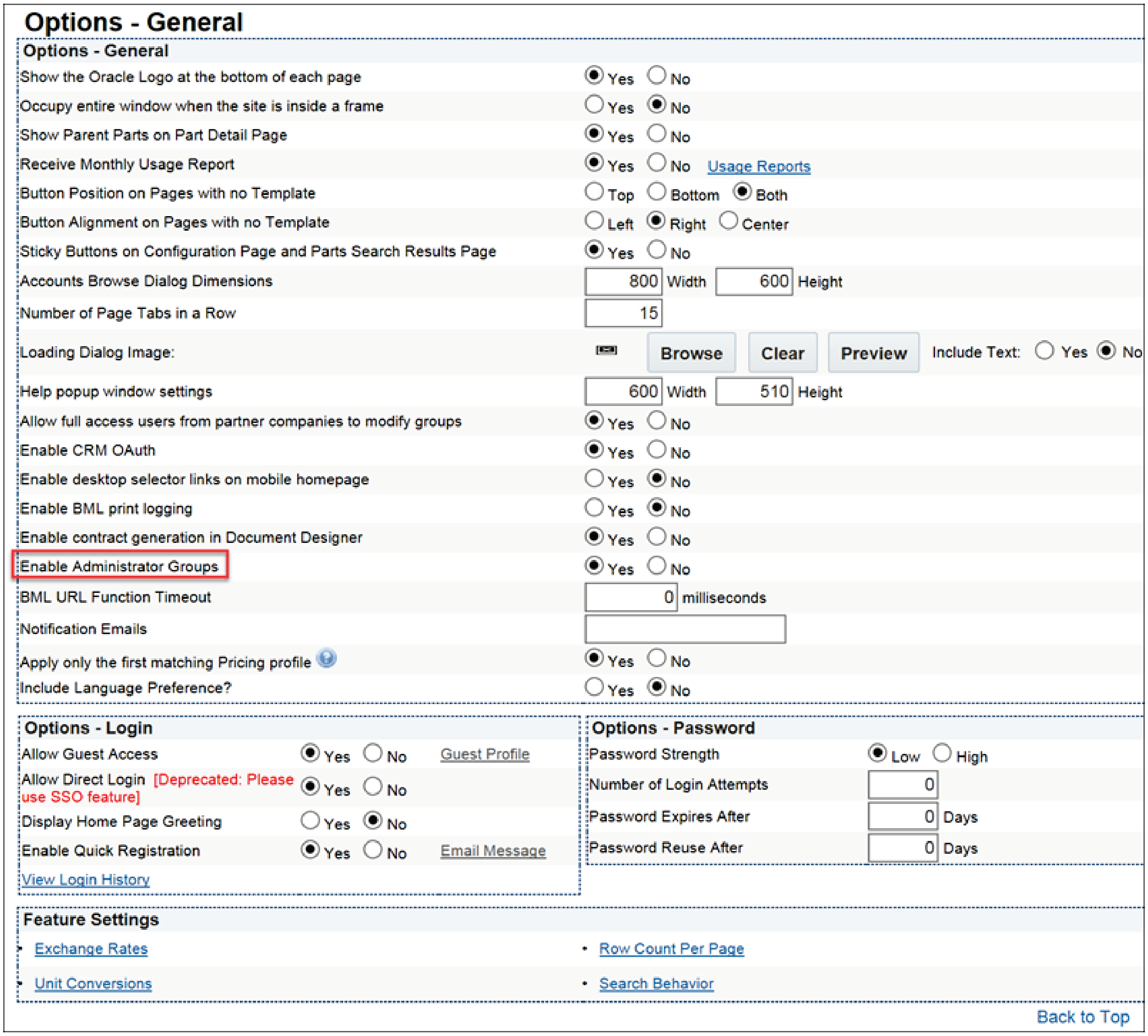
CPQ Cloud Release 18B allows administrators to:

- Enable Administrator groups for your site
- Assign Access Administrator privileges to Full Access users
- View groups based on Group Type
- Experience a modern UI for creating and editing groups
- Create and edit Administrator groups
- Add users to Administrator groups from the **User Administration** page
- Security features prevent unauthorized access to Admin pages, links, and services

IMPORTANT: In previous releases, the Users list showed only the logged in user when accessed by a FullAccess user without User Administrator privileges. After upgrading to 18B, the User List now shows all users. If the logged in user is not a User Administrator they will be able to see other user's detail pages in read-only mode. They can edit their own details by clicking their login in this list or by opening their My Profile page from the navigation bar or header. To restrict access to the Users list, create an Admin Group that excludes access to that feature.

Enable Administrator Groups for Your Site

An **Enable Administrator Groups** setting is now available on the **General Site Options** page. When set to **Yes**, the Administrator Access Control feature is enabled for the entire CPQ Cloud site. Only a SuperUser can modify the setting. When Administrator Groups are enabled, the access permission features available in prior releases are no longer available and will no longer apply. If you were using these features, you must configure access control using the new Administrator Access Control functionality.



Enable Administrator Groups Option

IMPORTANT:

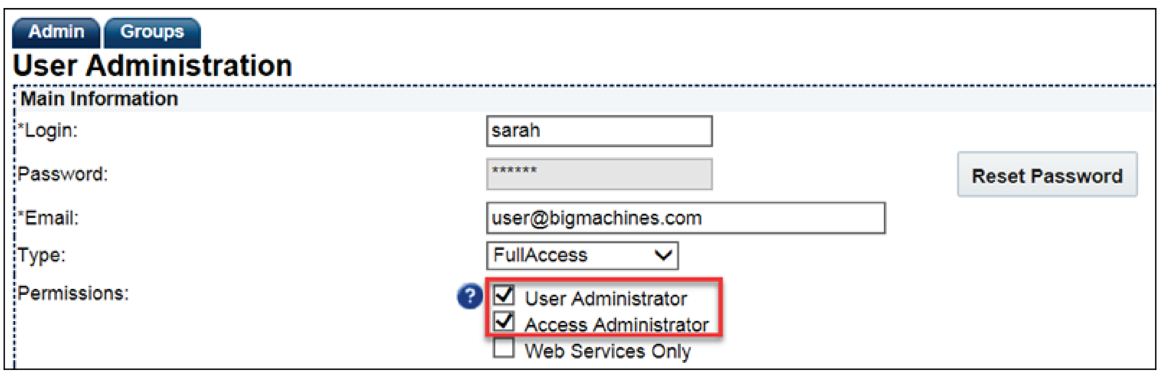
- The **Enable Administrator Groups** option is by default set to **Yes** for customers new to CPQ Cloud in Release 18B or later. The option is by default set to **No** for existing CPQ Cloud sites upgrading to Release 18B.
- The current **Enable Administrator Groups** selection (i.e. Yes or No) is retained on CPQ Cloud sites upgraded from Release 18B to a later version.

Assign Access Administrator Privileges to Full Access Users

When the **Enable Administrator Groups** setting on the **General Site Options** page is set to **Yes**, an **Access Administrator** checkbox displays as a Permissions property on the **User Administration** page. Only Access Administrators can create and edit Administrator groups. While the checkbox is read-only for Full Access Host Company users, SuperUsers and Access Administrators can delegate Access Administrator permissions to other Host Company users of type Full Access.

To assign Access Administrator privileges to Full Access users, perform the following steps:

1. Open the Admin Home page.
2. Under **Users**, select **Internal Users**.
   The **User Administration List** page opens.
3. Click the user login link for the Full Access user you want to make an Access Administrator.
   The **User Administration** page opens.
4. Select the **Access Administrator** checkbox. To be an Access Administrator, you must also be a User Administrator.



User Administrator and Access Administrator Checkboxes

5. Click **Apply**.

IMPORTANT:

- Only users with Access Administrator privileges can grant Access Administrator privileges to other Full Access users.
- In prior releases, the **User Administrator** checkbox was labeled **Create/Modify Users**.

View Groups Based on Group Type

As in previous releases, administrators can add or edit user groups from the **Group Administration List** page. In CPQ Cloud Release 18B, the **Group Administration List** page contains a **Group Type** column, which displays the group type (Sales or Administrator) associated with each group. By clicking the **Group Type** column header, users can sort the groups on the page based on group type.

IMPORTANT: When the Administrator Groups feature is first enabled, all existing groups are automatically categorized as Sales groups.

Group Administration List Total Groups: 6

Group Name	Variable Name	Group Type
Business Administrator	businssAdminstrator	Sales
Manager User	managerUser	Sales
Sales User	salesUser	Sales
Tablets	tablets	Sales
Technical Administrator	technicalAdminstrator	Sales
VP Users	vPUsers	Sales

Group Administration List Page with Group Type Column

When the Administrator Groups feature is first enabled, a new “All Access” Administrator Group is automatically created. This is a special system group that cannot be edited. When first enabled, all existing Full Access users are members of this group. The “All Access” group has access to all administrative features. To restrict access for a user, first remove them from the “All Access” group.

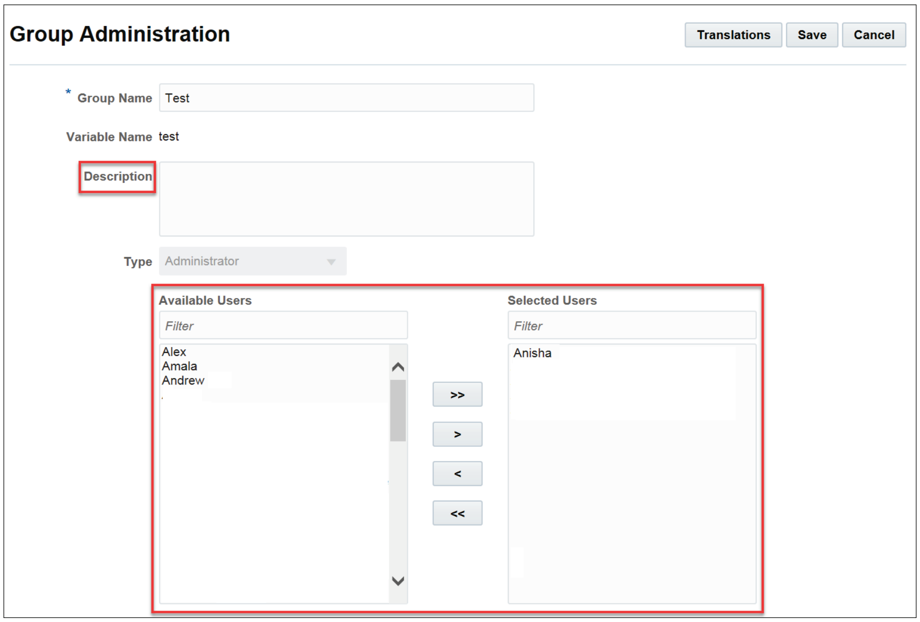
Group Administration List Total Groups: 7

Group Name	Variable Name	Group Type
All Access	_allAccess	Administrator
Business Administrator	businssAdminstrator	Sales
Manager User	managerUser	Sales
Sales User	salesUser	Sales
Tablets	tablets	Sales
Technical Administrator	technicalAdminstrator	Sales
VP Users	vPUsers	Sales

Groups Sorted Based on Group Type

Experience a modern UI for creating and editing groups

Users can now interact with a cleaner and easier to use **Group Administration** page updated with a modern UI for both Sales groups and Administrator groups. In CPQ Cloud Release 18B, the page contains a **Description** field to provide a group description for new and existing groups and a User Selector that supports filtering users and selecting multiple users.



Group Administration Page with Description Field and User Selector

Create and edit Administrator Groups

CPQ Cloud Release 18B adds the ability to create a new Group Type called Administrator groups. Administrator groups are used to create groups of Full Access users who have access to a subset of all CPQ administrator features. Only Access Administrators can create and edit Administrator groups.

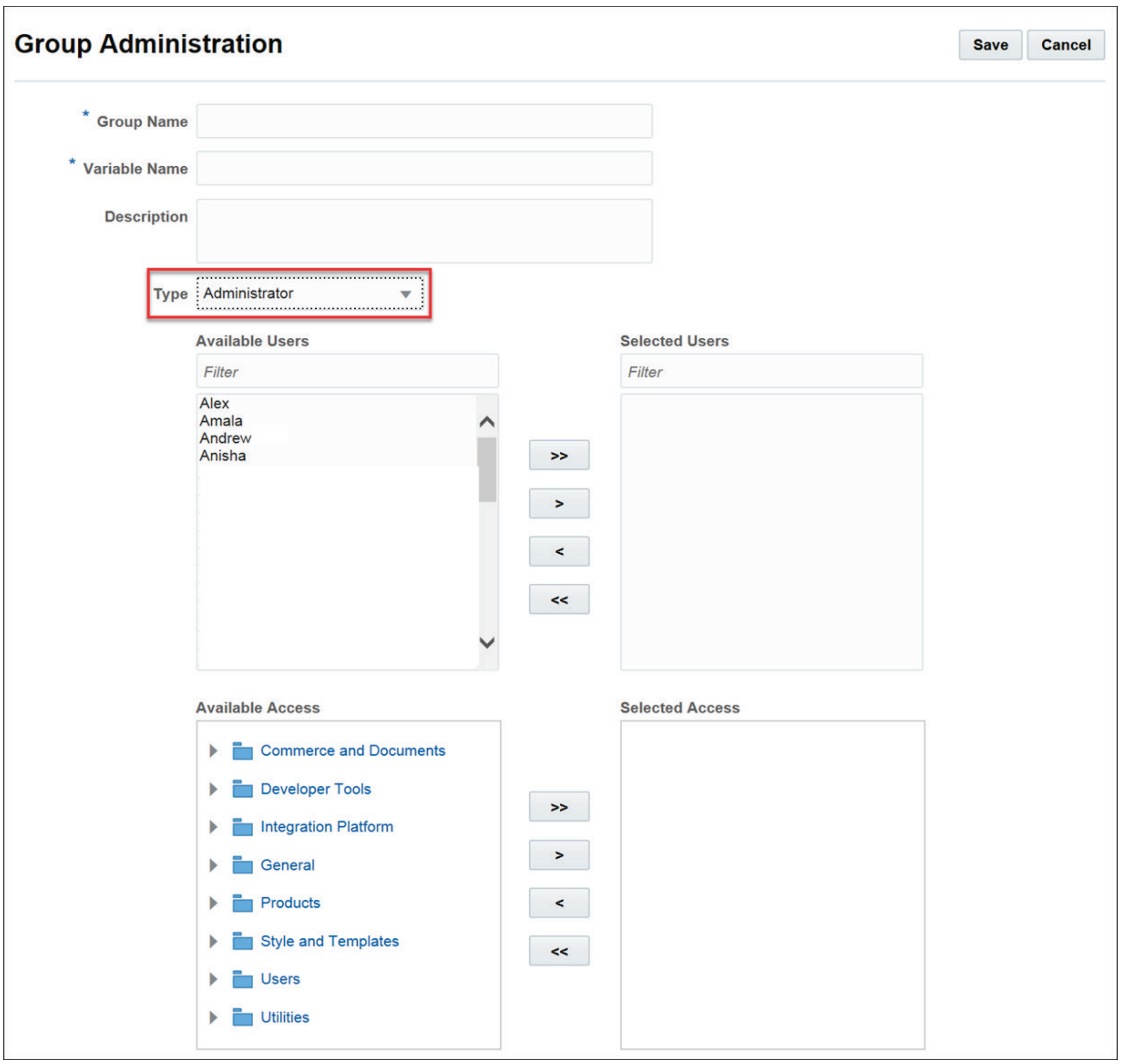
The **Group Administration** page contains the following enhancements:

- **Type** field: Use to designate a group type: Sales or Administrator. Once defined, users cannot modify the group type. The Administrator value for the **Type** field is shown on the **Group Administration** page only when the **Enable Administrator Groups** option is turned on.
- **Access Selector**: Use to define the administrative features to which member users have access. The Access Selector is only available for Administrator groups and supports bulk selection of administrative features. In the Access Selector, all Admin Home page links are grouped under their respective segment names.

IMPORTANT: Customers with a large number of users may experience issues with the **Group Administration** page when using Internet Explorer. Chrome or Firefox is recommended.

To create and edit Administrator groups, perform the following steps:

1. Open the Admin Home page.
2. Under **Users**, select **Groups**.
   The **Group Administration List** page opens.
3. To edit an existing Administrator group, click its **Group Name** to open the **Group Administration** page.
4. To create a new Administrator group, click **Add** to open the **Group Administration** page.
5. Populate the fields, as desired.
6. From the **Type** drop-down, select **Administrator**.



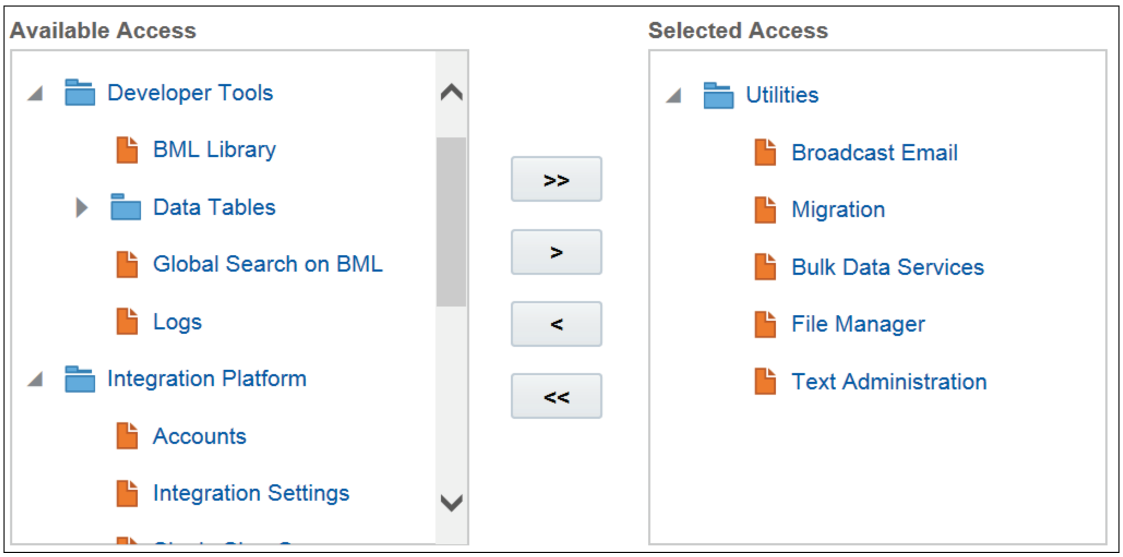
Group Administration Page

7. Define the users who are members of the **Administrator** group.

    - To add users to the group, move user names from the list of **Available Users** to the list of **Selected Users**.
    - To remove users from the group, move user names from the list of **Selected Users** to the list of **Available Users**.

8. Use the Access Selector to define the administrative features to which member users have access. The Access Selector supports the following functionality:

    - Add or remove all administrative features at once.
    - Multi-select administrative features (Ctrl + click) and add or remove them all at once.



Access Selector

9. Click **Save**.

IMPORTANT:

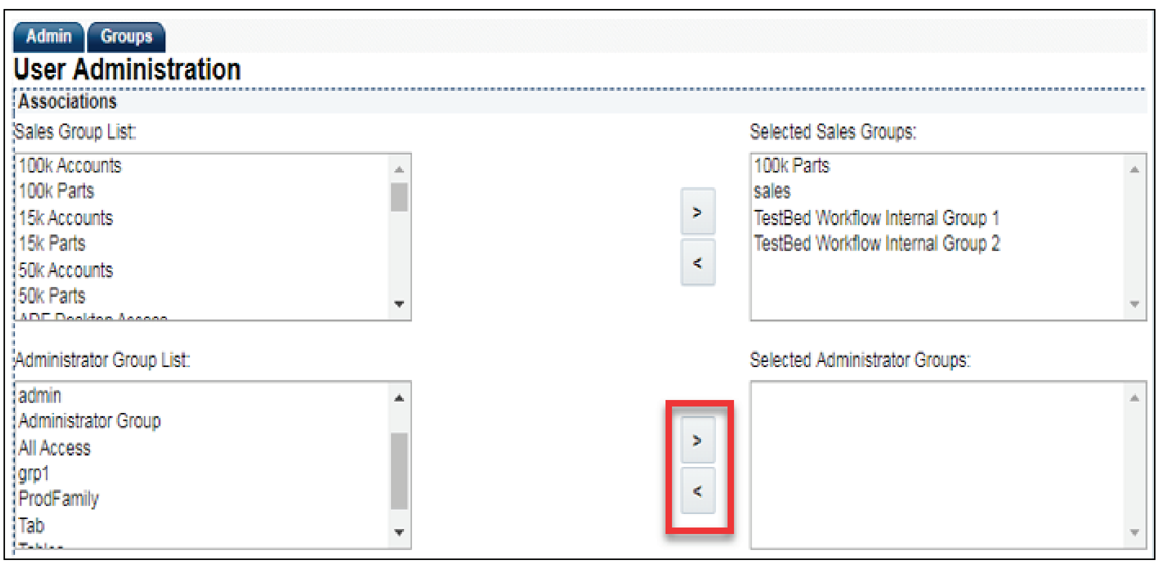
- Only Access Administrators can create Administrator groups. All other users can only choose the Sales group type.
- Access Administrators and Full Access users can use the **Group Administration** page to create and edit Sales groups. When the **Enable Administrator Groups** option is turned off, only Sales groups can be created.
- The Access Selector allows for the granular selection of Data Table folders and Product Families. Granular selection of BML Library folders is not supported. Administrator groups can have access to either all BML Libraries or no BML Libraries.

Add users to Administrator groups from the User Administration page

In addition to adding a user to an Administrator group from the **Group Administration** page, Access Administrators can also add a user to an Administrator group from the **Groups** tab on the **User Administration** page.

To add users to Administrator groups, perform the following steps:

1. Open the Admin Home page.
2. Under **Users**, select **Internal Users**.
   The **User Administration List** page opens.
3. Select the user login link for an Access Administrator.
   The **User Administration** page opens.
4. Select the **Groups** tab.
5. Use the Administrator Groups shuttle to specify the Administrator groups to which the user has access:
   - To add the user to Administrator groups, move administrator group names from the **Administrator Group List** to the **Selected Administrator Groups** list.
   - To remove the user from Administrator groups, move administrator group names from the **Selected Administrator Groups** list to the **Administrator Group List**.



User Administration Page – Groups Tab

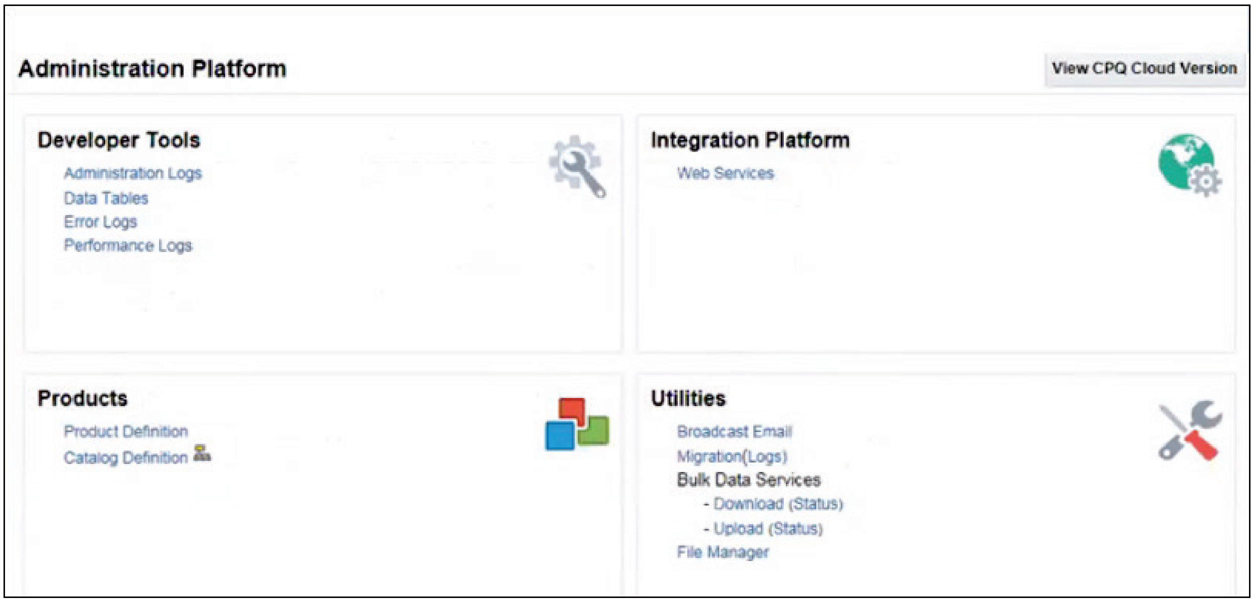
IMPORTANT: **The Administrator Group List** under the **Groups** tab is only shown for Full Access user profiles. Other user types will only see a **Sales Group List**. Only Access Administrators can edit this list.

Security Features Prevent Unauthorized Access To Admin Pages, Links, and Services

When Administrator Groups are enabled and setup, Full Access users only have access to the administration pages and data to which they are entitled. To ensure this data is properly secured and the logged in user only sees links to the content they can access, Oracle has added a number of security features.

Secure Pages

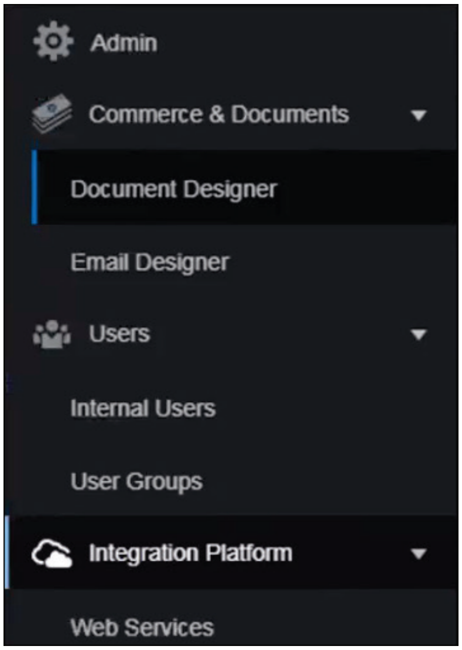
The Admin Home page only displays the pages to which the logged in user has access. Members of the "All Access" group can access all pages and navigation menus. In the following example, the user has access to only a few of the administrative segments of the Admin Home page. The links are secured from unauthorized access.



Sample Admin Home Page

Secure Admin Drawer

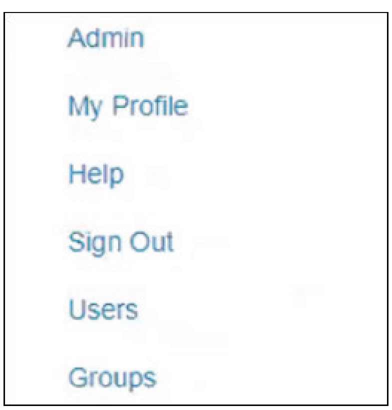
When the Alta Navigation menu is enabled, Full Access users see an Admin Drawer in the upper left-hand corner of the screen under a "hamburger menu”. When the Administrator Access Control feature is turned on, the Admin Drawer only shows the pages to which the logged in user has access.



Admin Navigation Drawer

Secure Navigation Menus

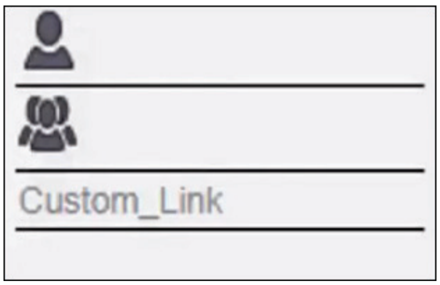
Administrators can customize the Navigation Menus for their users by providing links to internal and customized content. When these links point to administration features, they are removed when the user does not have access to the features. This security applies to headers, sub-headers, and sub-footers when using Top Navigation, Side Navigation, or Alta Navigation.



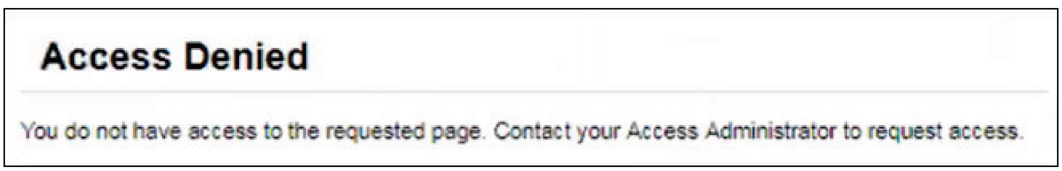
Sample User Navigation Menu

Sample Navigation Menu

IMPORTANT: If a custom link points to a restricted administrator page, it is not automatically hidden. An access denied message will display.



Sample Custom Link



Access Denied Message

Secure SOAP Web Services

All SOAP APIs for administrative features that are public to Full Access users are secured, blocking unauthorized users from accessing data.

When using web services version 1.0 or version 2.0:

- A SuperUser can access all administrator SOAP APIs (e.g. parts, groups, configuration, price books, data tables, users, exchange rates).
- Authorized users can access designated administrator SOAP APIs.
- Users trying to access restricted SOAP APIs will see an error message and the operation will fail.
- The getGroups operation retrieves information for Sales groups only.
- The modifyGroups operation can modify Sales groups only.

The following error displays in the response when a SOAP API to access data tables is called by an unauthorized user.


```
<soapenv:Fault>
    <faultcode>soapenv:Server</faultcode>
    <faultstring>DATA-TABLES-ERR:User does not have
permissions.</faultstring>
    <detail xmlns:bm="urn:soap.bigmachines.com">
     <bm:fault>
       <bm:exceptionCode>DATA-TABLES-ERR</bm:exceptionCode>
       <bm:exceptionMessage>User does not have permissions.
</bm:exceptionMessage>
     </bm:fault>
    </detail>
  </soapenv:Fault>
```


Secure REST Web Services

All REST APIs for administrative features that are public to Full Access users are secured, blocking unauthorized users from accessing data.

- A SuperUser can access all administrator REST APIs (e.g. parts, groups, configuration, price books, data tables, users, exchange rates).
- Authorized users can access designated administrator REST APIs.
- Users trying to access restricted REST APIs will see an error message and the operation will fail.


```
{
   "error": "You do not have access to perform this action. Contact
your Access Administrator to request access.",
   "error_uri": "HTTP://www.w3.org/Protocols/rfc2616/rfc2616-
sec10.html",
   "error_description": "You do not have access to perform this
action. Contact your Access Administrator to request access.“
}
```

STEPS TO ENABLE

Administrators must enable the Administrator Access Control feature from the **General Site Options** page.

TIPS AND CONSIDERATIONS

Consider the following tips when using the Administrator Access Control feature:

- Newly created Data Table folders and Product Families are only available to “All Access” users upon creation. An Access Administrator must grant access to those newly created items before they are usable by Full Access users who are not “All Access” users.
- Bulk Data Services can only be globally allowed or restricted. A user with access to Bulk Data Services can access any data available for bulk upload or download, so grant access sparingly.
- Users can only migrate settings when they have access to the features in both the target and the source site. If the user does not have access to a feature, the migration will fail.
- Keep in mind that User Administrators can proxy login as any user. These users can bypass Access Controls by logging in as a Full Access user with greater access rights. As a result, grant User Administrator rights sparingly.

KEY RESOURCES

Refer to CPQ Cloud Administration Online Help for additional information.

FOREIGN KEY SUPPORT FOR DATA TABLES

CPQ Cloud Release 18B supports Foreign Key column relationships between Data Tables within a site. Foreign Keys define a relationship between multiple Data Tables ensuring data integrity and consistency, and reducing the cost of data management and complexity when querying. This enhancement establishes a relationship between a defined Natural Key column within a parent Data Table to a defined Foreign Key column within a child Data Table. Administrators can define a maximum of five Foreign Keys per child table, as there is a limitation of five indexed columns per data table.

Foreign Key (FK) support for Data Tables allows administrators to do the following:

- Create a new Foreign Key column
- Convert an existing column to a Foreign Key column
- Remove a Foreign Key relationship
- Import and export Data Tables with Foreign Key relationships
- Migrate Data Tables with Foreign Key relationships

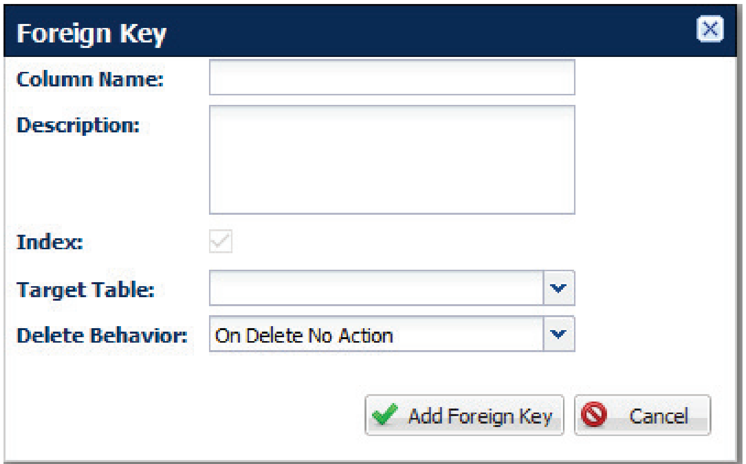
Add A Foreign Key

CPQ Cloud Release 18B allows administrators to add a new Foreign Key column to a Data Table. The procedure below assumes another Data Table has already been created with a single Natural Key column defined to establish a parent/child relationship.

To add a new Foreign Key record to a Data Table, perform the following steps:

1. Open the Admin Home page.
2. Under **Developer Tools**, select **Data Tables**.
   The Data Tables page displays with the defined Data Tables folder navigation in one panel and the details **Data** and **Schema** tabs in another panel.
3. Double-click to open an existing Data Table or create a new Data Table for establishing a Foreign Key relationship. This table is considered the child Data Table.
4. Click the **Schema** tab.
   The Data Table schema displays.

5. Click **Add Foreign Key**.
   The **Foreign Key** screen displays.

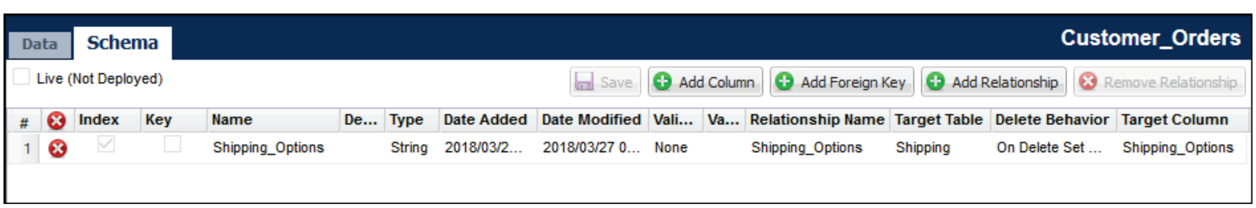


Add Foreign Key

6. In the **Column Name** field, type the name of the column to establish a Foreign Key relationship.
7. (Optional) In the **Description** field, type the desired description of the Foreign Key.
8. From the **Target Table** drop-down, select the parent table to which the Foreign Key relationship is established.
9. From the **Delete Behavior** drop-down, select one of the following three options:

   - **On Delete No Action** – deletion of a referenced record from the parent Data Table is prevented
   - **On Delete Set Cascade** – deletion of a referenced record from the parent Data Table results in deletion of the referencing record from the child Data Table
   - **On Delete Set Null** – deletion of a referenced record from the parent Data Table results in removal of the value in the Foreign Key column from the referring record of the child Data Table, leaving a null or empty value

10. Click **Add Foreign Key**.
    The foreign key row displays in the **Schema** tab with the **Relationship Name**, **Target Table**, **Delete Behavior**, and **Target Column** fields populated.



Data Table Schema Tab with Foreign Key Columns

IMPORTANT: The Index column defaults to selected and Key column is disabled by default. Administrators cannot change these default selections.

Convert an Existing Column to a Foreign Key Column

Administrators can modify an existing column in a Data Table to support a Foreign Key relationship.

To modify an existing column, perform the following steps:

1. Open the Admin Home page.
2. Under **Developer Tools**, select **Data Tables**.
   The Data Tables page displays with the defined Data Tables folder navigation in one panel and the details **Data** and **Schema** tabs in another panel.
3. Open an existing Data Table for establishing a Foreign Key relationship.
   This table is considered the child Data Table.
4. Click the **Schema** tab.
   The existing column schema for the Data Table displays.
5. Click the first column of the corresponding row to select the row to create the Foreign Key relationship then click **Add Relationship**. The **Relationship** screen displays.

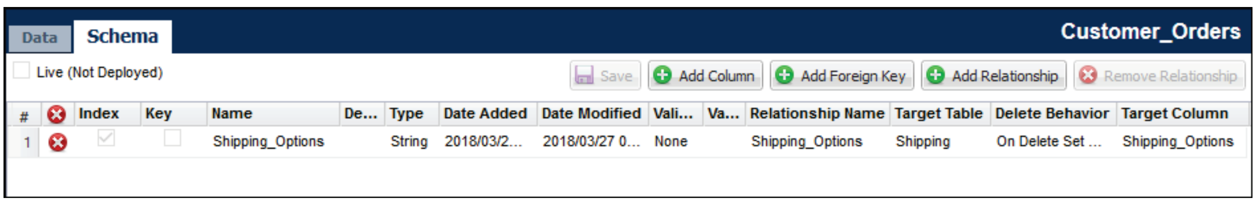
Add Relationship

6. In the **Relationship Name** field, type the name of the relationship for this Foreign Key.
7. From the Target Table drop-down, select the parent Data Table to which the Foreign Key relationship is established.

8. From the **Delete Behavior** drop-down, select one of the following three options:

   - **On Delete No Action** – deletion of a referenced record from the parent Data Table is prevented
   - **On Delete Set Cascade** – deletion of a referenced record from the parent Data Table results in deletion of the referencing record from the child Data Table
   - **On Delete Set Null** – deletion of a referenced record from the parent Data Table results in removal of the value in the Foreign Key column from the referring record of the child Data Table, leaving a null or empty value

9. In the **Column Mapping** drop-down, select the column to establish the Foreign Key relationship.
10. Click **Add Relationship**.
    The selected row (new foreign key row) displays in the **Schema** tab with the **Relationship Name**, **Target Table**, **Delete Behavior**, and **Target Column** fields populated.



Data Table Schema Tab with Foreign Key Columns

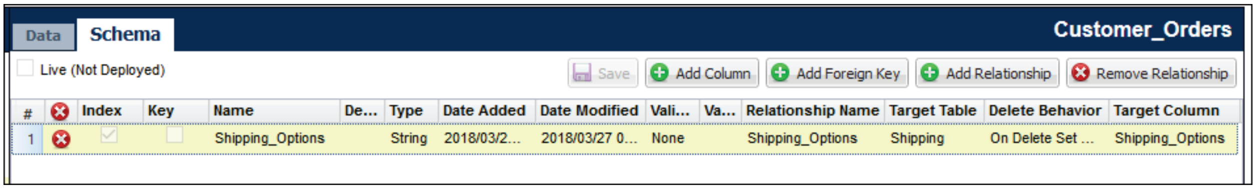
IMPORTANT: The Index column defaults to selected and Key column is disabled by default. Administrators cannot change these default selections.

Remove a Foreign Key Relationship

Existing Foreign Key relationships prevent the deletion of parent Data Table schema and modification of its Natural Key definition. To perform such actions, the Foreign Key relationship must first be removed from the child Data Table schema. If deleting an associated record is attempted with a Foreign Key relationship, an error message is posted indicating the deletion is denied.

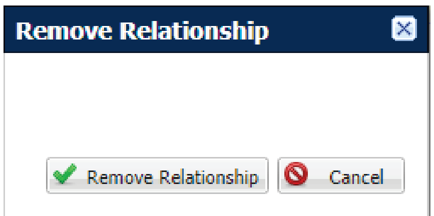
To remove an existing Foreign Key relationship, perform the following steps:

1. Open the Admin Home page.
2. Under **Developer Tools**, select **Data Tables**.
   The Data Tables page displays with the defined Data Tables folder navigation in one panel and the details **Data** and **Schema** tabs in another panel.
3. Open an existing Data Table for removing a Foreign Key relationship.
   This table is considered the child Data Table.
4. Click the **Schema** tab.
   The existing column schema for the Data Table displays.



Data Table Schema Tab with Remove Relationship

5. Click on the Foreign Key row to modify and then click **Remove Relationship**.
   The **Remove Relationship** screen displays.

   Remove Relationship Confirmation

6. Click **Remove Relationship**.
   The selected row displays in the **Schema** tab with the Foreign Key relationship removed.

Import and Export Data Tables with Foreign Key Relationships

When importing or exporting bulk or individual Data Tables with Foreign Keys relationships, the Foreign Key data values are part of the Data Table files. Foreign Key-related schema import and export is not supported. Administrators cannot add or modify Foreign Key relationships via data table import. Therefore, following the import of a new Data Table, Foreign Keys must be manually added. If a Foreign Key relationship error is detected during import or export, an error message displays and the record is not modified.

Due to the inter-dependencies of records in separate Data Tables with Foreign Keys, the sequence of steps is very important when importing Data Tables with Foreign Key relationships. As applicable, perform the import in the following sequence order:

1) Import files specific to deleting Foreign Key child records with the deletion behavior defined as **On Delete No Action**. Administrators must identify records that are only referencing parent records which are intended to be deleted during Step 2 below. Failing to do this will prevent the deletion of the referenced parent records during Step 2.

2) Import files for parent records. We recommend modify actions be grouped and performed first, followed by delete actions. This is important because sets of modify and deletes are processed separately upon import and have different behavior, as follows:

   a) First modify set is processed when field records are processed individually. Therefore failed records do not affect successful update of other records in the set.

b) Delete set is processed as a whole and any failure results in failure of the whole set of deletes. When deleting records, the **On Delete Behavior** setting of the Foreign Key schema determines the disposition for deleting or disassociating the child records.

3) Import files for child records that will be explicitly modified.

Migrate Data Tables with Foreign Key Relationships

Administrators must include all Data Tables related to Foreign Key relationships in the migration package. This ensures the Data Tables are deployed together for data integrity purposes. Administrators must resolve the error messages in the migration log before they can successfully migrate Data Tables with Foreign Key relationships.

STEPS TO ENABLE

Foreign Key Data Table enhancements are automatically available on all CPQ Cloud 18B sites.

KEY RESOURCES

Refer to CPQ Cloud Administration Online Help for additional information.

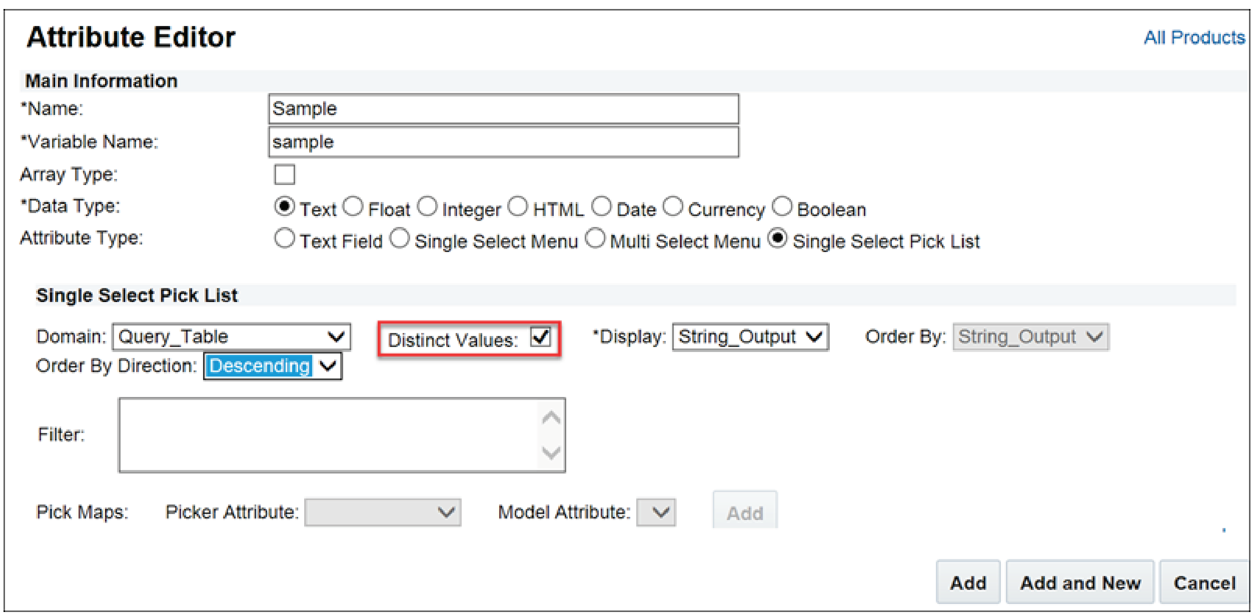
SINGLE SELECT PICK LIST ENHANCEMENTS

A Single Select Pick List, also referred to as a Dynamic Menu, is a Configuration attribute type. Administrators manage the domain of values for a Single Select Pick List attribute within a defined resource (e.g. Data Tables or Configuration arrays). The enhancements available in CPQ Cloud Release 18B address scenarios where a Single Select Pick List filter returns multiple results with the same value, resulting in users seeing the same result multiple times in Single Select Pick List values.

In CPQ Cloud Release 18B, administrators can filter previously returned multiple results to ensure that a value displays only once to users in the Single Select Pick List. This is accomplished by selecting the **Distinct Values** checkbox in **Attribute Editor** to display only distinct values. The checkbox is only available when using a data table as the domain for a Single Select Pick List.

Display Only Distinct Values in a Single Select Pick List

A **Distinct Values** checkbox is now available in **Attribute Editor**. Selecting the checkbox ensures only distinct values display in the Single Select Pick List, which prevents multiple results with the same value from displaying. The checkbox is only available when using a data table as the resource (i.e. Domain) for a Single Select Pick List.



Attribute Editor

The **Distinct Values** checkbox provides an improved user experience, preventing duplicate values from displaying to users in a Single Select Pick List.

Sample Single Select Pick List

STEPS TO ENABLE

Single Select Pick List enhancements are automatically available on all CPQ Cloud 18B sites.

TIPS AND CONSIDERATIONS

Consider the following tips when using the Single Select Pick List enhancements:

- When the **Distinct Values** checkbox is selected, administrators cannot:
  - Modify the **Pick Maps** area of **Attribute Editor**.
    If administrators add a pick map by mapping a Picker Attribute to a Model Attribute and then select the **Distinct Values** checkbox, the pick mapping is removed upon clicking **Apply** or **Update**.
  - Modify the variable for text Single Select Pick Lists. The variable is automatically set to the same value as the display. For this reason, the **Variable** menu does not display.
  - Select an option from the **Order By** menu.
    Order By is always set to the column selected in the **Display** menu.
- The **Distinct Values** checkbox is available when creating Single Select Pick Lists as stand-alone attributes or array-type attributes.
- When images are enabled on a Single Select Pick List, the combination of the Display value and the Image value define the uniqueness of each row in a data table. The same Display value may appear multiple times in a Distinct Single Select Pick List, but only when the image paths associated with the Display value are different.
- Beginning with Release 18B, administrators must include the list of Pick Maps associated with a Single Select Pick List in the XML or CSV upload file. Otherwise, pre-existing Pick Maps will be removed.

KEY RESOURCES

Refer to CPQ Cloud Administration Online Help for additional information.

BOM MAPPING ENHANCEMENTS

The Bill of Materials (BOM) Mapping feature allows administrators to import multi-level BOM product structures for use in CPQ Configuration, Commerce Transactions, and downstream integration of orders to an Enterprise Resource Planning (ERP) system. This data-driven solution significantly reduces the amount of time needed to set up and maintain integrations of configured products with ERP systems using BOM tables and the BOM Mapping rule type.

As part of continuing improvements to BOM Mapping, the following enhancements are available in CPQ Cloud Release 18B:

- Provide BOM Mapping support for Single Select Pick List attributes, which will invoke applicable BOM Mapping rules to add parts to a Transaction based on a Single Select Pick List selection.
- Allow administrators to add conditions to BOM Mapping Rules to invoke rules based on conditional logic.
- Provide inherited hierarchies in BOM Mapping, which automatically map parent items when administrators map to a child item.
- Allow mapping to multiple Configuration attributes to enable the evaluation of multiple attributes when adding Line Items to BOM-related Transactions.
- Allow administrators to use Configurable Array Attributes in BOM Mapping.

Single Select Pick List Support for BOM Mapping

In prior releases, Single Select Pick List attributes were not supported for BOM Mapping. CPQ Cloud Release 18B provides BOM Mapping support for Single Select Pick Lists, also known as Dynamic Menus. When a Single Select Pick List option is selected, the applicable BOM Mapping rules are invoked to add parts to a Transaction based on the Single Select Pick List selection. The Single Select Pick List attribute type can be created in Configuration for Text, Integer, and Float data types.

IMPORTANT: To ensure proper operation of the BOM Mapping rules, the variable names referenced for the Single Select Pick List options must match the Configurable Attribute variable names and values in the BOM Item Mapping table.

Simple and Advanced Conditions for BOM Mapping Rules

In prior releases, "Always True" was the only Condition Type available for BOM Mapping Rules. CPQ Cloud Release 18B enables Simple and Advanced Condition Types for BOM Mapping Rules. The condition section allows administrators to select the logic that specifies when a rule should run. There are three options: Always True, Simple Condition, and Advanced Condition.

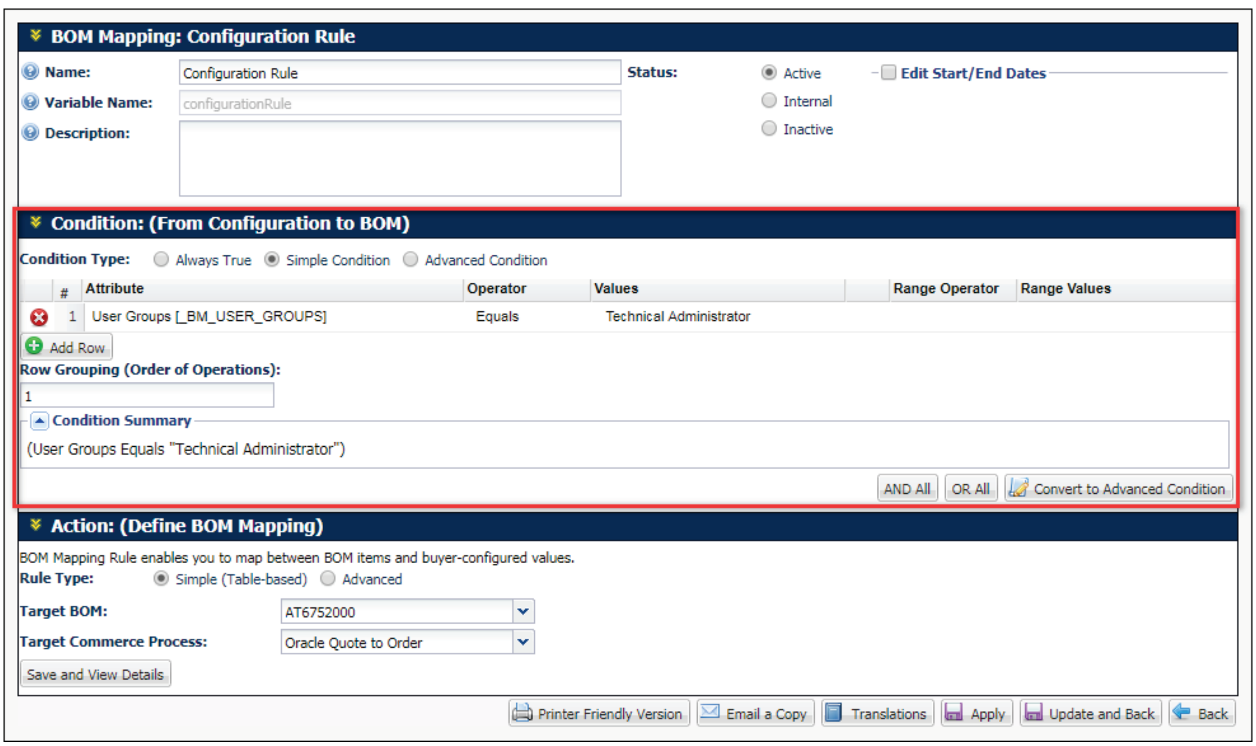
- **Always True**: The rule will fire automatically, every time, because a specific condition does not need to be met.
- **Simple Condition**: The rule will fire based on defined condition attributes, operators, and values that are selected from drop-down menus.
- **Advanced Condition**: The rule will fire based on an advanced function written with BML.

IMPORTANT: Simple and Advanced Conditions are only evaluated during Configuration, these conditions are NOT evaluated during Reconfiguration.

Simple Conditions for BOM Mapping Rules

When **Simple Condition** is enabled, administrators can define Attributes, Operators, Values, Range Operators, and Range Values for the desired condition. They can also Add Rows and set the Order of Operations to provide multiple conditions.

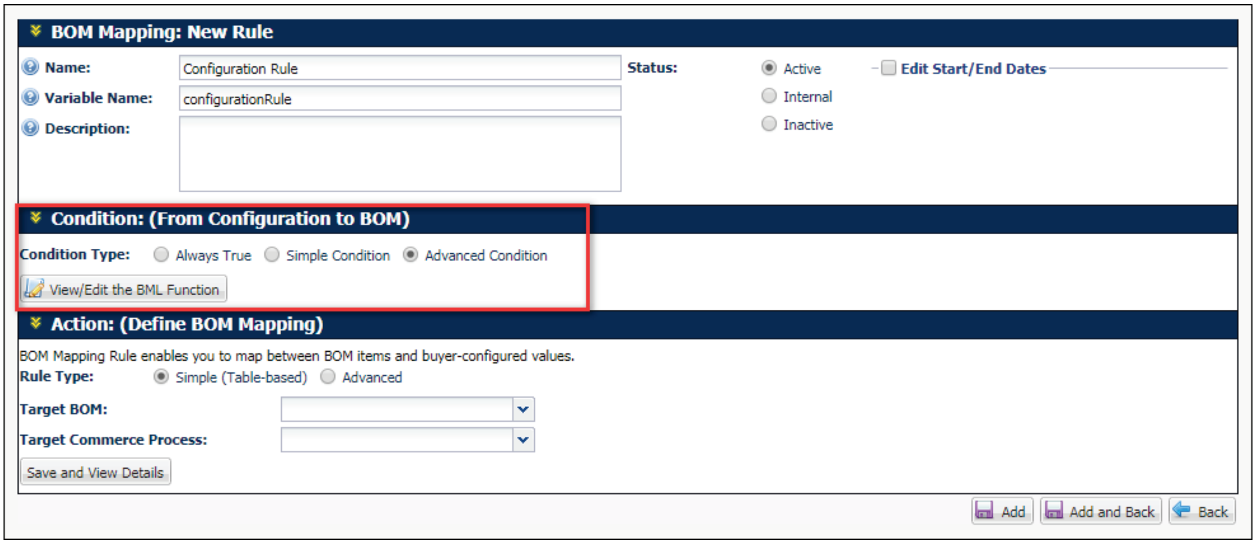
For example: The following image displays a Simple Condition that will not invoke the BOM Mapping rule unless the user is in the "Technical Administrator" User Group.



BOM Mapping Configuration Rule with Simple Condition

Advanced Conditions for BOM Mapping Rules

The advanced function is meant for complex condition logic. Administrators use BML to define conditions in the Function Editor. After selecting the **Advanced Condition** type, administrators select the **View/Edit the BML Function** to access the Function Editor.

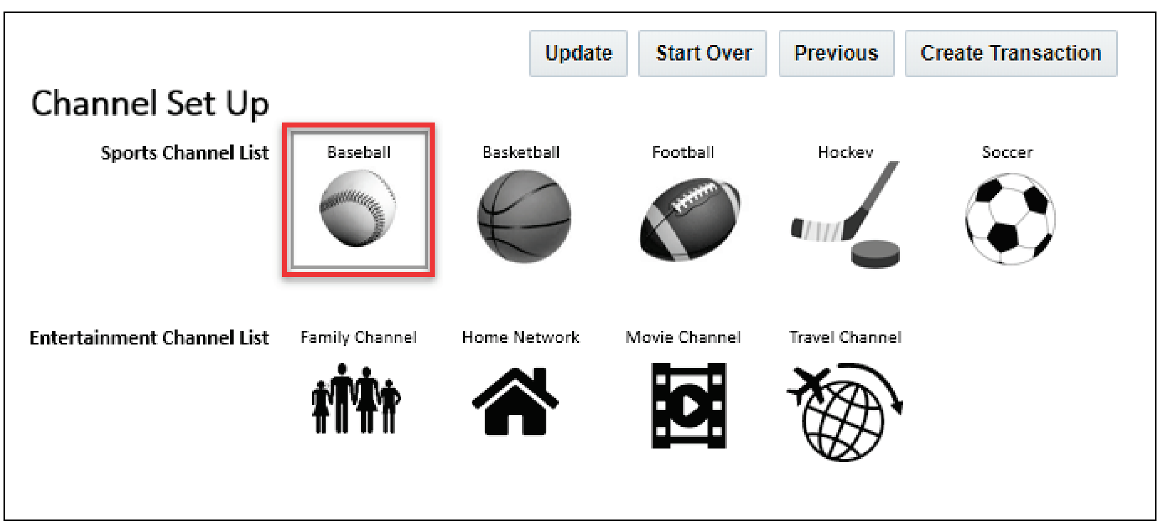


BOM Mapping Configuration Rule - Advanced Condition

Inherited Parent Hierarchies for Child Items

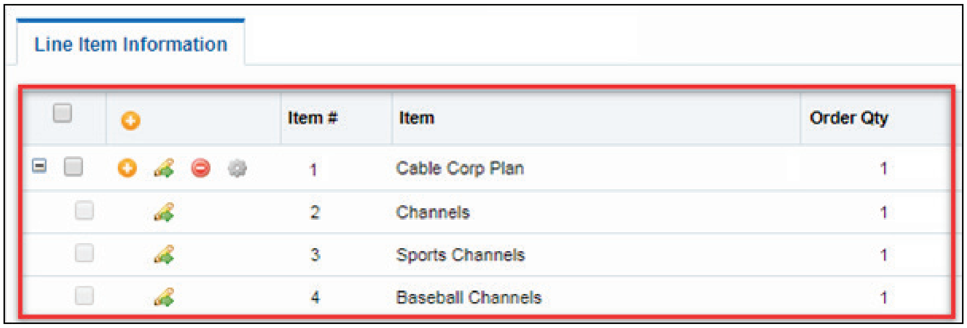
CPQ Cloud Release 18B introduces the "Option Class" BOM item type to enable inherited parent hierarchies for child BOM items. Option Class items are only added if they contain a descendant BOM item (child, grandchild, etc.) that is not an Option Class item.

For example: The following image displays a Configuration page for a cable channel provider that offers different channel options as part of their Sports Channel and Entertainment Channel plans.



Configuration Page for Cable Channel Provider

When the user selects the Baseball channel and creates a transaction, the parent items (I.e. "Channels" and "Sports Channels") are automatically added as Line Items to the Transaction. The parent items are also added to the BOM Instance, which is sent to the Fulfillment System, to complete the order.

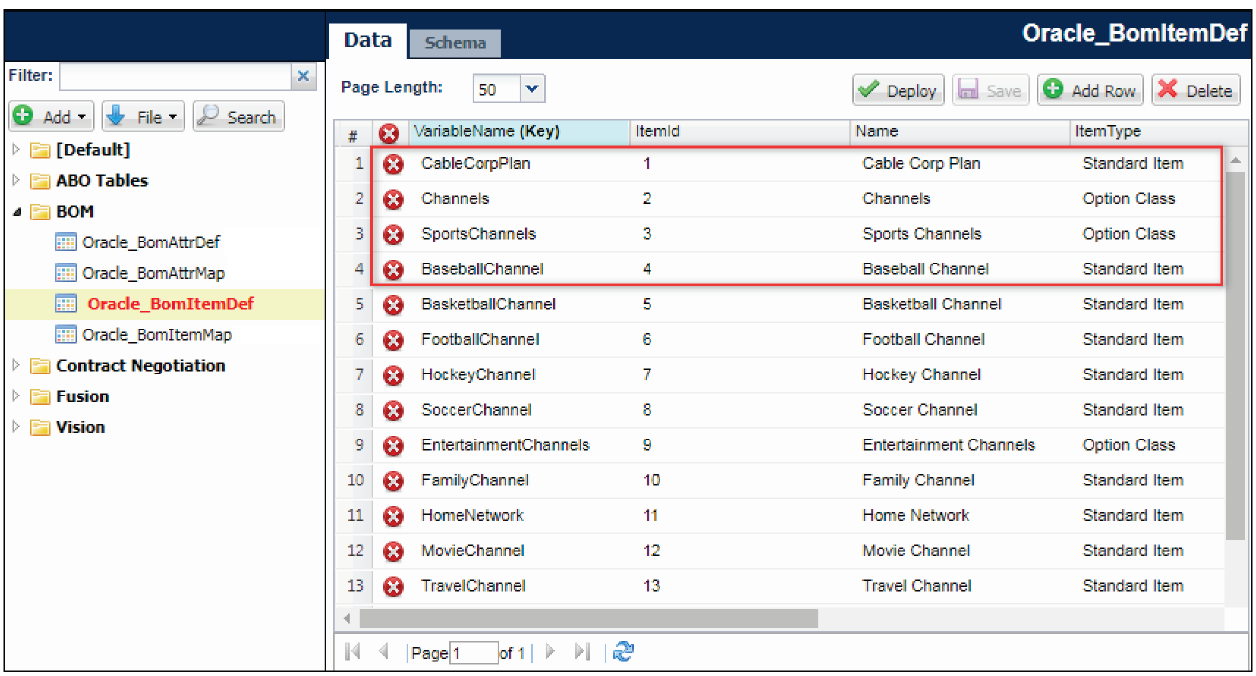


Item #	Item	Order Qty
1	Cable Corp Plan	1
2	Channels	1
3	Sports Channels	1
4	Baseball Channels	1

Commerce Transaction for Sports Channel Package

For parent items the Item Type is set to "Option Class", the Item Type for child items can be set to anything other than "Option Class". The BOM parent items will only be added to the BOM Instance when a nested child item is selected. During table-based BOM mapping, "Option Class" items are not added to the BOM instance unless they have a descendant that is not an "Option Class" item.

Advanced BML BOM Mapping rules can be used to add "Option Class" items that do not have a descendant that is not an "Option Class" item.



#	VariableName (Key)	ItemId	Name	ItemType
1	CableCorpPlan	1	Cable Corp Plan	Standard Item
2	Channels	2	Channels	Option Class
3	SportsChannels	3	Sports Channels	Option Class
4	BaseballChannel	4	Baseball Channel	Standard Item
5	BasketballChannel	5	Basketball Channel	Standard Item
6	FootballChannel	6	Football Channel	Standard Item
7	HockeyChannel	7	Hockey Channel	Standard Item
8	SoccerChannel	8	Soccer Channel	Standard Item
9	EntertainmentChannels	9	Entertainment Channels	Option Class
10	FamilyChannel	10	Family Channel	Standard Item
11	HomeNetwork	11	Home Network	Standard Item
12	MovieChannel	12	Movie Channel	Standard Item
13	TravelChannel	13	Travel Channel	Standard Item

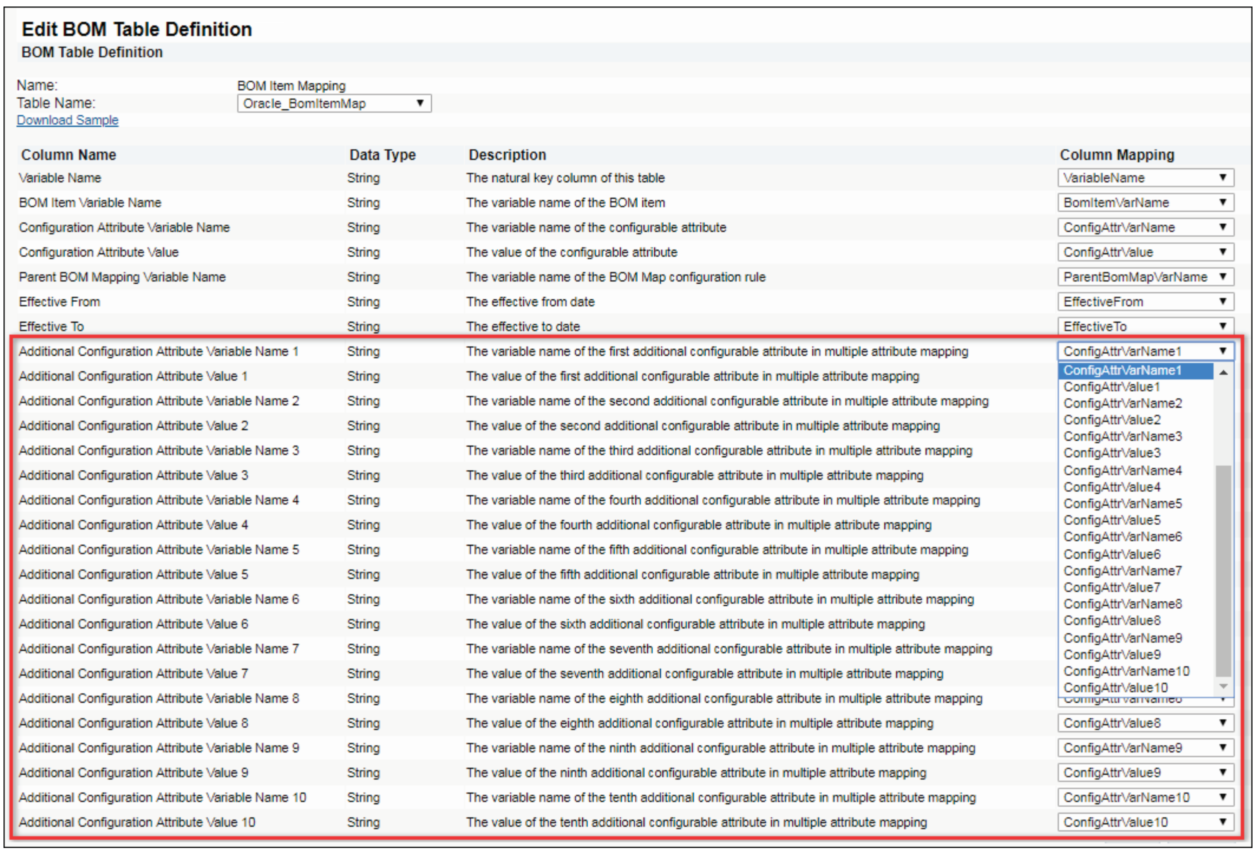
BOM Item Definition Data Table with Option Class Item Types

Multiple Attribute Mapping for BOM mapping Items

CPQ Cloud Release 18B provides ten additional mapping attribute and value fields for the BOM Item Mapping table to support mapping to multiple Configurable Attributes. This allows the selection of multiple configuration options to add a single Line Item to a BOM-related Transaction.

Additional Configurable Attributes for BOM Item Mapping

The BOM Item Mapping Table associates BOM items to Configuration attributes. Administrators will upload or migrate BOM structures to CPQ Data Tables using CPQ Cloud's standard importing features. The Data Table can then be linked to the corresponding BOM Mapping platform tables. Activating this table enables simple Table-Based BOM Mapping Configuration rules. The items that are available for mapping are displayed in the Column Mapping drop-down menus. The list of menu options is derived from the BOM Item Mapping Data Table columns Names.



Edit BOM Table Definition

BOM Table Definition

Name: BOM Item Mapping
Table Name: Oracle_BomItemMap
Download Sample

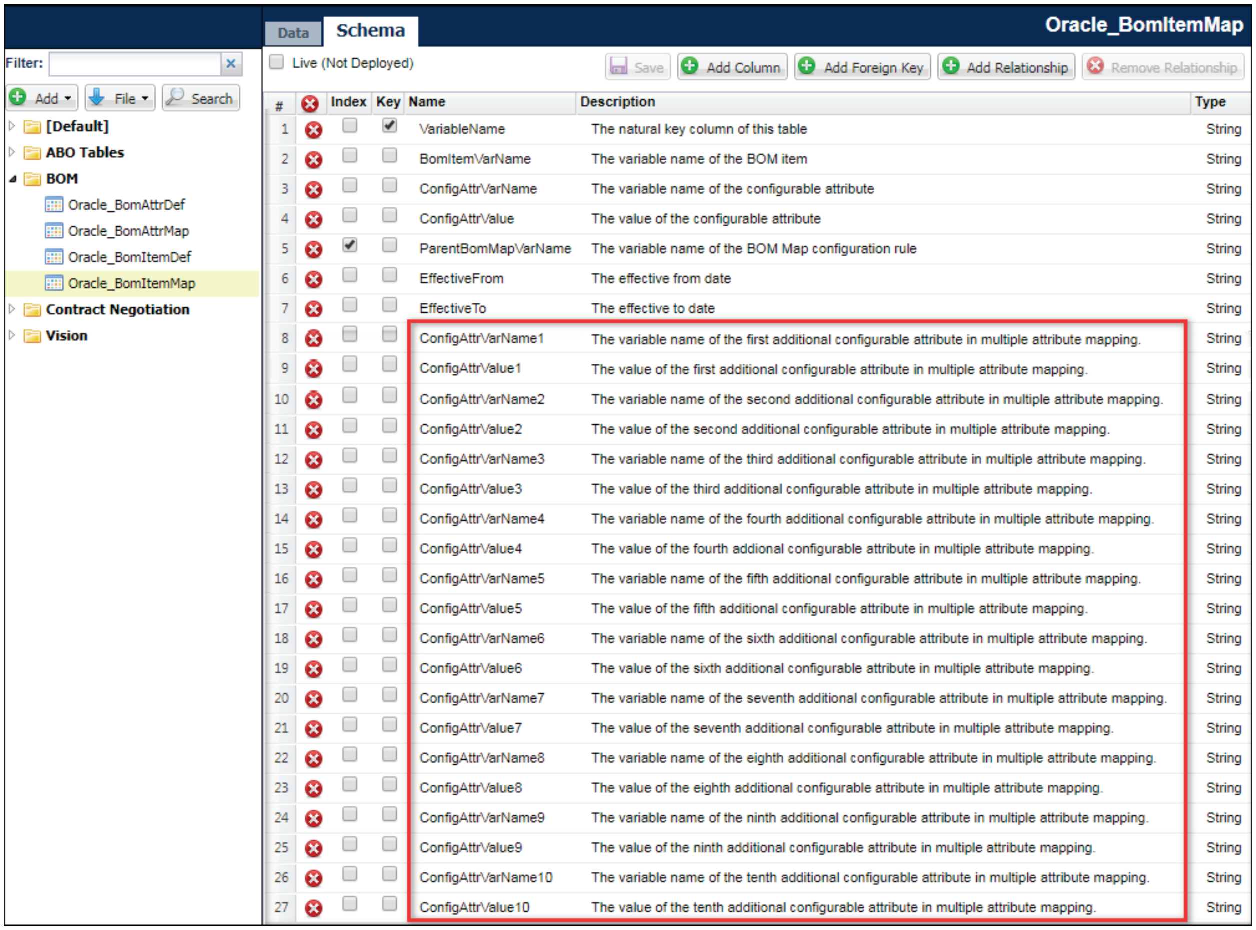
Column Name	Data Type	Description	Column Mapping
Variable Name	String	The natural key column of this table	VariableName
BOM Item Variable Name	String	The variable name of the BOM item	BomItemVarName
Configuration Attribute Variable Name	String	The variable name of the configurable attribute	ConfigAttrVarName
Configuration Attribute Value	String	The value of the configurable attribute	ConfigAttrValue
Parent BOM Mapping Variable Name	String	The variable name of the BOM Map configuration rule	ParentBomMapVarName
Effective From	String	The effective from date	EffectiveFrom
Effective To	String	The effective to date	EffectiveTo
Additional Configuration Attribute Variable Name 1	String	The variable name of the first additional configurable attribute in multiple attribute mapping	ConfigAttrVarName1
Additional Configuration Attribute Value 1	String	The value of the first additional configurable attribute in multiple attribute mapping	
Additional Configuration Attribute Variable Name 2	String	The variable name of the second additional configurable attribute in multiple attribute mapping	
Additional Configuration Attribute Value 2	String	The value of the second additional configurable attribute in multiple attribute mapping	
Additional Configuration Attribute Variable Name 3	String	The variable name of the third additional configurable attribute in multiple attribute mapping	
Additional Configuration Attribute Value 3	String	The value of the third additional configurable attribute in multiple attribute mapping	
Additional Configuration Attribute Variable Name 4	String	The variable name of the fourth additional configurable attribute in multiple attribute mapping	
Additional Configuration Attribute Value 4	String	The value of the fourth additional configurable attribute in multiple attribute mapping	
Additional Configuration Attribute Variable Name 5	String	The variable name of the fifth additional configurable attribute in multiple attribute mapping	
Additional Configuration Attribute Value 5	String	The value of the fifth additional configurable attribute in multiple attribute mapping	
Additional Configuration Attribute Variable Name 6	String	The variable name of the sixth additional configurable attribute in multiple attribute mapping	
Additional Configuration Attribute Value 6	String	The value of the sixth additional configurable attribute in multiple attribute mapping	
Additional Configuration Attribute Variable Name 7	String	The variable name of the seventh additional configurable attribute in multiple attribute mapping	
Additional Configuration Attribute Value 7	String	The value of the seventh additional configurable attribute in multiple attribute mapping	
Additional Configuration Attribute Variable Name 8	String	The variable name of the eighth additional configurable attribute in multiple attribute mapping	
Additional Configuration Attribute Value 8	String	The value of the eighth additional configurable attribute in multiple attribute mapping	ConfigAttrValue8
Additional Configuration Attribute Variable Name 9	String	The variable name of the ninth additional configurable attribute in multiple attribute mapping	ConfigAttrVarName9
Additional Configuration Attribute Value 9	String	The value of the ninth additional configurable attribute in multiple attribute mapping	ConfigAttrValue9
Additional Configuration Attribute Variable Name 10	String	The variable name of the tenth additional configurable attribute in multiple attribute mapping	ConfigAttrVarName10
Additional Configuration Attribute Value 10	String	The value of the tenth additional configurable attribute in multiple attribute mapping	ConfigAttrValue10

ConfigAttrVarName1
ConfigAttrValue1
ConfigAttrVarName2
ConfigAttrValue2
ConfigAttrVarName3
ConfigAttrValue3
ConfigAttrVarName4
ConfigAttrValue4
ConfigAttrVarName5
ConfigAttrValue5
ConfigAttrVarName6
ConfigAttrValue6
ConfigAttrVarName7
ConfigAttrValue7
ConfigAttrVarName8
ConfigAttrValue8
ConfigAttrVarName9
ConfigAttrValue9
ConfigAttrVarName10
ConfigAttrValue10

Edit BOM Table Definition Page for BOM Item Mapping

Configurable Attribute Columns in the BOM Item Mapping Data Table

Prior to mapping, the additional Configurable Attribute and Value fields must be added to the BOM Item Mapping Data Table Schema tab. The following image displays a BOM Item Mapping Data Table with ten additional Configurable Attribute and Value columns added to the Data Table schema.



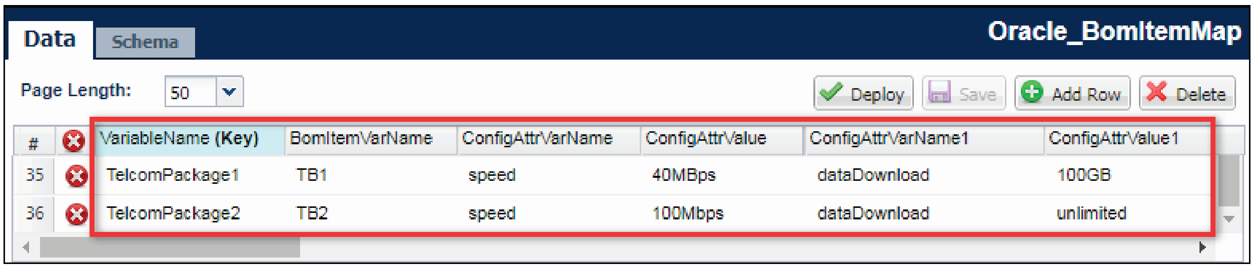
#	Index	Key	Name	Description	Type
1		✔	VariableName	The natural key column of this table	String
2			BomItemVarName	The variable name of the BOM item	String
3			ConfigAttrVarName	The variable name of the configurable attribute	String
4			ConfigAttrValue	The value of the configurable attribute	String
5	✔		ParentBomMapVarName	The variable name of the BOM Map configuration rule	String
6			EffectiveFrom	The effective from date	String
7			EffectiveTo	The effective to date	String
8			ConfigAttrVarName1	The variable name of the first additional configurable attribute in multiple attribute mapping.	String
9			ConfigAttrValue1	The value of the first additional configurable attribute in multiple attribute mapping.	String
10			ConfigAttrVarName2	The variable name of the second additional configurable attribute in multiple attribute mapping.	String
11			ConfigAttrValue2	The value of the second additional configurable attribute in multiple attribute mapping.	String
12			ConfigAttrVarName3	The variable name of the third additional configurable attribute in multiple attribute mapping.	String
13			ConfigAttrValue3	The value of the third additional configurable attribute in multiple attribute mapping.	String
14			ConfigAttrVarName4	The variable name of the fourth additional configurable attribute in multiple attribute mapping.	String
15			ConfigAttrValue4	The value of the fourth addional configurable attribute in multiple attribute mapping.	String
16			ConfigAttrVarName5	The variable name of the fifth additional configurable attribute in multiple attribute mapping.	String
17			ConfigAttrValue5	The value of the fifth additional configurable attribute in multiple attribute mapping.	String
18			ConfigAttrVarName6	The variable name of the sixth additional configurable attribute in multiple attribute mapping.	String
19			ConfigAttrValue6	The value of the sixth additional configurable attribute in multiple attribute mapping.	String
20			ConfigAttrVarName7	The variable name of the seventh additional configurable attribute in multiple attribute mapping.	String
21			ConfigAttrValue7	The value of the seventh additional configurable attribute in multiple attribute mapping.	String
22			ConfigAttrVarName8	The variable name of the eighth additional configurable attribute in multiple attribute mapping.	String
23			ConfigAttrValue8	The value of the eighth additional configurable attribute in multiple attribute mapping.	String
24			ConfigAttrVarName9	The variable name of the ninth additional configurable attribute in multiple attribute mapping.	String
25			ConfigAttrValue9	The value of the ninth additional configurable attribute in multiple attribute mapping.	String
26			ConfigAttrVarName10	The variable name of the tenth additional configurable attribute in multiple attribute mapping.	String
27			ConfigAttrValue10	The value of the tenth additional configurable attribute in multiple attribute mapping.	String

Oracle BomItemMap Data Table with Additional Configurable Attribute Columns

Multiple Attribute Mapping Example

After the additional Configurable Attribute and Value fields have been added to the BOM Item Mapping Data Table schema, the Data Table can be populated with the additional Configurable Attributes and Values. BOM Mapping can now evaluate the combination of several different Configuration attributes and then add a single child part to the quote based on multiple attribute selections.

For example: The following BOM Item Mapping Data displays two BOM items with "speed" and "dataDownload" attributes. If a user selects a speed of 40Mbps and a data download option of 100GB, then the TelecomPackage1 part will be added to the quote.



#	VariableName (Key)	BomItemVarName	ConfigAttrVarName	ConfigAttrValue	ConfigAttrVarName1	ConfigAttrValue1
35	TelcomPackage1	TB1	speed	40MBps	dataDownload	100GB
36	TelcomPackage2	TB2	speed	100Mbps	dataDownload	unlimited

BOM Item Mapping Data Table

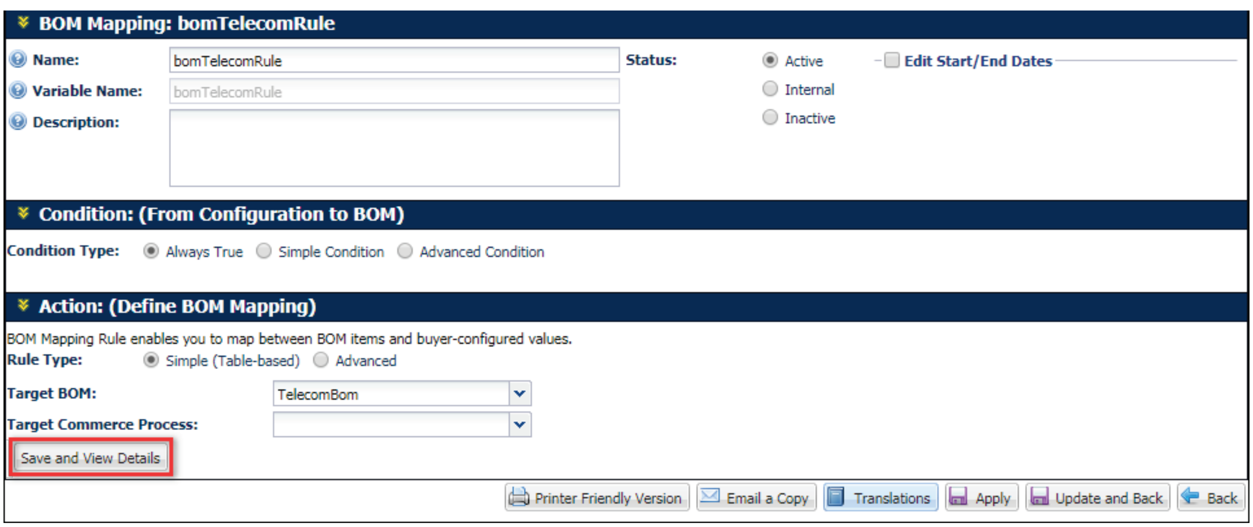
When additional Configurable attributes have been added and mapped, administrators can view the mapped attributes in the BOM Item Mapping Administration List and BOM Item Mapping Administration pages.

The details for the "TelecomPackage1" are displayed in the following procedure.

View BOM Item Mapping Administration Pages

Complete the following steps to view additional configurable attributes.

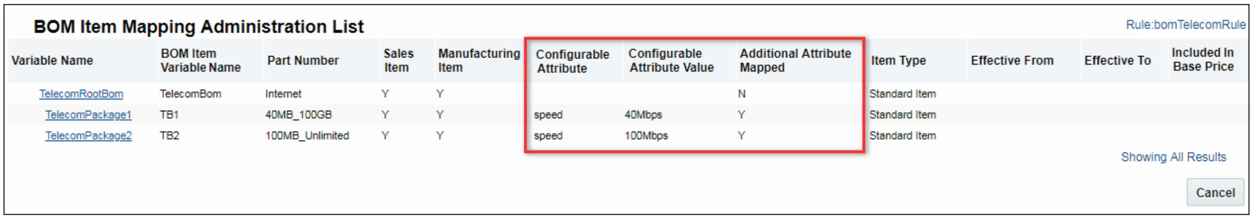
1. Navigate to the Admin Home Page.
2. Under **Products**, click **Catalog Definition**.
   The **Supported Products** page opens.
3. Select **Product Families** from the **Navigation** drop-down.
4. Click **List**.
   The **Supported Product Families** page opens.
5. Next to the applicable Product Family, select **Product Lines** from the **Navigation** drop-down.
6. Click **List**.
   The **Product Line Administration List** page opens.
7. Next to the applicable Product Line, select **Models** from the **Navigation** drop-down.
8. Click **List**.
   The **Model Administration List** page opens.
9. Next to the applicable Model, select **BOM Mapping** from the **Navigation** drop-down.
10. Click **List**.
    The **BOM Mapping: Rules List** page opens.
11. Select the applicable rule.
    The **BOM Mapping Rule** page opens.



BOM Mapping Rule Page

12. Click **Save and View Details**.
    The **BOM Mapping Administration List** page opens.

    In the following image, the mapped Configuration Attributes are shown. If there are any Additional Configurable Attributes, the **Additional Attribute Mapped** column will be set to **Y**.



BOM Item Mapping Administration List

Rule:bomTelecomRule

Variable Name	BOM Item Variable Name	Part Number	Sales Item	Manufacturing Item	Configurable Attribute	Configurable Attribute Value	Additional Attribute Mapped	Item Type	Effective From	Effective To	Included In Base Price
TelecomRootBom	TelecomBom	Internet	Y	Y			N	Standard Item			
TelecomPackage1	TB1	40MB_100GB	Y	Y	speed	40Mbps	Y	Standard Item			
TelecomPackage2	TB2	100MB_Unlimited	Y	Y	speed	100Mbps	Y	Standard Item			

Showing All Results

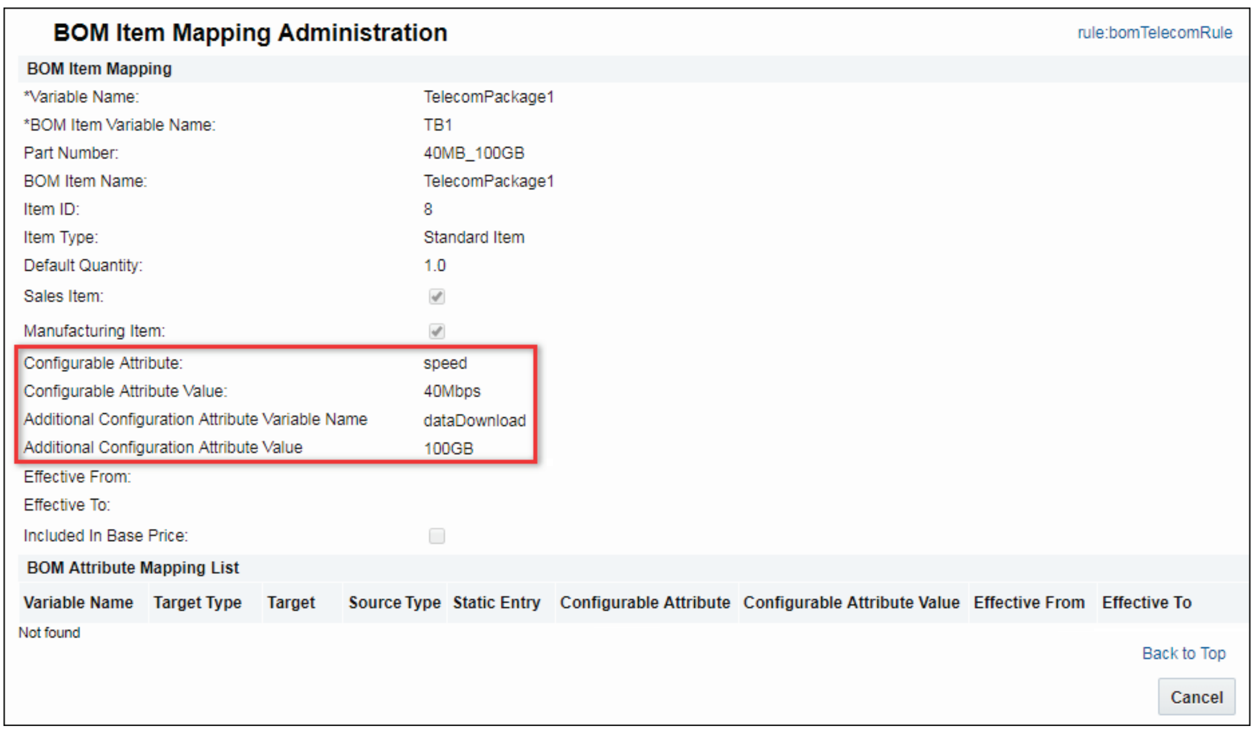
Cancel

BOM Item Mapping Administration List Page

13. Select the applicable Variable Name to view the Additional Configurable Attributes.
    The **BOM Item Mapping Administration** page opens.

    The associated Configurable Attribute and Additional Configurable Attributes are displayed.

    For example: The BOM Item Mapping details for "TelecomPackage1" are displayed in the following image. When "40Mbps" is selected for the "speed" attribute and "100GB" is selected for the "dataDownload" attribute, the TelecomPackage1 part will be added to the quote.



BOM Item Mapping Administration

rule:bomTelecomRule

BOM Item Mapping

*Variable Name:	TelecomPackage1
*BOM Item Variable Name:	TB1
Part Number:	40MB_100GB
BOM Item Name:	TelecomPackage1
Item ID:	8
Item Type:	Standard Item
Default Quantity:	1.0
Sales Item:	✓
Manufacturing Item:	✓
Configurable Attribute:	speed
Configurable Attribute Value:	40Mbps
Additional Configuration Attribute Variable Name	dataDownload
Additional Configuration Attribute Value	100GB
Effective From:	
Effective To:	
Included In Base Price:	☐

BOM Attribute Mapping List

Variable Name	Target Type	Target	Source Type	Static Entry	Configurable Attribute	Configurable Attribute Value	Effective From	Effective To
Not found								

Back to Top

Cancel

BOM Item Mapping Administration Page

Configurable Array Attribute Support for BOM Mapping

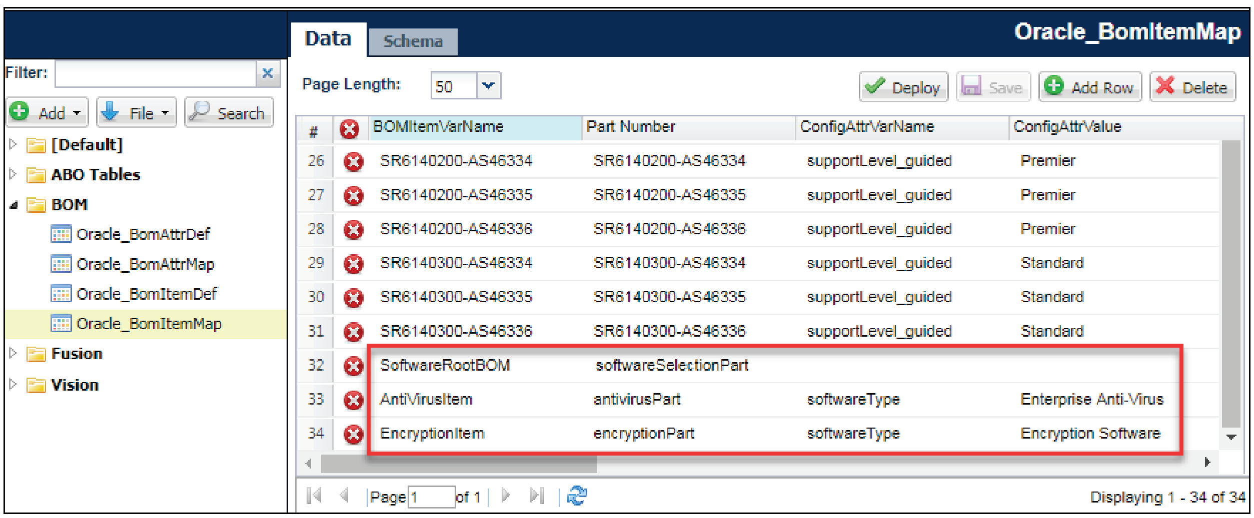
CPQ Cloud Release 18B enhances BOM Mapping support for Configurable Array Attributes. The options selected during Configuration can be used to populate BOM items and attributes in the BOM instance.

BOM Item Mapping for Configurable Array Attributes

When Configurable array attributes are used with BOM Item Mapping, the Array Set row items are mapped to a matching BOM item. The mapping should be one-to-one between the Array Set row and a BOM item.

For example: In the following BOM Item Mapping Data Table there are two BOM items displayed under the "SoftwareRootBOM" item:

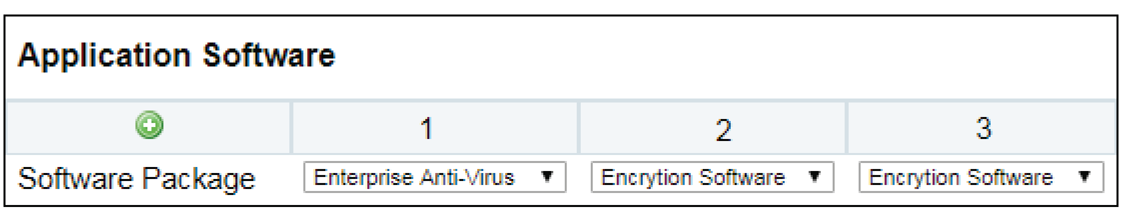
- AntiVirusItem - Part Number "antiVirusPart", ConfigAttrVarName "softwareType", and ConfigAttrValue "Enterprise Anti-Virus"
- EncryptionItem - Part Number "encryptionPart", ConfigAttrVarName "softwareType", and ConfigAttrValue "EncryptionSoftware"



BOM Item Mapping Data Table

Customers can use Configurable Array Sets to define BOM items to be selected during Configuration.

For example: The following image displays an Application Software Configuration item with three items: "Enterprise Anti-Virus", "Encryption Software", and "Encryption Software".



Application Software Configuration with Software Packages

When these BOM items are selected during Configuration, the following BOM Instance is generated:

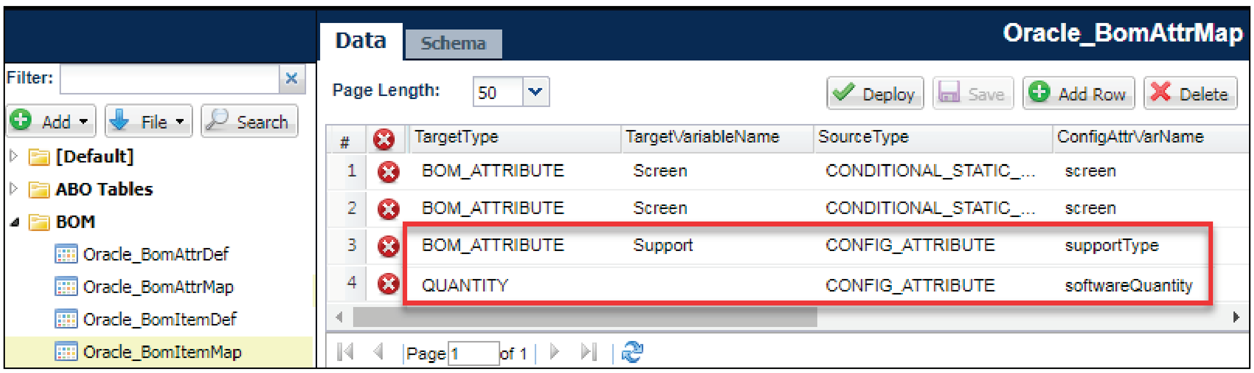

```
{
  "variableName": "SoftwareRootBOM",
  "partNumber": "softwareSelectionPart",
  "quantity": 1,
  "category": "sales",
  "children": [{
      "variableName": "AntiVirusItem",
      "partNumber": "antiVirusPart",
      "quantity": 1
    }, {
      "variableName": "EncryptionItem",
      "partNumber": " encryptionPart",
      "quantity": 1
    }, {
      "variableName": "EncryptionItem",
      "partNumber": "encryptionPart",
      "quantity": 1
    }]
 }
```

BOM Attribute Mapping for Configurable Array Attributes

When Configurable Array Attributes are used with BOM Item Mapping, related BOM Attribute Mappings can use additional Configurable Array Attributes from the same array set. The additional Configurable Array Attributes for a BOM item are mapped to Attribute Mapping items.

For example: In the following BOM Attribute Mapping Data Table two Configurable Attributes are displayed:

- supportType - TargetType "BOM_ATTRIBUTE", TargetVariableName "Support", and SourceType "CONFIG_ATTRIBUTE".
- softwareQuantity - TargetType "QUANTITY" and SourceType "CONFIG_ATTRIBUTE".

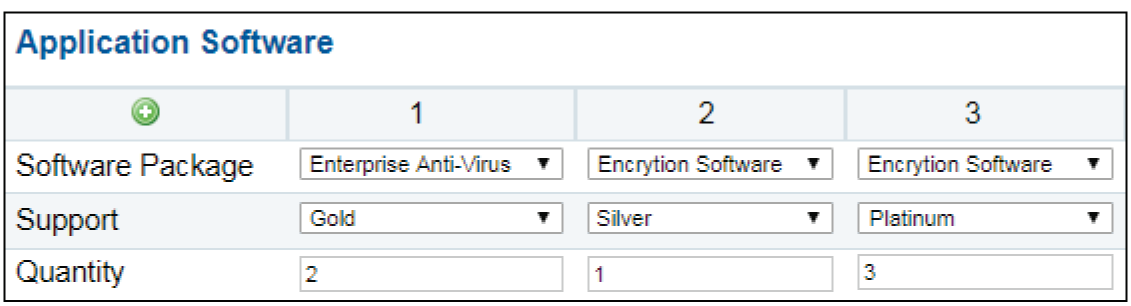


BOM Attribute Mapping Data Table

Customers can also use Configurable Array Sets to define BOM item attributes to be selected during Configuration.

For example: The following image displays an Application Software Configuration with three items:

- "Enterprise Anti-Virus" with "Gold" support and quantity "2"
- "Encryption Software" with "Silver" support and quantity "1"
- "Encryption Software" with "Platinum" support and quantity "3"



Application Software Configuration with Software Packages, Support, and Quantity

When these BOM items and attributes are selected during Configuration, the following BOM Instance is generated:

```
{
  "variableName": "SoftwareRootBOM",
  "partNumber": "softwareSelectionPart",
  "quantity": 1,
  "category": "sales",
  "children": [{
      " variableName": "AntiVirusItem",
      "partNumber": "antiVirusPart",
      "quantity": 2,
      "attributes": {"Support": {value: "Gold"}}
    }, {
      " variableName": "EncryptionItem",
      "partNumber": " encryptionPart",
      "quantity": 1,
      "attributes": {"Support": {value: "Silver"}}
    }, {
      " variableName": "EncryptionItem",
      "partNumber": " encryptionPart",
      "quantity": 3,
      "attributes": {"Support": {value: "Platinum"}}
    }]
 }
```

IMPORTANT:

- BOM Attributes can be mapped to both Configurable Array Attributes and non-array type Configurable Attributes.
- Refer to the CPQ Cloud Administration Online Help for BOM Mapping Configurable Array Attribute Restrictions that are used to maintain one-to-one mapping between an Array Set row and a BOM item.

STEPS TO ENABLE

BOM Mapping enhancements are automatically available on all CPQ Cloud 18B sites.

KEY RESOURCES

Refer to CPQ Cloud Administration Online Help for additional information.

COMMERCE CLOUD INTEGRATION ENHANCEMENTS

Self-service users in Commerce Cloud can configure complex products for purchase using the CPQ Cloud Configurator. They can also request a CPQ Cloud quote, thereby initiating a CPQ Cloud Transaction that a sales specialist can modify, reconfigure, or discount. The Commerce Cloud integration enhancements available in CPQ Cloud Release 18B support the retrieval and display of eCommerce usage metrics related to the number of times the CPQ Cloud **Model Configuration** page is accessed from Commerce Cloud (i.e. the number of interactions).

CPQ Cloud customers have the option to pay for our service based on the number of licenses available for the site or the number of user interactions. For customers who integrate with Commerce Cloud, the majority of configurations are performed by unregistered users. As a result, tracking usage by license count does not properly reflect usage. The 18B integration enhancements address this scenario and support CPQ Cloud customers who pay for our service based on the number of interactions that occur by any user.

The following enhancements are available in CPQ Cloud Release 18B:

- Use a REST API to retrieve interaction data
- View interaction data in CPQ Cloud
- View interaction data in the Oracle Cloud portal

Use a REST API to Retrieve Interaction Data

Use the new "eCommerce Interaction Metrics" REST API to retrieve usage data related to the number of times the CPQ Cloud **Model Configuration** page is accessed from Commerce Cloud. Each instance is an interaction representing usage data. Interactions are generated by all users, regardless of company or access type. Commerce Cloud self-service users do not need to invoke the Add to Cart action for an interaction to count as usage metric data.

IMPORTANT: CPQ Cloud uses a custom URL parameter to determine when a configuration is accessed from Commerce Cloud. An interaction is generated every time the parameter is set or an external reconfigure is called using a saved configuration. There may be Configuration scenarios that occur when not integrated with Commerce Cloud that count as interaction data, such as interactions performed by non-Commerce Cloud partners.

The below table identifies interaction scenarios both included and not included in metric data.

Included in Metric Data	Not Included in Metric Data
• Accessing the **Model Configuration** page from Commerce Cloud to perform an initial configuration. • Accessing the **Model Configuration** page from Commerce Cloud to perform an external reconfigure or using parameters from an external partner. • Mobile configurations from an external partner. • Subscription Ordering configurations related to the Modify and Follow-On order flows and performed by external partners. • Configurations not completed due to model-related errors.	• Related web service calls including configure, getConfigurations, and getSpare. • Configurations performed when not integrated with Commerce Cloud. • Navigating multiple nodes or branching nodes within a single Configuration flow. • Configuring child models in a system for the first time. • Adding a model to a quote from Favorites without performing a configuration in the **Model Configuration** page. • Adding a model to a quote using the “config Id” and the Commerce “_new_transaction” REST API introduced in CPQ Cloud 2017 R1 to enhance the Request for Quote flow.

REST API Definition

This section describes the “eCommerce Interaction Metrics” REST API, which is available for REST version 6 or later by all Host Company Full Access users. The REST response returns data for all interactions performed between the start and end dates passed in the request. If a start and end date are not included in the request, all records are returned.

eCommerce Interaction Metrics REST API		
Description	Retrieves eCommerce usage metrics.	
URI Endpoint	rest/v6/ecommerceInteractionMetrics	
Endpoint Parameters	Query specifications that follow CPQ Cloud query and pagination parameters syntax, and query specifications that follow a subset of MongoDB syntax can organize or narrow return data. For more information, refer to the Query Specification Syntax topic in the CPQ Cloud Administration Online Help.	
HTTP Method	GET	
Request Body Parameters	`None`	
Response Body Parameters	`id`	Primary Key of the interaction metrics resource.
	`timestamp`	Timestamp for eCommerce interaction
	`interaction`	eCommerce interaction type - (configure or reconfigure)
	`login`	Login of the user who performed the eCommerce interaction

URI ENDPOINT SAMPLE

```
https://sitename.bigmachines.com/rest/v6/ecommerceInteractionMetrics
```

SAMPLE RESPONSE

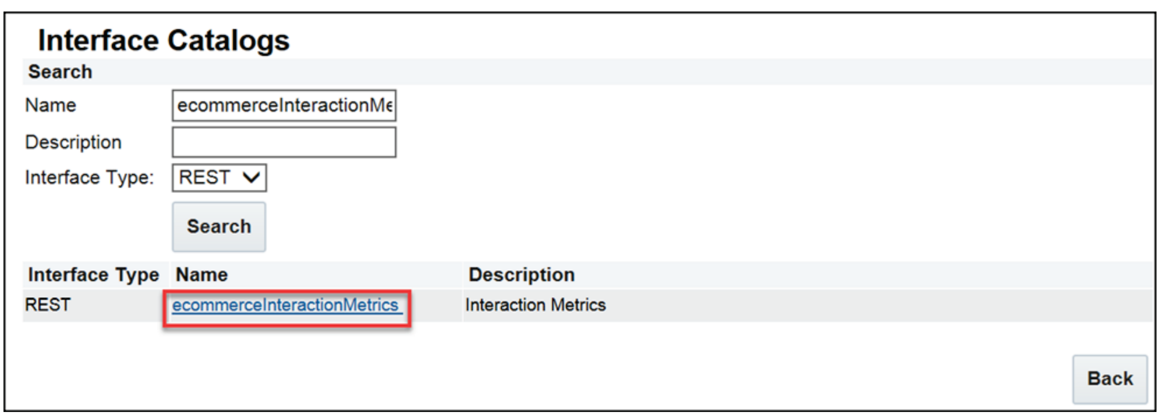

```
{
   "hasMore": true,
   "items": [{
         "id": 21754096,
         "timestamp": "2018-02-28T21:59:16.000Z",
         "interaction": "configure",
         "login": "SuperUser",
         "links": [{...}]
      }, {
         "id": 21754100,
         "timestamp": "2018-02-28T21:59:16.000Z",
         "interaction": "configure",
         "login": "guest",
         "links": [{...}]
      }, {
         "id": 21754104,
         "timestamp": "2018-02-28T21:59:17.000Z",
         "interaction": "configure",
         "login": "guest",
         "links": [{...}]
      }
```


Interface Catalog

Administrators can access metadata for the “eCommerce Interaction Metrics” REST API from the **Interface Catalogs** page.

To access the metadata, perform the following steps:

1. Open the Admin Home page.
2. Under **Integration Platform**, select **Interface Catalogs**.
   The **Interface Catalogs** page opens.
3. Click **ecommerceInteractionMetrics** to view metadata for the “eCommerce Interaction Metrics” REST API.



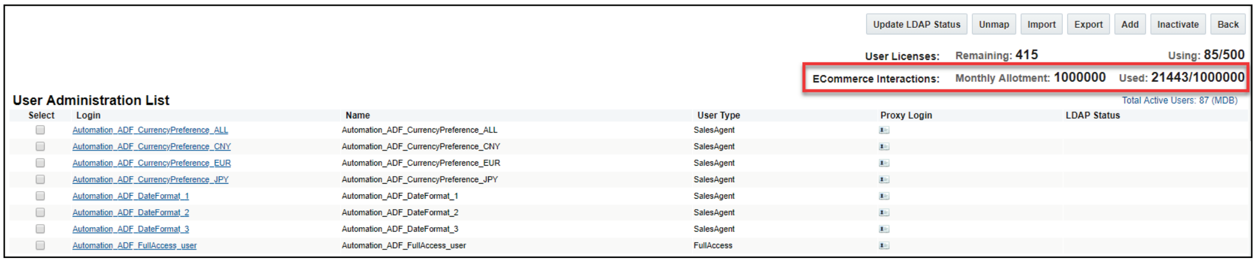
Interface Catalogs Page

View Interaction Data in CPQ Cloud

Host Company Full Access users with permission to create and modify users can view eCommerce interaction data on the **User Administration List** page. The eCommerce interaction data represents the number of interactions performed on the CPQ Cloud site in the current month.

To view interaction data in CPQ Cloud, perform the following steps:

1. Open the Admin Home page.
2. Under **Users**, select **Internal Users**.
   The **User Administration List** page opens and displays eCommerce interaction data. The customer is billed for the Monthly Allotment amount, which is a specific number of interactions per month. The number of interactions used by the customer from the beginning of the month to the current date also displays. The value is updated each time the page is opened.



User Administration List Page Displaying eCommerce Interactions

IMPORTANT: Open a Service Request on My Oracle Support to change the Monthly Allotment amount.

View Interaction Data from the Oracle Cloud Portal

Customers can use the “eCommerce Interaction Metrics” REST API to view daily interaction metrics from the Oracle Cloud portal, which bypasses the need to access CPQ Cloud directly to view metric data. The daily interaction metrics display in the Oracle Cloud portal automatically. There is no administrator setup required.

STEPS TO ENABLE

Refer to the *Integrating Oracle Commerce Cloud Service and CPQ Cloud Service Implementation Guide*

TIPS AND CONSIDERATIONS

Consider the following tips when using the Commerce Cloud Integration enhancements:

- By default, interaction metrics are retained for 60 days. Open a Service Request on My Oracle Support to increase or decrease this setting.

KEY RESOURCES

Refer to CPQ Cloud Administration Online Help for additional information.

Customers can add parts to a Transaction in a variety of ways including via Recommended Item Rules, BOM Mapping Rules, Part Search, Multi-Part Search, Quick Keys, and API calls. CPQ Cloud Release 18A introduced Eligibility Rules as a feature, allowing administrators to define the parts available to specific customers. In CPQ Cloud Release 18B, all methods of adding parts now enforce Eligibility Rules.

The following Eligibility REST API enhancements are available in CPQ Cloud Release 18B:

- Access Eligibility API metadata from the Interface Catalog
- Allow external applications to create, read, update, delete, and deploy Eligibility Rules
- Search and filter parts using the Search Parts REST API

Access Eligibility API Metadata from the Interface Catalog

Administrators can use the Interface Catalog to access metadata for the Eligibility REST APIs available in CPQ Cloud Release 18B. The metadata for the REST APIs used to create, read, update, delete, and deploy Eligibility Rules is available in the “eligibilityRule” resource. The metadata for the REST APIs used to search for and filter parts is available in the “parts” resource.

To access metadata for the Eligibility REST APIs, perform the following steps:

1. Open the Admin Home page.
2. Under **Integration Platform**, select **Interface Catalogs**.
   The **Interface Catalogs** page opens.
3. Scroll to the “eligbilityRule” or “parts” resource.
4. Click the associated link to view the resource metadata.

Allow External Applications to Create, Read, Update, Delete, and Deploy Eligibility Rules

CPQ Cloud exposes eligibility data through REST APIs. As described in this section, Eligibility APIs allow external applications to create, read, update, delete, and deploy eligibility data.

Create Eligibility Rule

Create Eligibility Rule REST API		
Description	This operation creates a new Eligibility Rule.	
URI Endpoint	`/rest/v6/eligibilityRule`	
Endpoint Parameters	None	
HTTP Method	POST	
Request Body Parameters	`active`	Used to specify whether the Eligibility Rule is active: Yes or No
	`conditionRowGrouping`	Holds the Eligibility Rule's condition row grouping information.
	`conditonType`	Used to specify whether the condition is Always True or Simple.
	`description`	The description of the Eligibility Rule.
	`endDate`	The Eligibility Rule end date.
	`name`	The name of the Eligibility Rule.
	`ruleType`	Used to indicate whether the Eligibility Rule is Available or Not Available.
	`selectionRowGrouping`	Holds the Eligibility Rule's selection row grouping.
	`selectionType`	Used to specify whether the selection is All, None, or Simple.
	`startDate`	The Eligibility Rule start date.
	`variableName`	The variable name of the Eligibility Rule.
Response Body Parameters	Creation of the JSON data for the updated eligibility rule.	

Get Eligibility Rule

Get Eligibility Rule REST API		
Description	This operation returns eligibility data for a specific Eligibility Rule.	
URI Endpoint	`/rest/v6/eligibilityRule/{id}?expand=all`	
Endpoint Parameters	{id}	The unique ID of the Eligibility Rule.
	`expand=all`	Necessary to pull child conditions and selection rows in the GET request.
HTTP Method	GET	
Request Body Parameters	None	
Response Body Parameters	JSON data of the Eligibility Rule. Returns all attributes from the Eligibility Rule object in JSON format.	

Get All Eligibility Rules

Get All Eligibility Rules REST API		
Description	This operation returns all Eligibility Rule data.	
URI Endpoint	`/rest/v6/eligibilityRule/?expand=all`	
Endpoint Parameters	`expand=all`	Necessary to pull child conditions and selection rows in the GET request.
HTTP Method	GET	
Request Body Parameters	None	
Response Body Parameters	JSON data of all Eligibility Rules. Returns all attributes from the Eligibility Rule object in JSON format.	

Update Eligibility Rule

Update Eligibility Rule REST API		
Description	This operation updates an existing Eligibility Rule.	
URI Endpoint	`/rest/v6/eligibilityRule/{id}`	
Endpoint Parameters	{id}	The unique ID of the Eligibility Rule to update.
HTTP Method	POST	
Request Body Parameters	`active`	Used to specify whether the Eligibility Rule is active: Yes or No
	`conditionRowGrouping`	Holds the Eligibility Rule's condition row grouping information.
	`conditonType`	Used to specify whether the condition is Always True or Simple.
	`description`	The description of the Eligibility Rule.
	`endDate`	The Eligibility Rule end date.
	`id`	The primary key of the Eligibility Rule. * During update, the id cannot be changed.
	`name`	The name of the Eligibility Rule.
	`ruleType`	Used to indicate whether the Eligibility Rule is Available or Not Available.
	`selectionRowGrouping`	Holds the Eligibility Rule's selection row grouping.
	`selectionType`	Used to specify whether the selection is All, None, or Simple.
	`startDate`	The Eligibility Rule start date.
	`variableName`	The variable name of the Eligibility Rule. * During update, the variableName cannot be changed.
Response Body Parameters	Creation of the JSON data for the updated Eligibility Rule.	

Delete Eligibility Rule

Delete Eligibility Rule REST API		
Description	This operation deletes an existing Eligibility Rule.	
URI Endpoint	`/rest/v6/eligibilityRule/{id}/actions/delete`	
Endpoint Parameters	{id}	The unique ID of the Eligibility Rule to delete.
HTTP Method	POST	
Success Response	HTTP 200 OK	

Delete Eligibility Rule

Delete Eligibility Rule REST API		
Description	This operation deletes an existing Eligibility Rule.	
URI Endpoint	`/rest/v6/eligibilityRule/{id}`	
Endpoint Parameters	{id}	The unique ID of the Eligibility Rule to delete.
HTTP Method	Delete	
Success Response	204 - Success	

Deploy Eligibility Rule

Deploy Eligibility Rule REST API		
Description	This operation deploys an existing Eligibility Rule.	
URI Endpoint	`/rest/v6/eligibilityRule/{id}/actions/deploy`	
Endpoint Parameters	{id}	The unique ID of the Eligibility Rule to deploy.
HTTP Method	POST	
Response Body Parameters	None	

Deploy Multiple Eligibility Rules

Deploy Multiple Eligibility Rules REST API		
Description	This operation deploys multiple Eligibility Rules.	
URI Endpoint	`/rest/v6/eligibilityRule/actions/deploy`	
Endpoint Parameters	None	
HTTP Method	POST	
Request Body Parameters	`selections`	The object used to provide a string of Eligibility Rule IDs in an array format.
Response Body Parameters	None	

Search and filter Parts Using the Search Parts REST API

CPQ Cloud Release 18B adds eligibility checking and filtering to the standard Search Parts REST API, which supports searching and filtering parts in the following scenarios:

- Search parts using Configuration context
- Search parts using Commerce context
- Perform a Quick Key part search
- Search list of part numbers
- Perform an advanced part search

IMPORTANT: The Search Parts REST API supports customizing the REST response by specifying an advanced query object (i.e. “q” criteria) as a request body parameter. This allows administrators to customize the query by specifying various combinations of criteria.

Search Parts Using Configuration Context

Search Parts REST API		
Description	This operation is used to search parts based on Configuration attribute values. If account and user information is available in the authentication token, Eligibility Rules created on user and account attributes are applied.	
URI Endpoint	`/rest/v6/parts/actions/search`	
Endpoint Parameters	None	
HTTP Method	POST	
Request Body Parameters	`context`	A top-level object in the payload containing the context definition for the part search and used to specify the specific content to retrieve. **Note:** pricebookVarName, config, currencyCode, allProducts, segment, productLine, and model are specified inside context.
	`pricebookVarName`	The string value that specifies the variable name of the active price book. If the site uses price books, this is required.
	`config`	The Configuration data for the part search.
	`currencyCode`	The currencyCode value in which the attribute is represented.
	`allProducts`	Holds attribute data belonging to all products.
	`segment`	Holds segment-related data such as the variable name of the Configuration segment and attribute data.
	`productLine`	Holds product-line related data such as the variableName of the Configuration product line and attribute data.
	`model`	Holds model-related data such as the variableName of the Configuration model and attribute data.
	`criteria`	A top-level object in the payload used to specify the fields used to filter the parts or limit the number of parts returned in the response. * Advanced query object "q" criteria is supported.
Response Body Parameters	Returns a list of part numbers.	

IMPORTANT: The attribute data referenced in the allProducts, segment, productLine, and model descriptions contains a set of key value pairs. The attribute's variableName is the key and the value is the value of the attribute. If the attribute is a Multi Select Menu, it can take a list of values from the item's array.

URI ENDPOINT SAMPLE

```
https://sitename.oracle.com/rest/v6/parts/actions/search
```

REQUEST BODY SAMPLE


```
{
    "criteria": {
        "totalResults": true,
        "limit": 15,
        "offset": 0,
        "fields": [
            "partNumber",
            "_part_custom_field8",
            "_part_custom_field9",
            "_part_custom_field11",
            "_part_custom_field17",
            "directBuy",
            "units",
            "leadTime",
            "partDisplayNumber"
        ],
        "q": "{\"partNumber\":{\"$like\":
\"EligibilityForPartRESTAPICONFIGPart%\"}}"
    },
    "context": {
        "pricebookVarName": "pricebook1",
        "config": {
            "allProducts": {
                "attributes": {
                    "conditionsAllPF": "true"
                }
            },
            "segment": {
                "variableName": "testbed",
                "attributes": {
                    "aVPMSMCheckboxesOther": {
                        "items": [
                            "Value 1"
                        ]
                    }
                }
            },
            "productLine": {
                "variableName": "recommendedItems",
                "attributes": {
                    "advancedCondition1": "true"
                }
            },
            "model": {
                "variableName": "performance",
                "attributes": {
                    "numberOfLineItems": "50"
                }
            }
        }
    }
}
```

Search Parts Using Commerce Context

Search Parts REST API		
Description	When an Eligibility Rule is based on a Commerce attribute and a Transaction is created with values that satisfy the Eligibility Rule, this operation is used to search for parts using Transaction data.	
URI Endpoint	`/rest/v6/parts/actions/search`	
Endpoint Parameters	None	
HTTP Method	POST	
Request Body Parameters	`context`	A top-level object in the payload containing the context definition for the part search and used to specify the specific content to retrieve. **Note**: pricebookVarName, commerce, currencyCode, process, and mainDocument are specified inside context. All parameters are optional but some are required based on input data.
	`pricebookVarName`	The string value that specifies the variable name of the active price book. If the site uses price books, this is required.
	`commerce`	Provides the Commerce process ID to be used in the part query.
	`id`	The unique Buyside ID of the Transaction used to retrieve parts. * id is a child property within commerce
	`cacheInstanceId`	The unique identifier for the entry of Transaction data stored in the cache, which is typically obtained from the first createTransaction or OpenTransaction action. To avoid reloading Transaction data from the database, users can modify the Transaction in the cache and then use the unsaved Transaction data to search for parts. * cacheInstanceId is a child property within commerce
	`currencyCode`	The currencyCode value in which the attribute is represented. If the input values supplied through the mainDocument have decimal values based on the currencyCode, then currencyCode is required.
	`process`	Holds the Transaction's process metadata, such as the variableName of the process to which the current Transaction data belongs.
	`mainDocument`	Holds the Transaction's main document data, such as the variableName of the main document to which the current Transaction data belongs and attribute data.
	`criteria`	The criteria definition to specify the fields used to filter the parts or limit the number of parts returned in the response. * Advanced query object "q" criteria is supported.
Response Body Parameters	Returns a list of part numbers.	

URI ENDPOINT SAMPLE

```
https://sitename.oracle.com/rest/v6/parts/actions/search
```

REQUEST BODY SAMPLE


```
{
  "criteria":{
    "totalResults": true,
    "limit": 15,
    "offset": 0,
    "fields":["partNumber","_part_custom_field8","_part_custom_field9","_pa
rt_custom_field11","_part_custom_field17","directBuy","units","leadTime","p
artDisplayNumber"],
    "q": "{\"partNumber\":{\"$like\": \"Basic Pricing 01\"}}"
  },
  "context":{
    "pricebookVarName":"pricebook1",
        "commerce": {
            "id": "20587705"
        }
  }
}
```

Perform a Quick Key Search in Commerce

In a CPQ Cloud Transaction, Quick Key line items are used to add parts to a quote without navigating away from the Transaction page and to auto-suggest a part to aid in part selection. The Search Part REST API allows implementers to build similar functionality where the Quick Key part selector auto-populates with part numbers when users enter characters into an item field in the Line Item Grid.

Search Parts REST API		
Description	This operation is used to populate the Quick Key part selector in Commerce.	
URI Endpoint	`/rest/v6/parts/actions/search`	
Endpoint Parameters	None	
HTTP Method	POST	
Request Body Parameters	`context`	A top-level object in the payload containing the context definition for the part search and used to specify the specific content to retrieve. **Note**: pricebookVarName and commerce are specified inside context.
	`pricebookVarName`	The string value that specifies the variable name of the active price book. If the site uses price books, this is required.
	`commerce`	Used to search for parts using Transaction data. *Any commerce attributes can be included as child properties within commerce.
	`id`	The unique Buyside ID of the Transaction used to retrieve parts. * id is a child property within commerce
	`cacheInstanceId`	The unique identifier for the entry of Transaction data stored in the cache, which is typically obtained from the first createTransaction or OpenTransaction action. To avoid reloading Transaction data from the database, users can modify the Transaction in the cache and then use the unsaved Transaction data to search for parts. * cacheInstanceId is a child property within commerce
	`criteria`	The criteria definition to specify the fields, such as Part Number or Part Display Number, used to filter the parts or limit the number of parts returned in the response. * Advanced query object “q” criteria is supported.
Response Body Parameters	Returns a list of part numbers.	

URI ENDPOINT SAMPLE

```
https://sitename.oracle.com/rest/v6/parts/actions/search
```

REQUEST BODY SAMPLE

```
{

      "context": {

        "pricebookVarName": "pricebook1" ,

        "commerce": {

            "id": "20516360",

            "cacheInstanceId":
"3KR11zuA1UZzhlH2ohStrgwgRrlrYa9YbrSIY2OofoRPBbluv8MCYfm40Ag33nGP"

        }

      },

      "criteria": {

        "q": "{\"partNumber\":{$like: \"part2690%\", $options:\"I\"}}",

        "fields": [ "partDisplayNumber","partNumber"] ,

        "totalResults": true,

        "limit":10,

        "offset":0

      }

    }
```

IMPORTANT:

- If cacheInstanceId is present, the id and process data are ignored.
- If cacheInstanceId is not present and id is present, the id is used.
- If cacheInstanceId and id are not available, Commerce attribute values are passed.

Search List of Part Numbers

Search Parts REST API		
Description	Used to filter a given list of parts. The list of parts is provided in the “q” parameter (concatenated with 'OR') of the criteria object.	
URI Endpoint	`/rest/v6/parts/actions/search`	
Endpoint Parameters	None	
HTTP Method	POST	
Request Body Parameters	`context`	A top-level object containing the context definition for the part search. **Note**: pricebookVarName and commerce are parameters inside context.
	`pricebookVarName`	The string value that specifies the variable name of the active price book. If the site uses price books, this is required.
	`commerce`	Used to search for parts using Transaction data.
	`id`	The unique Buyside ID of the Transaction used to retrieve parts. * id is a child property within commerce
	`criteria`	The criteria definition used to filter the parts or limit the number of parts returned in the response. * Advanced query object “q” criteria is supported.
Response Body Parameters	Returns a list of part numbers.	

URI ENDPOINT SAMPLE

```
https://sitename.oracle.com/rest/v6/parts/actions/search
```

REQUEST BODY SAMPLE

```
    {
    "context": {
        "pricebookVarName": "pricebook1",
        "commerce": {
            "id": "20104203"
        }
    },
    "criteria": {
        "q": "{ $or: [ { \"partNumber\": { $eq: \"part2690\" }}, {
\"partNumber\": { $eq: \"part2691\" }} ] }"
    }
}
```

Perform an Advanced Part Search

Search Parts REST API		
Description	This operation is used to search for parts using a single or combination of multiple part fields with Eligibility Rules applied. The part search criteria supports operators based on field type.	
URI Endpoint	`/rest/v6/parts/actions/search`	
Endpoint Parameters	None	
HTTP Method	POST	
Request Body Parameters	`criteria`	The criteria definition to specify the fields used to filter the parts or limit the number of parts returned in the response. The following operators can be applied to the fields: • Text: =, !=, Starts With, Ends With, Contains, Null, Not Null • Integer and Float: =, !=, >, >=, <, <= • Single Select Menu (SSM): =, != • Multi Select Menu (MSM): in, nin, eq, ne
	`context`	The context definition for the part search, which is used to specify the specific content to retrieve.
Response Body Parameters	Returns a list of part numbers.	

URI ENDPOINT SAMPLE

```
https://sitename.oracle.com/rest/v6/parts/actions/search
```

REQUEST BODY SAMPLE

Search parts based on a part custom field, such as an MSM field. As shown in the below example, any MSM field can be searched using the value attribute.

```
{
  "criteria":{
    "totalResults": true,
    "limit": 5,
    "offset": 0,
    "fields":["_part_custom_field16","partNumber"],
   "q":"{$and:[{partNumber:\"EligibilityForPartRESTAPIPart3\"},{\"_part_custom_field16.value\":{$ne:[\"Value 1\"]}}]}"

},
  "context":{
    "pricebookVarName":"pricebook1"

        }
  }
```

STEPS TO ENABLE

Eligibility REST APIs are automatically available on CPQ Cloud 18B sites.

KEY RESOURCES

Refer to CPQ Cloud Administration Online Help for additional information.

TRANSACTION REST API ENHANCEMENTS

The Transaction REST API enables administrators to update transactions from external systems.

As part of continuing improvements to Commerce Transaction REST services, the following enhancements are available in CPQ Cloud Release 18B:

- Full Administration support to send single or multiple e-Signature requests, show details for the e-Signature request, and cancel the e-Signature request.
- Support to refresh the Quote Transaction with the latest data from the server.

Send e-Signature Request REST API

Send e-Signature Request REST API		
Description	The Send e-Signature REST API sends the e-signature documents to recipients. This action is set to receive a rejection or signed document from DocuSign.	
URI Endpoint	`/rest/v6/commerceDocuments{ProcessVarName}{MainDocVarName}/{_id}/actions/_action_esig_send`	
Endpoint Parameters	`ProcessVarName`	The variable name of the Commerce process, the first letter must be capitalized
	`MainDocVarName`	The variable name of the main document, the first letter must be capitalized
	`_id`	The Commerce Transaction ID
HTTP Method	POST	
Request Body Parameters	`skipIntegration`, `criteria`, `documents`, `delta`, `selections`, and `cacheInstanceId` are optional	
	`cacheInstanceId`	Optional, use a”-1” value to load the complete transaction into the user’s cache
	`esigAttrSetVarName`	Variable name of the e-Signature attribute set
Success Response	The JSON data for the requested transaction, or a subset of transaction items, depending on the input request.	

URI ENDPOINT SAMPLE

```
https://sitename.oracle.com/rest/v6/commerceDocumentsOraclecpqoTransaction/
20563735/actions/_action_esig_send
```

SAMPLE REQUEST


```
{"esigAttrSetVarName": "eSignatureAttributeSet1_esig_set",
"documents": {
   "_eSignatureAttributeSet1_esig_recipients": "John Doe<john.doe@oracle.com>;",
      "quoteDescription" :"abcquote",
      "_eSignatureAttributeSet1_esig_file_attachment": {
         "fileID": "20600546",
         "fileType": "application/vnd.openxmlformats-
officedocument.wordprocessingml.document",
         "isFileSaved": false,
         "fileName": "DocuSignTestDocument2Signers.docx"
   },
   "criteria": {
      "state": true,
      "childDefs": [{  "name": "lineItem",  "queryDef": { "state": true} } ]
      }
   }
}
```


SAMPLE RESPONSE


```
{
"documents": {
"_eSignatureAttributeSet1_esig_recipients": "John Doe<john.doe@oracle.com>;",
"_eSignatureAttributeSet1_esig_file_attachment": {
      "fileID": "20600546",
      "fileType": "application/vnd.openxmlformats-
officedocument.wordprocessingml.document",
      "isFileSaved": false,
      "fileName": "DocuSignTestDocument2Signers.docx"
      },

"_eSignatureAttributeSet1_esig_envelope_id": "5d28d6ca-0f7d-41d4-a1f1-fa12184a7b07",

"_eSignatureAttributeSet1_esig_date_modified": "2018-03-11T20:16:44Z",

"_eSignatureAttributeSet1_esig_status": {
      "value": "Pending",
      "displayValue": "Pending"
      },
"quoteDescription" :"abcquote”,
"sub": {},
"links": [
      {
      "rel": "self",
      "href": "../rest/v6/commerceDocumentsTestMain/20905405"
      }
   ],
   "_state:"{}
},
"warnings": {}
}
```

Request e-Signature Details REST API

Request e-Signature Details REST API		
Description	This API returns transaction JSON data along with a property named "destinationNewWindowURL" that is used to view the e-Signature related details via an integrated site, such as DocuSign.	
URI Endpoint	`/rest/v6/commerceDocuments{ProcessVarName}{MainDocVarName}/{_id}/actions/_action_esig_details`	
Endpoint Parameters	`ProcessVarName`	The variable name of the Commerce process, the first letter must be capitalized
	`MainDocVarName`	The variable name of the main document, the first letter must be capitalized
	`_id`	The Commerce Transaction ID
HTTP Method	POST	
Request Body Parameters	`criteria`, `documents`, `delta`, and `cacheInstanceId` are optional	
	`cacheInstanceId`	Optional, use a"-1" value to load the complete transaction into the user's cache
	`esigAttrSetVarName`	Variable name of the e-Signature attribute set
Success Response	The JSON data for the requested transaction, or a subset of transaction items, depending on the input request.	

URI ENDPOINT SAMPLE

```
https://sitename.oracle.com/rest/v6/commerceDocumentsOraclecpqoTransaction/
18498612/actions/_action_esig_details
```

SAMPLE REQUEST


```
{"esigAttrSetVarName": "eSignatureAttributeSet1_esig_set",
"documents": {
   "_eSignatureAttributeSet1_esig_recipients": "John Doe<john.doe@oracle.com>;",
      "quoteDescription" :"abcquote",
      "_eSignatureAttributeSet1_esig_file_attachment": {
         "fileID": "20600546",
         "fileType": "application/vnd.openxmlformats-
officedocument.wordprocessingml.document",
         "isFileSaved": false,
         "fileName": "DocuSignTestDocument2Signers.docx"
   },
   "criteria": {
      "state": true,
      "childDefs": [{  "name": "lineItem",  "queryDef": { "state": true} } ]
      }
   }
}
```


SAMPLE RESPONSE


```
{...
   "destinationNewWindowURL":
"https://demo.docusign.net/Member/StartInSession.aspx?StartConsole=1&t=4afcbf24-
2808-4e61-8107-496f7bd9410b&DocuEnvelope=95f8dd4d-af4c-47b4-87ec-d0c523989385"
...
}
```

Cancel e-Signature Request REST API

Cancel e-Signature Request REST API		
Description	This cancels the e-Signature REST API pending e-signature request.	
URI Endpoint	`/rest/v6/commerceDocuments{ProcessVarName}{MainDocVarName}/{_id}/actions/action_esig_cancel`	
Endpoint Parameters	`ProcessVarName`	The variable name of the Commerce process, the first letter must be capitalized
	`MainDocVarName`	The variable name of the main document, the first letter must be capitalized
	`_id`	The Commerce Transaction ID
HTTP Method	POST	
Request Body Parameters	`documents` and `cacheInstanceId` are optional	
	`cacheInstanceId`	Optional, use a”-1” value to load the complete transaction into the user’s cache
	`esigAttrSetVarName`	Variable name of the e-Signature attribute set
Success Response	The JSON data for the requested transaction, or a subset of transaction items, depending on the input request.	

URI ENDPOINT SAMPLE

```
https://sitename.oracle.com/rest/v6/commerceDocumentsOraclecpqoTransaction/
20487343/actions/_action_esig_cancel
```

SAMPLE REQUEST

```
{"esigAttrSetVarName": "eSignatureAttributeSet1_esig_set",
"documents": {
    "_eSignatureAttributeSet1_esig_recipients": "John Doe<john.doe@oracle.com>;",
        "quoteDescription" :"abcquote",
        "_eSignatureAttributeSet1_esig_file_attachment": {
            "fileID": "20600546",
            "fileType": "application/vnd.openxmlformats-
officedocument.wordprocessingml.document",
            "isFileSaved": false,
            "fileName": "DocuSignTestDocument2Signers.docx"
    },
    "criteria": {
        "state": true,
        "childDefs": [{  "name": "lineItem",  "queryDef": { "state": true} } ]
        }
    }
}
```

SAMPLE RESPONSE

```
{
"documents": {
"_eSignatureAttributeSet1_esig_recipients": "John Doe<john.doe@oracle.com>;",
"_eSignatureAttributeSet1_esig_file_attachment": {
            "fileID": "20600546",
            "fileType": "application/vnd.openxmlformats-
officedocument.wordprocessingml.document",
            "isFileSaved": false,
            "fileName": "DocuSignTestDocument2Signers.docx"
            },

"_eSignatureAttributeSet1_esig_envelope_id": null,

"_eSignatureAttributeSet1_esig_date_modified": "2018-03-11T20:28:44Z",

"_eSignatureAttributeSet1_esig_status": {
            "value": "Cancelled",
            "displayValue": "Cancelled"
            },

"sub": {},
"links": [
        {
        "rel": "self",
        "href": "../rest/v6/commerceDocumentsTestMain/20905405"
        }
        ],
   "_state":{}
},
"warnings": {}
}
```

Refresh Transaction REST API

Refresh Transaction REST API		
Description	This action refreshes the current Transaction with last saved data; the refresh action removes the existing values and replaces with the last saved data.	
URI Endpoint	`/rest/v6/commerceDocuments{ProcessVarName}{MainDocVarName}/{_id}/actions/{actionVarName}`	
Endpoint Parameters	`ProcessVarName`	The variable name of the Commerce process, the first letter must be capitalized
	`MainDocVarName`	The variable name of the main document, the first letter must be capitalized
	`_id`	The Commerce Transaction ID
	`actionVarName`	The variable name of the action to refresh a transaction
HTTP Method	POST	
Request Body Parameters	`documents` and `cacheInstanceId` are optional	
	`cacheInstanceId`	Optional, use a”-1” value to load the complete transaction into the user’s cache
Success Response	The JSON data for the requested transaction, or a subset of transaction items, depending on the input request.	

URI ENDPOINT SAMPLE

```
https://sitename.oracle.com/rest/v6/commerceDocumentsTransaction2Quote/
18097326/actions/refresh
```

SAMPLE REQUEST

```
{
"cacheInstanceId":"-1"
}
```

Refresh Transaction Line REST API

Refresh Transaction Line REST API		
Description	This action refreshes the current line item data with last saved data; the refresh action removes the existing values and replaces with the last saved data.	
URI Endpoint	`/rest/v6/commerceDocuments{ProcessVarName}{MainDocVarName}/{_id}/{subDocVarName}/{subDocNumber}/actions/{actionVarName}`	
Endpoint Parameters	`ProcessVarName`	The variable name of the Commerce process, the first letter must be capitalized
	`MainDocVarName`	The variable name of the main document, the first letter must be capitalized
	`_id`	The Commerce Transaction ID
	`subDocVarName`	The variable name of the sub-document
	`subDocNumber`	The sub-document number
	`actionVarName`	The variable name of the action to refresh a transaction line
HTTP Method	POST	
Request Body Parameters	`documents` and `cacheInstanceId` are optional	
	`cacheInstanceId`	Optional, use a”-1” value to load the complete transaction into the user’s cache
Success Response	The JSON data for the requested transaction, or a subset of transaction items, depending on the input request.	

URI ENDPOINT SAMPLE

```
https://sitename.oracle.com/rest/v6/commerceDocumentsTransaction2Quote/
18097326/transactionLine/2/actions/refreshSubDoc
```

SAMPLE REQUEST

```
{
"cacheInstanceId":"-1"
}
```

STEPS TO ENABLE

Transaction REST API enhancements are automatically available on CPQ Cloud 18B sites.

KEY RESOURCES

Refer to CPQ Cloud Administration Online Help for additional information.

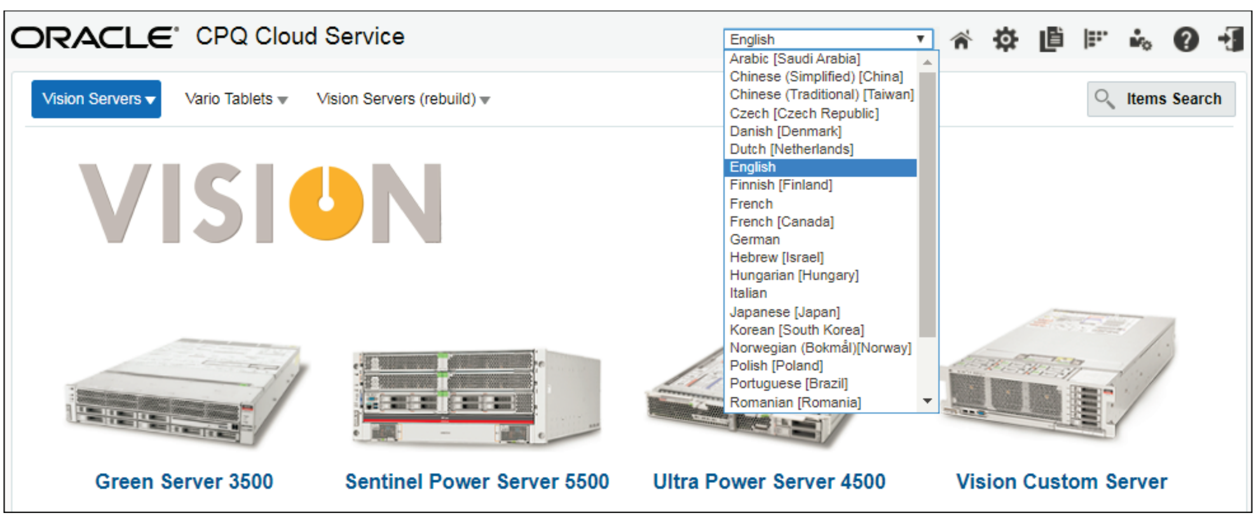
ADDITIONAL CPQ CLOUD ENHANCEMENTS

The CPQ Cloud Release 18B introduces the following enhancements to improve performance and simplify CPQ Cloud services.

- Current Session Language Selection
- CORS Access Control for REST APIs
- Migration Log Enhancements for Audit Compliance
- Overcrowded Mode Enhancements
- Performance Log Enhancements for Web Services
- Retain Recommended Item Selections during Reconfigure
- Upgrade Process Efficiencies

Current Session Language Selection

CPQ Cloud Release 18B provides users with the ability to change the language for the current session directly from UI pages, without updating their User Profile. In previous releases, users had to navigate to User Profile, change the language, and then navigate back to the desired page. Sales users can now change the language on the UI quickly and multiple times in a session allowing them to cater to the language requirements of different clients. When enabled, this enhancement provides a language selection menu in the application header for sales and administration pages.



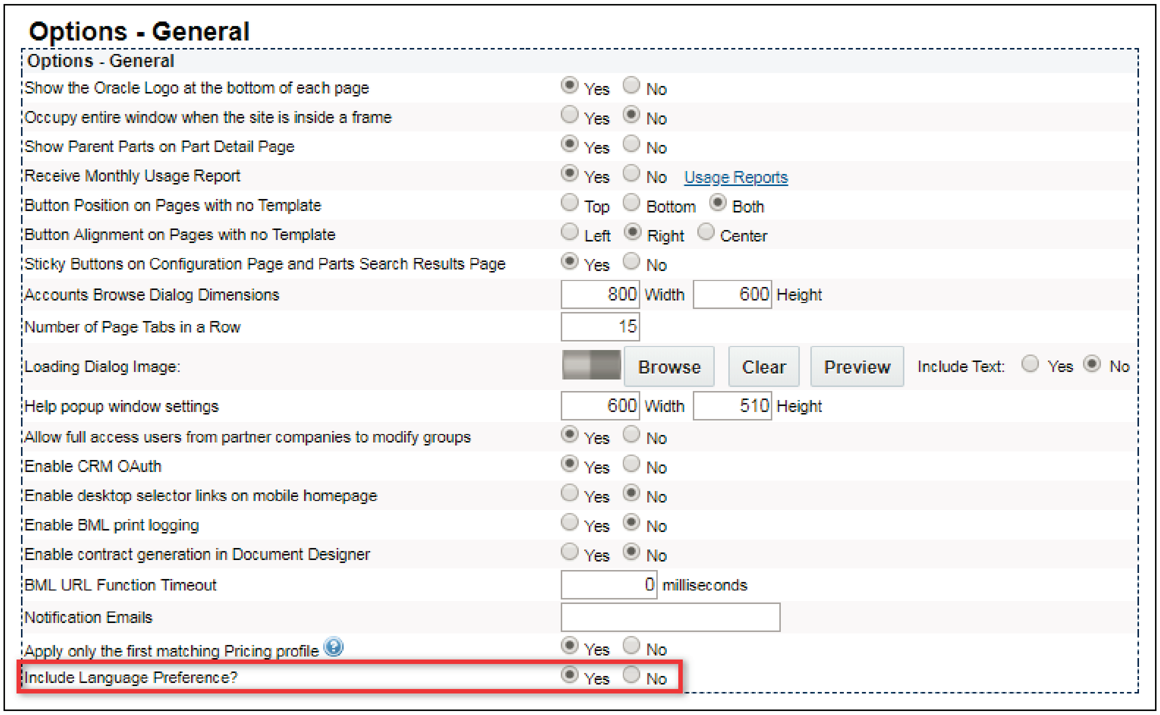
Current Session Language Selection

IMPORTANT: Users should save any work in progress prior to changing the current language since a page refresh is performed when a new language is selected.

Enable Current Session Language Selection

Complete the following steps to allow users to change the language selection for the current session.

1. Navigate to the Admin Home page.
2. Under **General**, click **General Site Options**.
   The **Options - General** page opens.



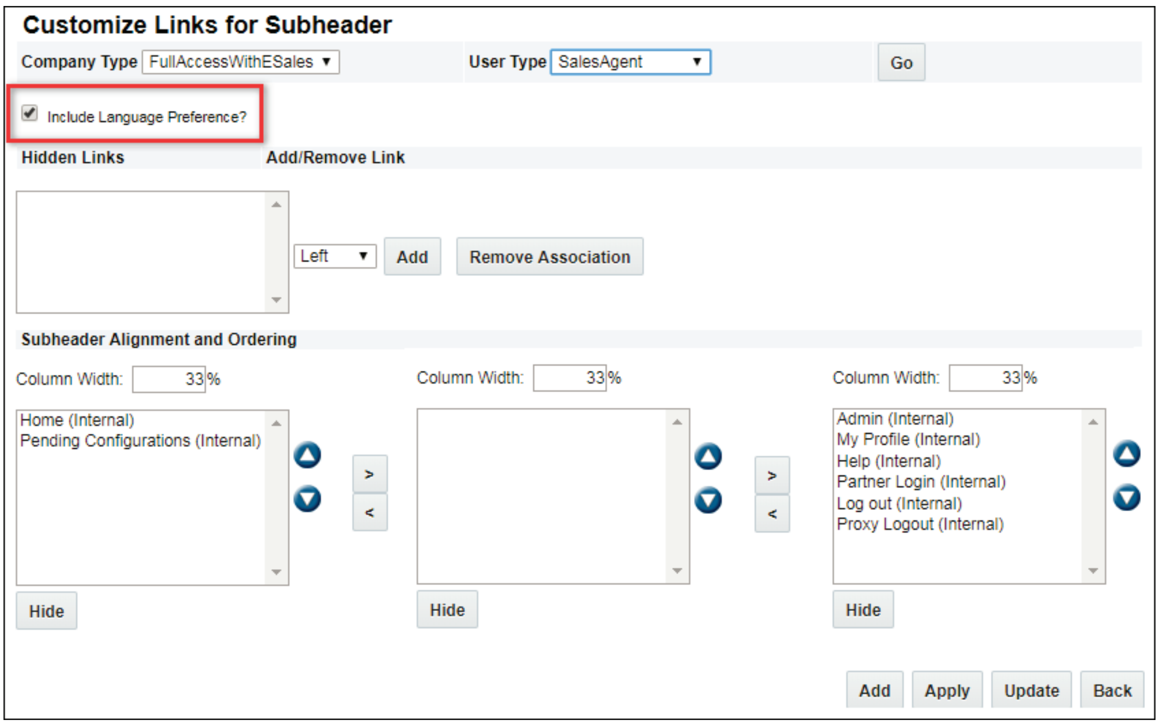
Options - General Page - Include Language Preference

3. Set the **Include Language Preference?** option to **Yes**.
4. Click **Update**.

Customize Current Session Language Selection by User Type

Administrators can also enable or disable Language Selection for specific User Types. Complete the following steps to customize Current Session Language Selection.

1. Navigate to the Admin Home page.
2. Under **Styles and Templates**, select **- Navigation Menus**.
   The **Navigation Menus** page opens.
3. Select **List Links** for the **Subheader** option.
   The **Navigation Items List - Subheader** page opens.
4. Select **Customize Menus**.
   The **Customize Links for Subheader** page opens.



Customize Links for Subheader

5. Select the desired **Company Type** and **User Type**, then click **Go**.
   The settings for the specified User Type display.
6. Set the **Include Language Preference?** option:
   - Select this option to enable Current Session Language Selection for the selected User Type.
   - Unselect this option to disable Current Session Language Selection for the selected User Type.
7. Click **Update**.

IMPORTANT: Alta UI Navigation does not support Current Session Language Selection.

CORS Access Control for REST API

Cross-Origin Resource Sharing (CORS) enables secure communication when using a browser-based programming language, such as JavaScript, to access content from another domain using HTTP requests. Previously without CORS Headers, calls into CPQ REST endpoints from other domains in a browser context would be blocked.

In CPQ 18B, trusted origins can access CPQ REST services, and access-control headers can be included in CPQ REST responses. This enables applications in external domains to verify permissions on a CPQ site. CORS enables better access control for CPQ Cloud REST APIs when invoked by external applications by providing support for CORS headers to be included in REST responses.

This functionality is enabled by default. Customers wishing to enable CORS Headers support for external applications should file a Service Request to establish their white-listed trusted origins. The following table lists the supported CORS headers.

CORS Headers	Purpose
Access-Control-Allow-Origin	Contains a comma-separated list of trusted origins that a client application can access resources from. For example: http://externaldomain.com Note: An origin value must be provided for this header to enable CORS.
Access-Control-Max-Age	Specifies the duration of storing the results of a request in the preflight result cache. The default value for caching preflight requests is 3600 seconds.
Access-Control-Allow-Methods	Contains a comma-separated list of permitted HTTP methods supported in a CPQ REST API request. Default values for allowed methods are GET, POST, PUT, PATCH, Delete, and OPTIONS.
Access-Control-Allow-Headers	Contains a comma-separated list of permitted HTTP headers supported in a CPQ REST request. Default values for allowed headers are Accept, Accept-Encoding, Cache-Control, Content-MD5, Content-Type, If-Match, If-None-Match, Origin, User-Agent, X-HTTP-Method-Override, X-Requested-By. Note: "Authorization" must be included in the list of allowed headers For example: Accept, Accept-Encoding, Cache-Control, Authorization
Access-Control-Allow-Credentials	Specifies whether a client application can send user credentials with a request. This option accepts two values: True to enable sending credentials with the request False, which is the default value, to disable sending credentials with the request

Migration Log Enhancements for Audit Compliance

CPQ Cloud Release 18B delivers an audit compliance property for migration logs. This property allows customers to specify how long migration events are retained before deletion. When an audit compliance timeframe is specified, the delete option will not be available for events within the specified timeframe. The default setting for this property is blank, which allows the deletion of all the migration events prior to and including the current date. Customers must open a Service Request on My Oracle Support to establish and specify the duration of an audit compliance timeframe. The duration setting, which is specified in months, determines how long migration events are maintained before allowing deletion.

Overcrowded Mode Enhancements

Overcrowded mode was introduced in CPQ Cloud 2017 R1 to keep environments running during extremely high loads. During Overcrowded mode, the timeout of idle sessions is reduced and the CPQ Cloud site temporarily prevents users, integrations, and BML URL access functions from creating new sessions to ensure active users can complete their Transactions. CPQ Cloud Release 18B provides SuperUser access during Overcrowded mode to enable site administrators to address performance issues.

CPQ Cloud Release 18B also adds a timestamp to notification emails that are sent when a site enters or exits Overcrowded mode. The timestamp, which corresponds to the site server time, allows administrators to identify the Overcrowded mode timeframe.

Performance log Enhancements for Web Services

CPQ Cloud Release 18B provides Performance Log enhancements to capture details for SOAP and REST API requests. Performance Logs will record all web service calls invoked from integrations, external applications, BML scripts, etc. All properties (except the Browser time) are populated with valid data for each request. The web service type (i.e. SOAP API or REST API) is listed in the Event Type column and action (e.g. getTransaction, _change_currency, etc.) is listed in the Action column.

Retain Recommended Item Selections during Reconfiguration

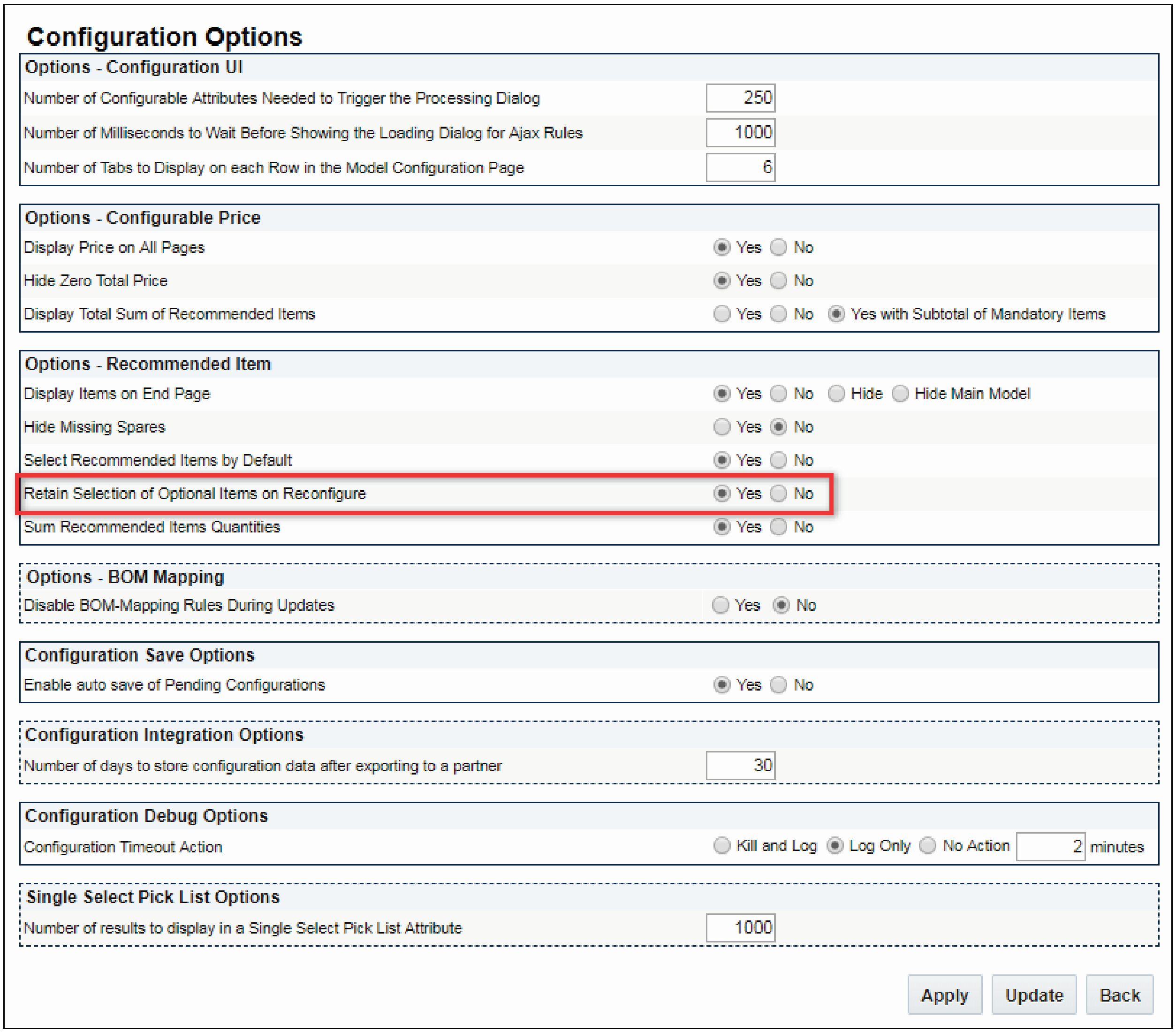
CPQ Cloud Release 18B provides the ability to retain Recommended Item selections during Reconfiguration. The **Retain Selection of Optional Items on Reconfigure** and the **Select Recommended Items by Default** Configuration options determine the selection of Recommended Items during Configuration and Reconfiguration.

- When **Retain Selection of Optional Items on Reconfigure** is set to "Yes", the **Select Recommended Items by Default** setting only affects the Recommended Item selections for newly added items. The user's Recommended Item selections are retained when a model is reconfigured.
- When **Retain Selection of Optional Items on Reconfigure** is set to "No", the user's Recommended Item selections are reset when a model is reconfigured. When the **Select Recommended Items by Default** option is set to "Yes" all Recommended Items are selected, and when the option is set to "No" all Recommended Items are unselected.

Enable Retain Selection of Optional Items on Reconfigure

Complete the following steps to enable the Retain Selection of Optional Items on Reconfigure option:

1. Navigate to the Admin Home Page
2. Under **Products**, click **Configuration Settings**.
   The **Configuration Options** page opens.
3. Set the **Retain Selection of Optional Items on Reconfigure** option to "Yes".
4. Click **Update**.



Configuration Options Page

Upgrade Process Efficiencies

- Provides improved processing time when performing CPQ Cloud upgrades.
- Provides improved processing time while deploying new or modified elements when performing Configuration and Commerce actions.

DIFFERENTIATE

Pioneer the next generation selling platform using the following CPQ Cloud 18B features:

- Rating/Pricing Engine
- Deal Management Enhancements
- System Configuration Enhancements

RATING/PRICING ENGINE

Companies use Rating/Pricing Engines to address increasing market requirements to sell products and services in a subscription model. The subscription model allows customers to manage a given product or service as a recurring or usage-based price item. The exact value for a starting or list price is derived by applying various pricing schemes such as flat fee, tiered, usage, overage, etc.

In Release 18B, CPQ Cloud expands the capabilities of the Customer Specific Pricing (CSP) profiles to support a wider range of pricing use cases. This is accomplished by enabling Pricing Profiles to be defined using additional attributes and advanced pricing functions, applying multiple Pricing Profiles to derive the list price for parts and lines, and supporting the ability to provide real-time pricing using RESTful web services.

To reflect these expanded capabilities the link on the Oracle CPQ Cloud Admin home page now appears as **Rating/Pricing Engine** as shown below.

Admin Home Page - Rating/Pricing Engine Link

The following platform enhancements provide added flexibility for customers to manage their process for deriving list pricing using CPQ Cloud Release 18B:

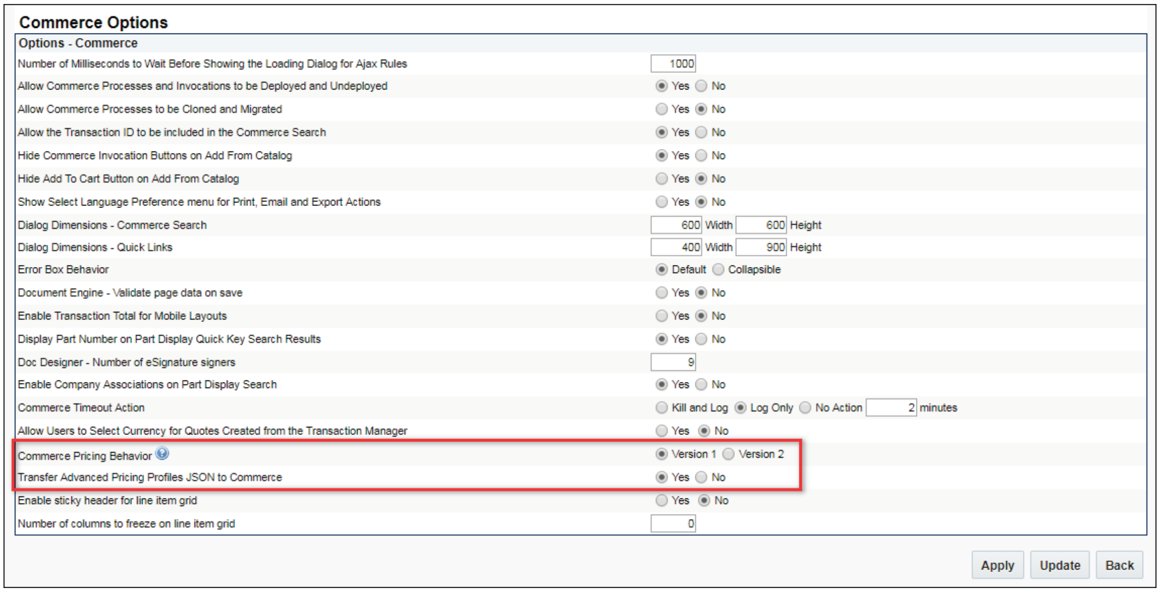
- Pricing Attributes now allow administrators to map to source attributes from the Rating/Pricing Engine, which automatically populates values for Pricing Rules and Pricing Profiles.
- A new Advanced Pricing Rule type allows administrators to enter custom BML functions referencing Pricing Attributes that define the transactions to which Pricing Profiles will be applied.
- A new Advanced Discount type for Pricing Profiles allows administrators to define advanced conditions based on Pricing Attribute values to determine when Pricing Rules will be applied.
- The new Calculate Price REST API provides the ability for external applications to retrieve pricing information from CPQ.
- Interface Catalog enhancements allow administrators to define and upload custom pricing components for the Calculate Pricing REST API.
- Migration Center enhancements enable migration of Pricing Attributes, Custom schema components, Profiles, and Rules.

Rating/Pricing Engine Options

CPQ Cloud Release 18B introduces new Commerce and General Options to support the Rating/Pricing Engine. The new Rating/Pricing Engine features entail changes to the order of operations for pricing calculations that may impact pre-existing pricing setup. For this reason, the features may be most easily adopted in net new pricing applications.

Complete the following steps to set up the Rating/Pricing Engine options:

1. Navigate to the Admin Home page.
2. Under **Commerce and Documents**, click **Commerce Settings**.
   The **Commerce Options** page opens.



Commerce Options Page > Pricing Options

3. Set the **Commerce Pricing Behavior** option.
   This option modifies the order of actions and formulas for line item updates.

   - **Version 1 -** (default) Select this option to use the default order for line item updates.
   - **Version 2** - Select this option to enable the Rating/Pricing Engine.
     This option populates the Main Document attributes before the Sub Document modify actions occur and Global Pricing calculations will occur before the execution of Formulas.

IMPORTANT:

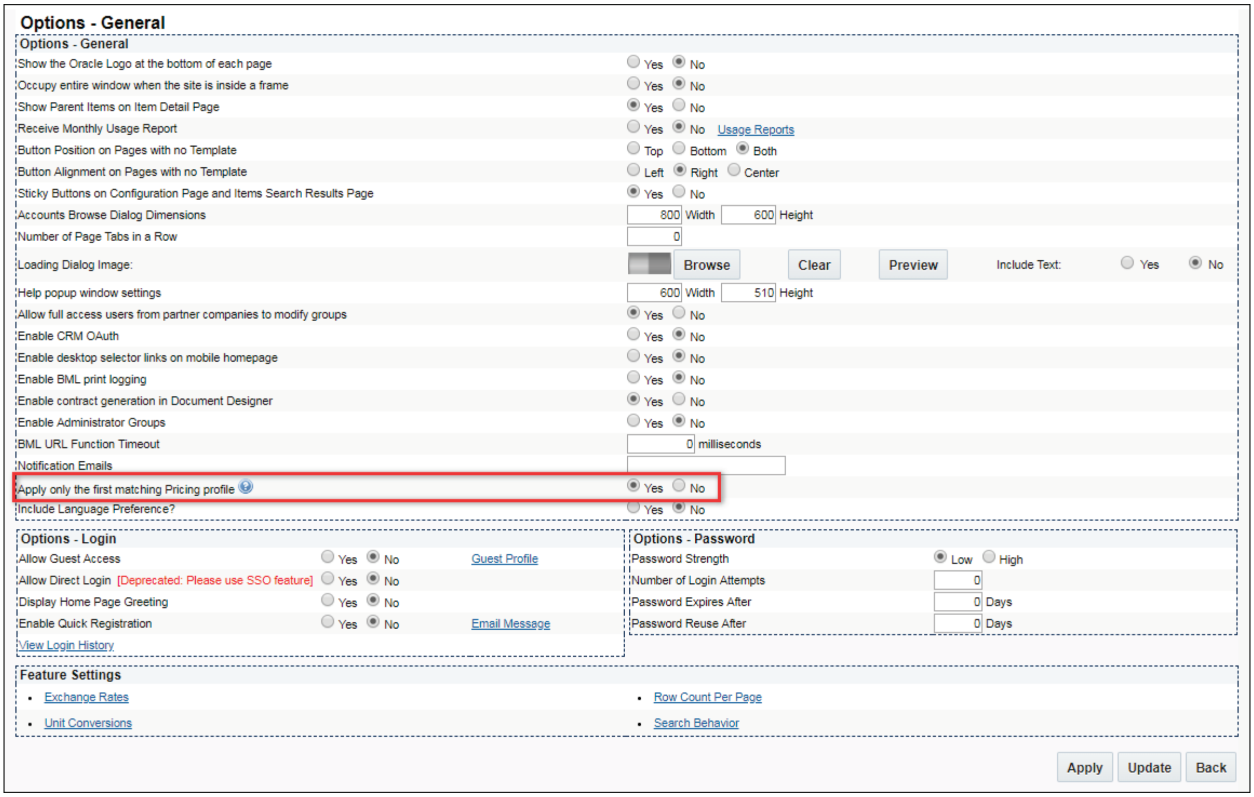
- Switching pricing Version options may affect existing pricing and transactions. Oracle recommends thoroughly testing the impact of the new version before implementing the change into a production environment. Once **Version 2** is enabled in a production environment, returning transactional data to **Version 1** may require significant effort.
- Release 18B introduces a new Commerce System Attribute,"_price_calculation_info", used to store in JSON the details of the pricing calculation performed by an Advanced Discount Pricing Profile. This attribute is automatically available in the Commerce Subdocument Price Attribute Set and will be populated in Commerce if the **Transfer Advanced Pricing Profiles JSON to Commerce** option is selected.

4. Set the **Transfer Advanced Pricing Profiles JSON to Commerce** option.
   This option determines if the Advanced Pricing Profile JSON information is sent to Commerce.

   - **Yes** - Select this option to send Advanced Pricing Profile JSON information to Commerce.
   - **No** - (default) Select this option to omit sending Advanced Pricing Profile JSON information.

5. Click **Update**.
   The Admin Home page opens.

6. Under **General**, click **General Site Options**.
   The **Options - General** page opens.



Options - General Page > Pricing Profile Option

7. Set the **Apply only the first matching Pricing profile** option.
   With the new support for multiple pricing profiles, administrators may choose how to apply these profiles at run-time. Either the first matching profile or all matching profiles will be applied based upon this setting.

   - **Yes** - (default) Select this option to apply only the first pricing profile that matches the pricing rule criteria to the part. If the same part is in multiple pricing rules, and within multiple profiles within a rule, the pricing rule price value is derived from the first rule (as shown in the list of rules on the Administration page) and the first profile within the rule (as shown in the List of Profiles section for the rule).

   - **No** - Select this option to apply all pricing profiles that match the pricing rule criteria to the part.

8. Click **Update**.

Pricing Attributes

CPQ Cloud Release 18B supports additional Pricing Attributes in the CPQ Cloud pricing module to enable Rating/Pricing Engine features. In addition to the Account Name and Part Number available in prior releases, Commerce or Parts attributes can be used to define pricing profiles for deriving list prices.

The pricing module calculates prices for Configuration, Invocation, Commerce, Reconfigure, and Calculate Price REST API web services using the Rating/Pricing Engine Profiles and Rules. When creating a quote within CPQ Cloud, existing integration functionality can be used to send contract and subscription data to external applications such as Oracle Contracts Cloud. These applications invoke the Calculate Price REST API to retrieve pricing information from CPQ Cloud.

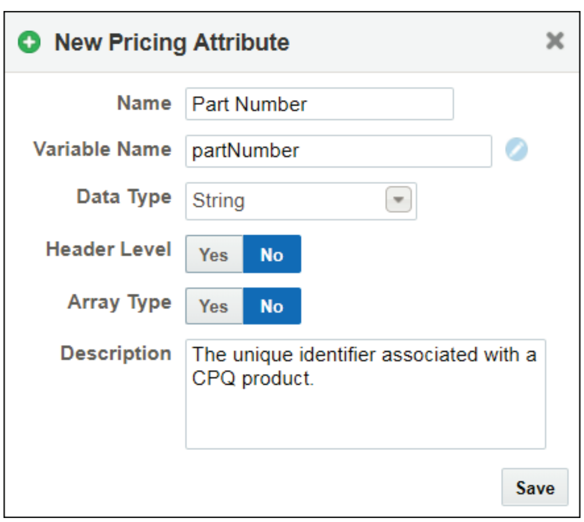
Administrators create Pricing Attributes and map source attributes in a Commerce process or in Part/Item data to be used in the Rating/Pricing Engine. After mapping, Pricing Attributes are available in defining Pricing Rules and Pricing Profiles and will automatically populate the values referenced in conditions and functions. As in previous releases, Pricing Rules are linked to applicable Pricing Profiles that apply prices to individual parts.

A new 'Attributes' tab has been added to the Rating/Pricing Engine for defining Pricing Attributes and their source mapping.

Create a Pricing Attribute

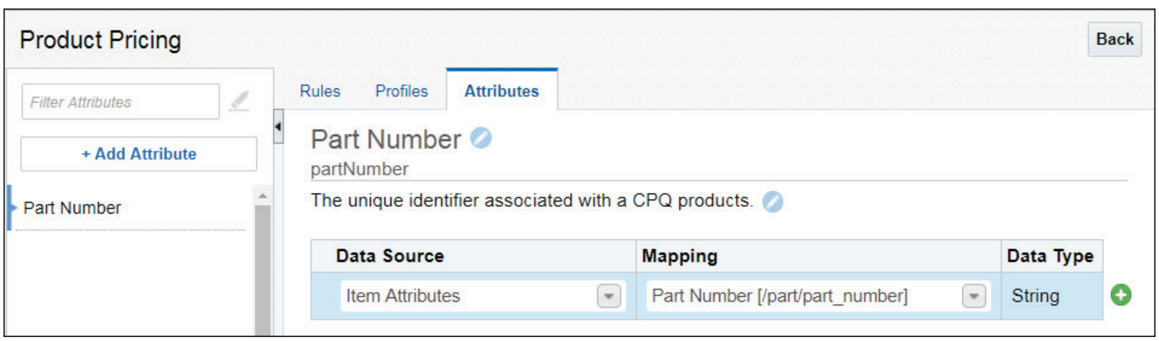
Complete the following steps to create a Pricing Attribute.

1. Navigate to the Admin Home Page.
2. Under the **Products** section, click **Rating/Pricing Engine**.
   The **Product Pricing** page opens.
3. Click the **Attributes** tab.
4. Click the **+ Add Attribute** button in the left panel.
   The **New Pricing Attribute** dialog box appears.



New Pricing Attribute Dialog

5. Enter a name in the **Name** field.
6. The **Variable Name** field populates automatically. The **Variable Name** can be changed before saving. After saving, this field is read-only. Variable names can only contain alphanumeric characters and underscores.
7. Select the **Data Type**.
8. Select the **Header Level** option:
   - **Yes** - Select this option for Contract Header attributes.
   - **No** - Select this option for Line Item attributes.
9. Select the **Array Type** option.
   - **Yes** - Select this option for Array attributes.
   - **No** - Select this option for Non-Array attributes.
10. Enter a **Description** (if desired).
11. Click **Save**.
    The **New Pricing Attribute** dialog box closes and the Pricing Attribute appears under the **Attributes** tab.



Product Pricing Attributes Tab

12. Select the **Data Source** from the drop-down menu.
13. Select the appropriate attribute from the **Mapping** drop-down menu.

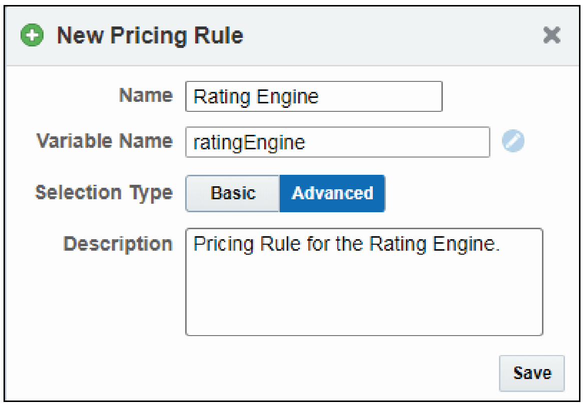
Advanced Pricing Rules

In prior releases, administrators could define the Account, Start Date, and End Date for Pricing Rules. CPQ Cloud Release 18B adds an Advanced Pricing Rule type, which allows administrators to define BML functions to define more flexible criteria for a Pricing Rule and to feed input values to the Rating/Pricing Engine. Advanced functions for Pricing Rules can reference only Main_Doc Pricing Attributes and must return TRUE or FALSE to indicate if the associated Pricing Profiles should be applied.

Create an Advanced Pricing Rule

Complete the following steps to add an Advanced Pricing Rule.

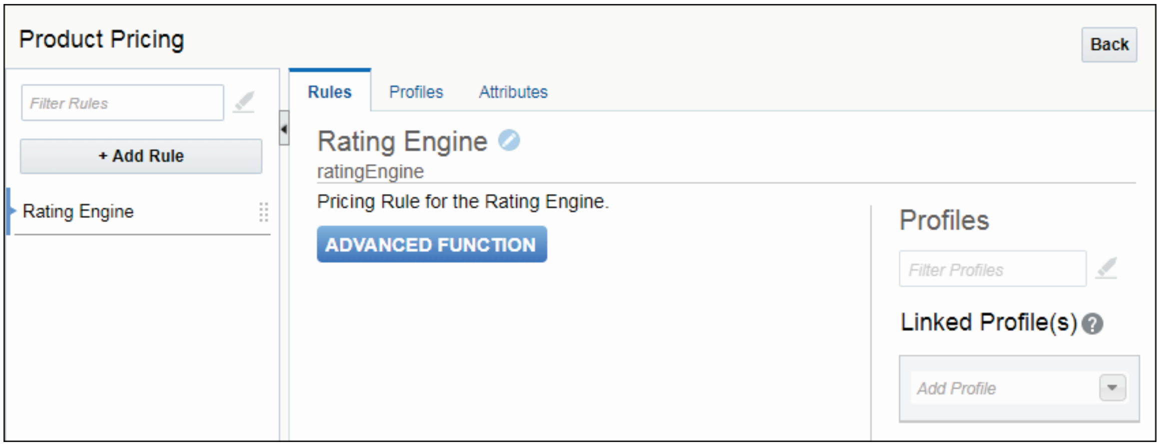
1. Navigate to the Admin Home Page.
2. Under the **Products** section, click **Rating/Pricing Engine**.
   The **Product Pricing** page opens.
3. Click the **Rules** tab.
4. Click the **+ Add Rule** button in the left panel.
   The **New Pricing Rule** dialog box appears.



New Pricing Rule Dialog

5. Enter a name in the **Name** field.
6. The **Variable Name** field populates automatically. The **Variable Name** can be changed before saving. After saving, this field is read-only. Variable names can only contain alphanumeric characters and underscores.
7. For the **Selection Type** option, select **Advanced**.
8. Enter a **Description** (if desired).

9. Click **Save**.
   The **New Pricing Rule** dialog box closes and the Pricing Rule appears under the **Rules** tab.



Product Pricing Rules Tab

10. Click **Advanced Function**.
    The **Select Attributes** window opens.
11. Select the applicable Pricing Attributes and Library Functions.
12. Click **Next**.
    The **BML Editor** opens.
13. Enter the applicable BML function.
    For example:

```
if (quoteType == "subscription") {
      return true;
}
return false;
```

14. Click **Save and Close**.

Pricing Profile Enhancements

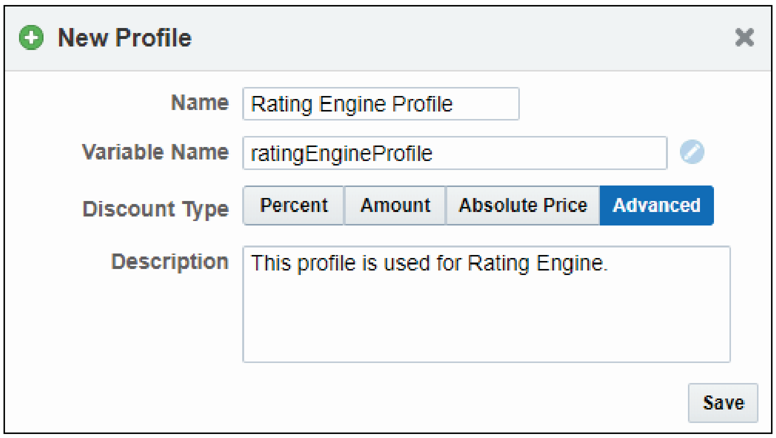
In prior releases, administrators could define simple Pricing Profiles for a part/currency combination using discount types of Percent, Amount, and Absolute Price. CPQ Cloud Release 18B adds an Advanced discount type, which allows administrators to define simple conditions and add advanced BML functions for Pricing Profiles. The advanced BML functions return the following pricing items:

- **Unit Price:** Displays Unit List Prices in CPQ Cloud Configuration and Commerce Price Attribute Set attributes ("_pricing_rule_price_each" and "_price_unit_price_each").
- **Pricing JSON:** Contains customer-defined data used for Rating/Pricing Engine integrations (see the new system attribute "_price_calculation_info" described above).

Create an Advanced Discount Type Pricing Profile

Complete the following steps to add an advanced BML function to Pricing Profiles.

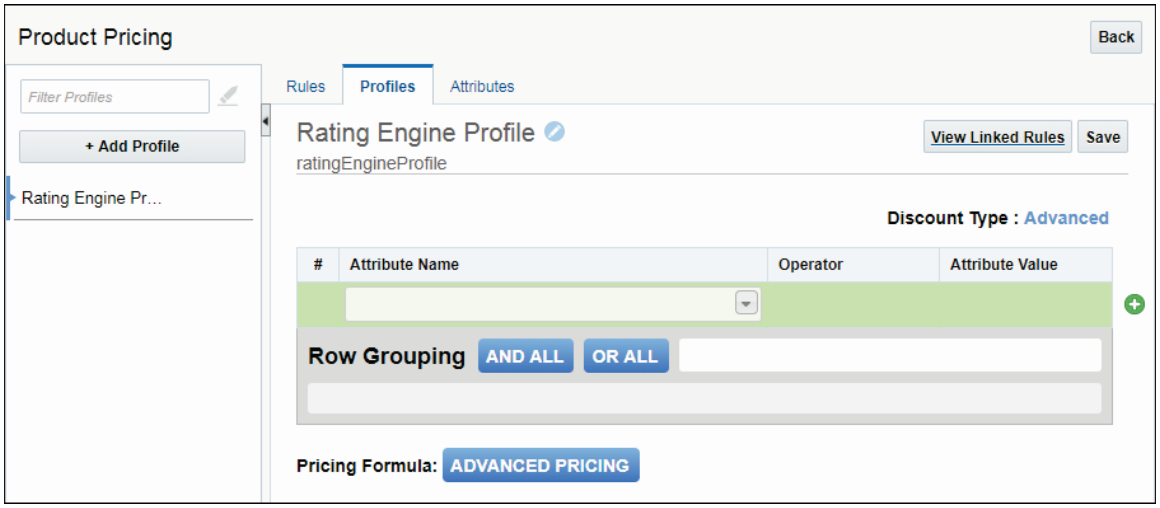
1. Navigate to the Admin Home Page.
2. Under the **Products** section, click **Rating/Pricing Engine**.
   The **Product Pricing** page opens.
3. Click the **Profiles** tab.
4. Click the **+ Add Profile** button in the left panel.
   The **New Pricing Profile** dialog box appears.

   New Profile Dialog

5. Enter a name in the **Name** field.
6. The **Variable Name** field populates automatically. The **Variable Name** can be changed before saving. After saving, this field is read-only. Variable names can only contain alphanumeric characters and underscores.
7. For the **Discount Type** option, select **Advanced**.
8. Enter a **Description** (if desired).

9. Click **Save**.
   The **New Pricing Profile** dialog box closes and the Pricing Profile appears under the **Profiles** tab.



Product Pricing Profiles Tab

Pricing Profile Conditions

10. Select the applicable **Attribute Name** from a dropdown list of the Pricing Attributes defined for this site.
11. Select an **Operator**.
12. Enter the desired **Attribute Value**.
13. Click the icon to add the condition to the Pricing Profile.
14. Enter **Row Grouping** if applicable.
15. Click **Save**.
16. Repeat Step 10 through Step 15 to add additional conditions.
17. Click **Advanced Pricing**.
    The **Select Attributes** window opens.
18. Select the applicable Pricing Attributes, Special Parameters, and Library Functions.
19. Click **Next**.
    The **BML Editor** opens.
20. Enter the applicable BML function.
21. Click **Save and Close**.

Calculate Price REST API

Calculate Price REST API		
Description	The Calculate Price REST API allows an external application to query CPQ Cloud for pricing information. CPQ Cloud executes contract rules and relevant profiles to calculate and return the final list price.	
URI Endpoint	`/rest/v6/pricing/actions/calculatePrice`	
Endpoint Parameters	None	
HTTP Method	POST	
Request Body Parameters	`customerId`	Transaction attribute, the ID associated with the customer account
	`currencyCode`	**Required** - Transaction attribute, the code for the desired currency
	`headerAttributeValues`	Customer defined Transaction pricing attributes (e.g. DateTime, pricingType)
	`priceBookVarName`	Transaction attribute, the variable name of the CPQ price book The default price book will be used if this parameter is not specified.
	`itemAttributeValues`	Customer defined Line Item pricing attributes (e.g. Usage), which are submitted as a name:value pair.
	`itemIdentifier`	**Required** - Part of `itemAttributeValues` Customer defined string value that is used to match request Line Items with response Line Items. (i.e. the document number from CPQ Cloud or a charge ID from Contracts Cloud)
	`partNumber`	**Required** - Part of `itemAttributeValues` The unique identifier associated with a CPQ product.
Response Body Parameters	`calculationInfo`	Calculation information from each price profile, listed in order of execution during the price calculation
	`itemIdentifier`	Customer defined Line item attribute that identifies each Line Item, used to match request Line Items with response Line Items.
	`partNumber`	Line Item attribute, the unique identifier associated with a CPQ product
	`unitPrice`	Final calculated unit price of the Line Item

URI ENDPOINT SAMPLE

```
https://sitename.oracle.com/rest/v6/pricing/actions/calculatePrice
```

SAMPLE REQUEST


```
{
   "currencyCode": "USD",
   "priceBookVarName": "_default_price_book",
   "customerId": "accountX",
   "headerAttributeValues": {
      "myPricingType": "recurring",
      ...
   },
   "items": [{
         "itemIdentifier": "2",
         "partNumber": "part1",
         "itemAttributeValues": {
            "myUsage": 15.2,
            ...
         }
      }, {
         "itemIdentifier": "3",
         "partNumber": "part1",
         "itemAttributeValues": {
            "myUsage": 80,
            ...
         }
      }, {
         "itemIdentifier": "4",
         "partNumber": "part2"
      }
   ]
}
```


SAMPLE RESPONSE


```
{
   "items": [{
         "itemIdentifier": "2",
         "partNumber": "part1",
         "unitPrice": 2.34,
         "calculationInfo": [{
               ...
            }, ...]
      }, {
         "itemIdentifier": "3",
         "partNumber": "part1",
         "unitPrice": 5.67,
         "calculationInfo": [{
               ...
            }, ...]
      }, {
         "itemIdentifier": "4",
         "partNumber": "part2",
         "unitPrice": 80.00,
         "calculationInfo": [{
               ...
            }, ...]
      }
   ]
}
```

Interface Catalog Enhancements

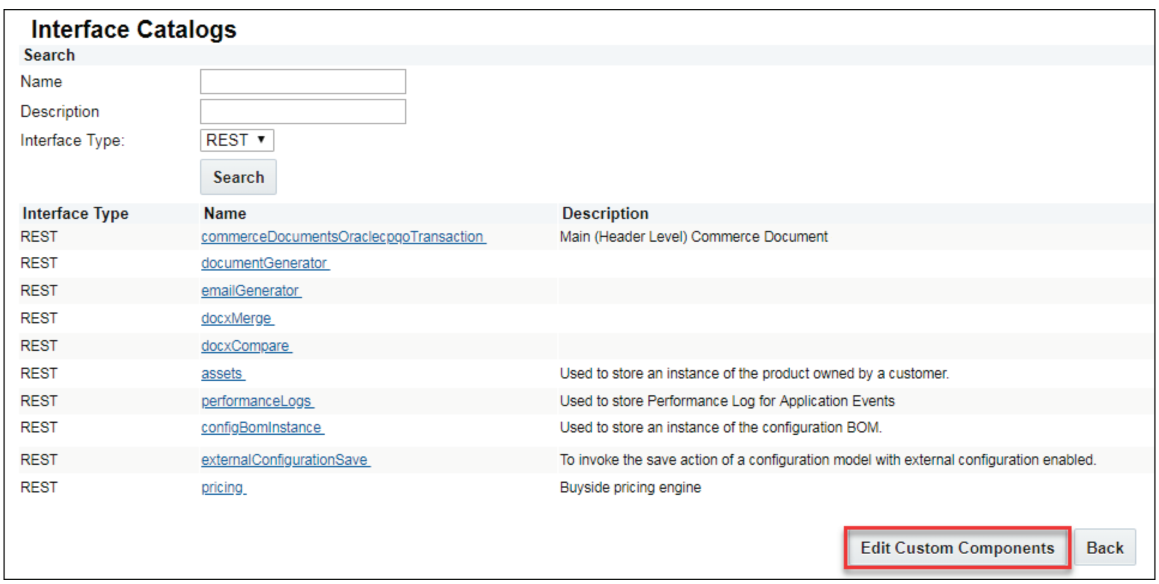
The Calculate REST API supports the customization of pricing components contained in the Pricing Calculation Info JSON attribute. Customers can integrate the elements of this JSON attribute with external applications. The Interface Catalog enhancements enable administrators to upload the customer-specific definition for the Calculate Price REST API to the CPQ Interface Catalog. This creates an accurate reflection of REST API pricing components for web service calls and component mapping such as that used in Oracle's Integration Cloud Services (ICS).

Custom pricing element definitions are listed within the "profileCalculationInfo" component in the Calculate Price REST API. By defining the custom elements contained in the "profileCalcaulationInfo" attribute in the REST API metadata, consuming applications can interpret and use these elements to understand the pricing calculations performed by CPQ's Rating/Pricing Engine.

Define Custom Pricing Components for the Calculate Price REST API

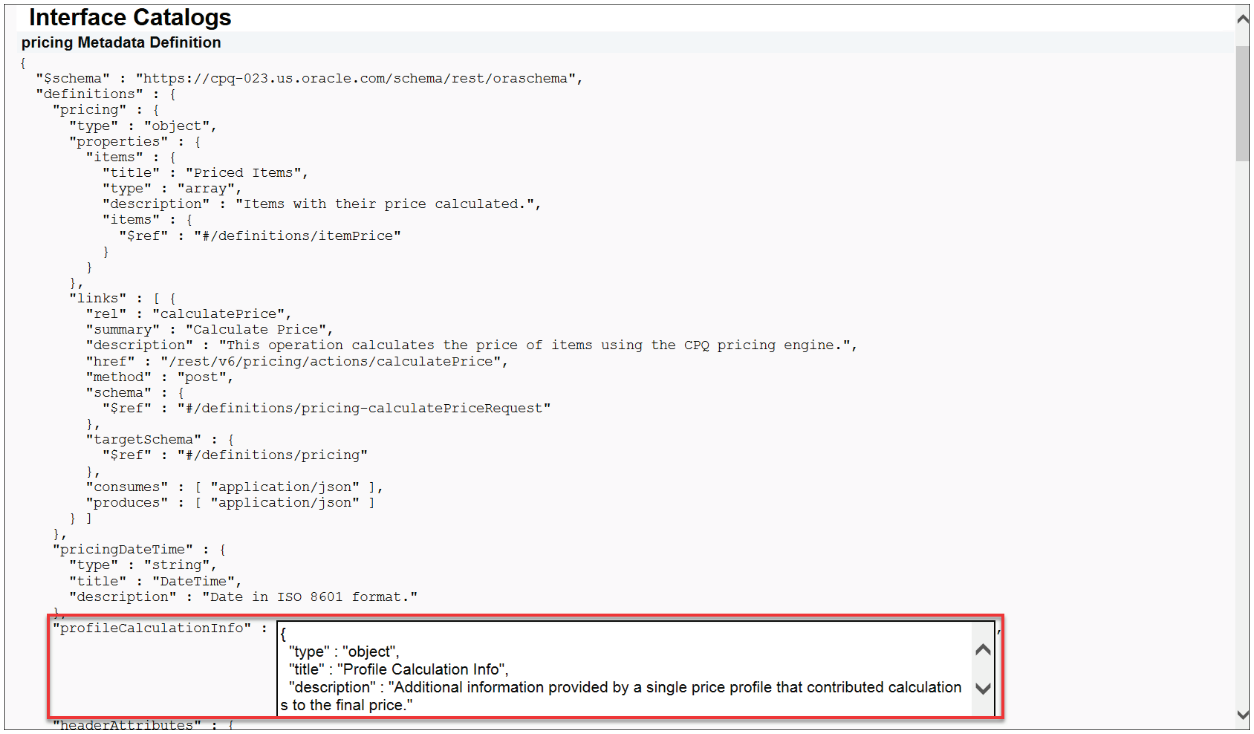
Complete the following steps to upload the custom definition for the Calculate Price REST API to the CPQ Interface Catalog:

1. Navigate to the Admin Home Page.
2. Under **Integration Platform**, click **Interface Catalogs**.
   The **Interface Catalogs** page opens.



Interface Catalogs Page

3. Click **Edit Custom Components**.
   The **Pricing Metadata Definition** opens.



Interface Catalogs

pricing Metadata Definition


```
{
  "$schema" : "https://cpq-023.us.oracle.com/schema/rest/oraschema",
  "definitions" : {
    "pricing" : {
      "type" : "object",
      "properties" : {
        "items" : {
          "title" : "Priced Items",
          "type" : "array",
          "description" : "Items with their price calculated.",
          "items" : {
            "$ref" : "#/definitions/itemPrice"
          }
        }
      },
      "links" : [ {
        "rel" : "calculatePrice",
        "summary" : "Calculate Price",
        "description" : "This operation calculates the price of items using the CPQ pricing engine.",
        "href" : "/rest/v6/pricing/actions/calculatePrice",
        "method" : "post",
        "schema" : {
          "$ref" : "#/definitions/pricing-calculatePriceRequest"
        },
        "targetSchema" : {
          "$ref" : "#/definitions/pricing"
        },
        "consumes" : [ "application/json" ],
        "produces" : [ "application/json" ]
      } ]
    },
    "pricingDateTime" : {
      "type" : "string",
      "title" : "DateTime",
      "description" : "Date in ISO 8601 format."
    },
    "profileCalculationInfo" : {
 "type" : "object",
 "title" : "Profile Calculation Info",
 "description" : "Additional information provided by a single price profile that contributed calculations to the final price."
    "headerAttributes" : {
```


Pricing Metadata Definition

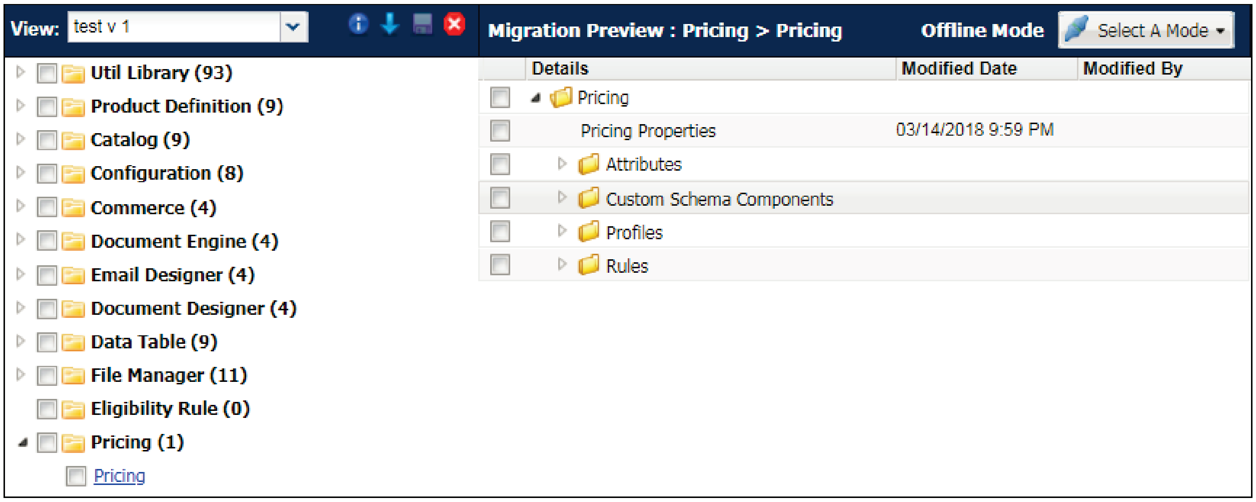
4. Enter the custom definition in the **profileCalculationInfo Definition** field.
   For example: the following definition adds pricing code, extended price, and description items to the Calculate Price REST API.

```
{
   "type": "object",
   "title": "Profile Calculation Info",
   "description": "Additional information provided by a single price profile
that contributed calculations to the final price.",
   "properties": {
      "pricingComponents": {
         "title": "Pricing Description",
         "type": "array",
         "items": {
            "title": "Component",
            "type": "object",
            "properties": {
               "code": {
                  "title": "Code",
                  "type": "string",
                  "description": "Pricing code"
               },
               "extPrice": {
                  "title": "Extended Price",
                  "type": "number",
                  "description": "Extended price for item"
               },
               "description": {
                  "title": "Description",
                  "type": "string",
                  "description": "Description for pricing component"
               }
            }
         }
      }
   }
}
```

5. Click **Save**.
   The Pricing Metadata Definition is updated to reflect the custom definition.

Pricing Migration

The Migration Center is the user interface where all migration takes place within CPQ Cloud. In CPQ Cloud Release 18B, "Pricing" displays as a migration component in the Content pane. Administrators can migrate pricing properties, attributes, custom schema components, profiles, and rules as independent entities and include pricing components in a migration package using the Migration Center functionality available in prior releases. In addition, administrators can view the granular differences between pricing components between the source and target sites.



Migration Center Pricing Details

STEPS TO ENABLE

Administrators must set up General Site Options and Commerce Options to enable the Rating/Pricing Engine.

TIPS AND CONSIDERATIONS

Consider the following tips when using the Rating/Pricing Engine feature:

IMPORTANT: Switching pricing Version options may affect existing pricing and transactions. Oracle recommends thoroughly testing the impact of the new version before implementing the change into a production environment. Once **Version 2** is enabled in a production environment, returning transactional data to **Version 1** may require significant effort.

KEY RESOURCES

Refer to CPQ Cloud Administration Online Help for additional information.

DEAL MANAGEMENT ENHANCEMENTS

CPQ Cloud's Deal Management provides robust tools for sales representatives using CPQ Cloud to drive profitability. The Deal Negotiation features guide CPQ Cloud sales representatives in achieving optimal prices and discounts for their customers using Price Score metrics, Last Price Paid, and a Deal Comparison analytic. The Win Probability feature employs machine learning technology to aid sales users in understanding their customers' price sensitivity in the quoting process. The Price Optimization feature also applies machine learning to maximize either margins or net revenue by predicting the optimal discount percentage for a Transaction.

As part of continuing improvements to Deal Management, the following enhancements are available in CPQ Cloud Release 18B:

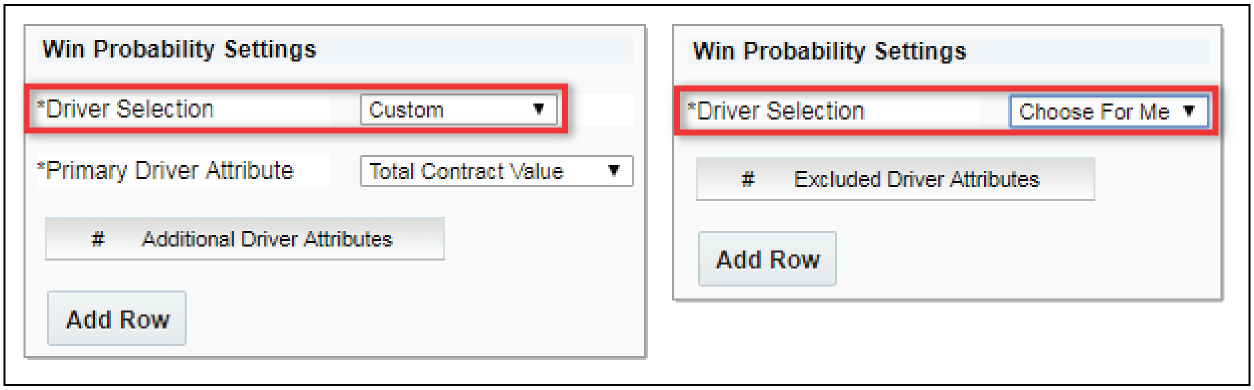
- Enhance the Win Probability Analytic
  - Use machine learning to automatically select driver attributes
  - View automatically selected driver attributes on the Training Details page
  - Preview analytics generated using automatically selected driver attributes
  - Use additional attributes for "Custom" Primary and Additional Driver Attributes
- Clone Win Probability, Price Optimization, and Deal Comparison analytics
- Migrate Deal Management analytics

Automatic Selection of Win Probability Driver Attributes

In previous releases, administrators manually specified attributes to drive the machine learning for Win Probability analytics. However, administrators may not have insight to which attributes are the real predictor of a win. CPQ Cloud Release 18B provides administrators with an option for CPQ Cloud to utilize machine learning to automatically choose the attributes to be used in predicting Win Probability. In addition to the pre-existing behavior (now labeled 'Custom'), administrators may select a "Choose For Me" option, which uses numeric and non-numeric driver attributes in order to address use cases where other, non-pricing-related factors are key determinants of the likelihood that a quote will become a closed sale. For example, win probability may vary significantly for different industries or geographies independent of the discounts offered.

Administrators can also select attributes to be excluded from the automatic driver selection (i.e. Excluded Driver Attributes) in order to avoid circular logic or address other business requirements. For example, the Commerce Step for a Transaction may indicate that the Transaction has already been converted to a sales order. As a result, this attribute will likely be identified as a driver attribute, even though it is of no value in predicting the outcome of an 'in progress' transaction. Administrators can select numeric, non-numeric and the following system attributes for **Excluded Driver Attributes**: System Number of Step Transitions, System Transaction Author Currency Preference, System Transaction Author Language Preference, System Transaction Update Count, and System Transaction Author User Id.

After an administrator creates a Win Probability analytic, the **Choose For Me** option will display as the default selection for the **Driver Selection** menu. When **Choose For Me** is selected, the option to select a Primary Driver Attribute is not available, but administrators can add and select **Excluded Driver Attributes**.



Win Probability Driver Selection

IMPORTANT:

- The **Choose For Me** Driver Selection option is only available for Win Probability analytics without Optimization, it is not available when the Win Probability type "with Optimization" option is selected. (i.e. **Choose For Me** is not available for Price Optimization analytics.)
- Since Price Optimization analytics (i.e. Win Probability analytics with Optimization) automatically optimize the transaction discount percentage as the **Primary Driver Attribute**, the 'Choose For Me' option is not available.
- However, customers can use the **Choose For Me** option to better inform their definition of Price Optimization analytics. The driver attributes selected by the **Choose For Me** option on a Win Probability analytic can be used as the **Additional Driver Attributes** in the definition of Price Optimization analytics.

After the **Status Attribute** and the **Won Value** are selected, the administrator initiates a training session to acquire driver attributes derived from machine learning.

Use Machine Learning to Select Win Probability Driver Attributes

Complete the following steps to use machine learning to select driver attributes for a Win Probability analytic:

1. Navigate to the Admin Home page.
2. Under **Commerce and Documents**, click **Process Definition**.
   The **Processes** page opens.
3. Next to the applicable process, select **Analytics** from the **Navigation** drop-down.
4. Click **List**.
   The **Analytics List** page opens.

5. Click **Add**.
   The **Analytics Definition Editor** page opens.
6. Define the following **Properties**:
   a. Enter a name in the **Name** field.

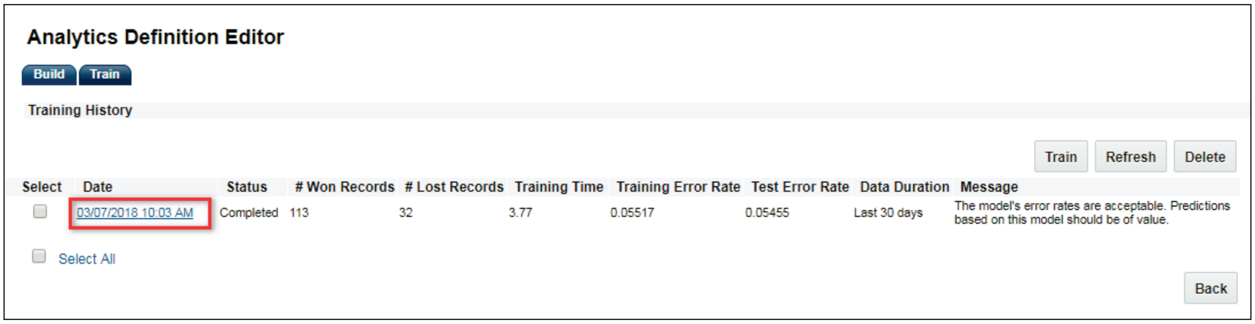
      The **Variable Name** field populates automatically. The **Variable Name** can be changed before saving. After saving, this field is read-only. Variable names can only contain alphanumeric characters and underscores.

   b. Enter a **Description** (if desired).
   c. Select **Win Probability** from the **Type** drop-down.
   d. Select the main Commerce document from the **Document** drop-down.
   e. Enter an analytic title in the **Title** field.
7. Click **Next**.
8. Define the following **Win Probability Settings**:
   a. Select **Choose For Me** from the **Driver Selection** drop-down.
   b. Click **Add Row** to define **Excluded Driver Attributes**, if desired.
   c. Select the **Status Attribute** from the drop-down.
   d. Select the **Won Value** attribute from the drop-down.
   e. Select the **Lost Value** attribute from the drop-down, if desired.
9. Click the **Train** tab.
   The **Training History** is displayed.
10. Click the **Train** button.

    After the training session is complete, the training session is listed in the **Training History** on the **Analytics Definition Editor** page under the **Train** tab.

    Use the **Refresh** button to update the Training History results.

IMPORTANT: A minimum of thirty Transactions are required to complete a training session.



Training History Results

11. Click the training session link.
    The **Training Details** page opens.

    The Training Details page displays the Test, Accuracy, Train Accuracy, Won Records, Lost Records, Training Time, and Drivers Selected.

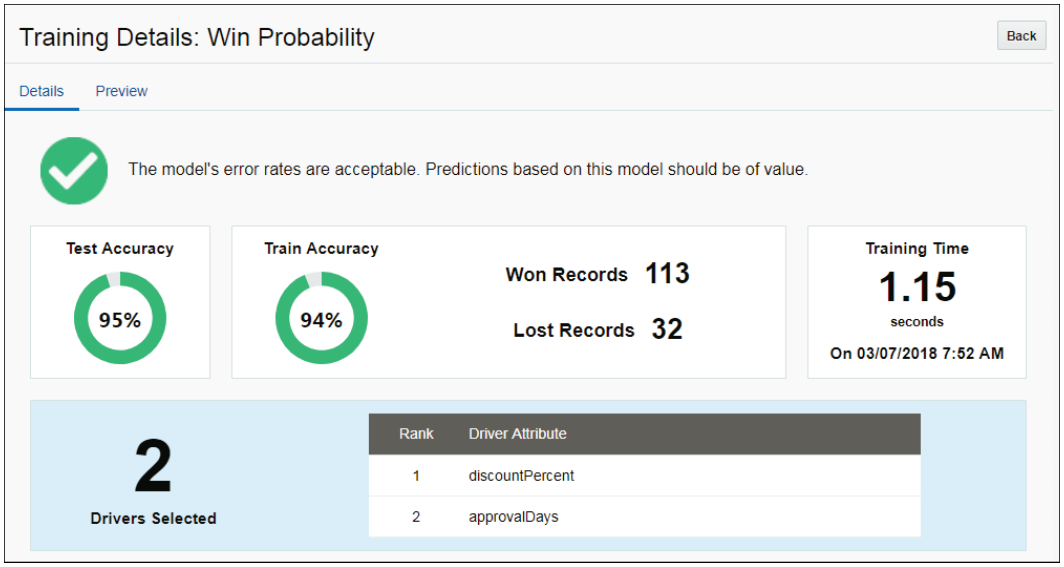
12. Evaluate the training session results.
13. Click **Back** to return to the Training History.
    Re-initiate training if the results are unacceptable.
14. Click the **Build** tab.
    The Driver Selection, Status Attribute, Won Value, and Lost Value attributes are now read-only.

IMPORTANT: To edit the Driver Selection, Status Attribute, Won Value, and Lost Value attributes following a successful training session, you can delete that training session and then editing is re-enabled for the attributes.

15. Define the following **Filters**, (if desired):
    a. Select a date attribute from the **Date Filter** drop-down.
    b. Select a time period value from the **Duration** drop-down.
    c. Click **Add Row** to define **Advanced Filters**.
16. Define the following **Output** values:
    a. Select a Commerce Modify-type action for the **Win Probability Trigger Action**.
    b. Select a Commerce attribute for the **Win Probability Value Prediction Attribute**.
17. Click **Update**.

View Automatically Selected Driver Attributes for Win Probability

The Training Details page is displayed when an administrator navigates to the Analytics Definition Editor Training tab and clicks a training session link. This page displays the Test Accuracy, Train Accuracy, the number of Won Records, the number of Lost Records (if the Lost attribute value is defined), and Training Time. If the "Choose For Me" option has been selected for this Win Probability analytic, the Drivers Selected by machine learning will also display as shown below:



Training Details Page - Details Tab

Preview Win Probability Analytics Generated Using the "Choose For Me" Option

The Win Probability Analytic Preview allows administrators to preview how driver attributes impact the analytic before displaying the results in a Commerce Transaction. Beginning in CPQ Cloud Release 18B, the Win Probability Analytic Preview will also provide a preview for analytics that are generated using the drivers selected using the "Choose For Me" option.

IMPORTANT: If the primary driver identified is not numeric, the Win Probability Analytics chart cannot be displayed and an error will display on the Training Details page Preview tab.

Additional "Custom" Driver Attributes for Win Probability

CPQ Cloud Release 18B enables the selection for the "Custom" Primary Driver Attribute from a broader set of options. Currency and Summation Commerce attributes, System Number of Step Transitions, and System Transaction Update Count attributes may also be selected as the Primary Driver Attribute.

Administrators can also select the following system attributes for Additional Driver Attributes: System Number of Step Transitions, System Transaction Author Currency Preference, System Transaction Author Language Preference, System Transaction Update Count, and System Transaction Author User Id.

IMPORTANT:

- Primary Driver Attribute selection is not available when using the **Choose For Me** option.
- The **Primary Driver Attribute** drop-down menu only displays the allowable numeric attributes.

Clone Deal Management Analytics

CPQ Cloud Release 18B provides the ability to clone Win Probability, Price Optimization, or Deal Comparison scatterplot analytics. This functionality allows administrators to quickly define and preview alternative analytics to evaluate the results with differing inputs.

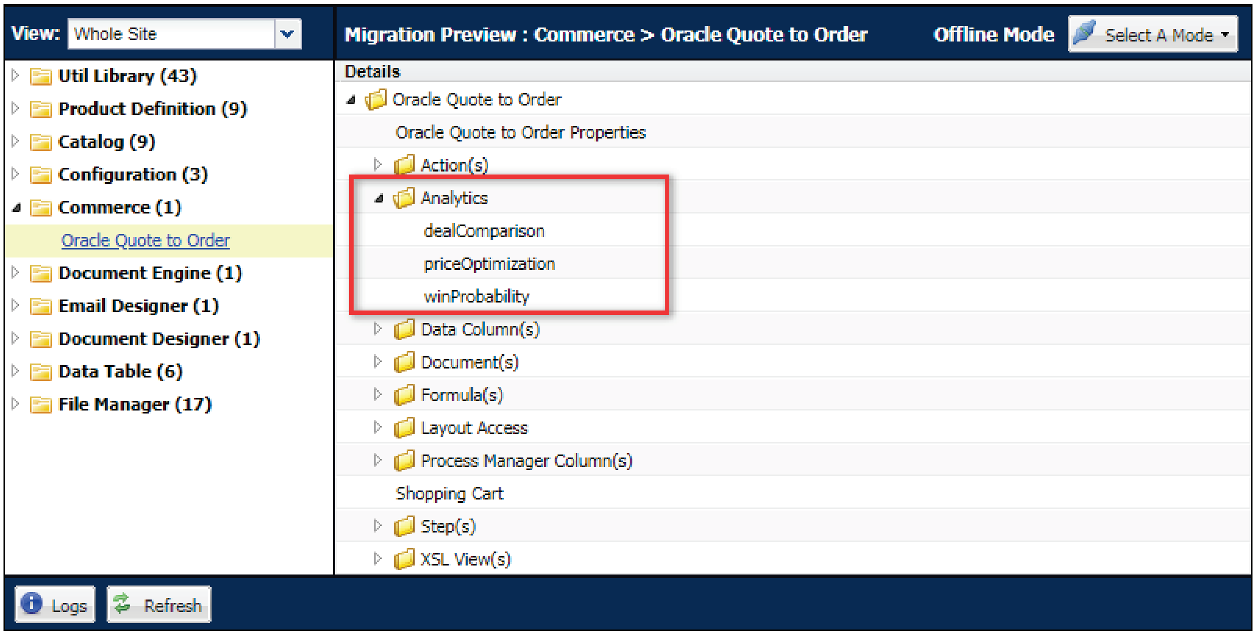
Complete the following steps to copy an analytic:

1. Navigate to the Admin Home page.
2. Under **Commerce and Documents**, click **Process**.
   The **Processes** page opens.
3. Select **Analytics** from the Navigation menu, next to the applicable process.
4. Click **List**.
   The **Analytics List** page opens.
5. Select the checkbox next to the applicable analytic.
6. Click **Copy**.
   The **Analytics Definition Editor** page opens.
7. Update the analytic properties as desired.
8. Initiate machine learning to train the new analytic.
9. Preview the new analytic to analyze the results.

IMPORTANT: Training sessions and results, and analytic output actions and attributes are not copied as part of the cloning process.

Migrate Deal management Analytics

The Migration Center is the user interface where all migration takes place within CPQ Cloud. Deal Management Analytics are displayed in the **Analytics** folder under the applicable Commerce process. Deal Management Analytics are migrated when the parent Commerce process is migrated.



Deal Management Analytics in Migration Center

STEPS TO ENABLE

The Deal Management enhancements are automatically available on CPQ Cloud 18B sites.

KEY RESOURCES

Refer to CPQ Cloud Administration Online Help for additional information.

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. A Bill of Material (BOM) instance is used to represent a set of products being bought together on a Quote.

The following example illustrates a complex System Configuration with multiple inter-model dependencies. Assume a telecommunications provider wants to offer multiple bundled packages to their customers or Sales teams, which could then be sold to large apartment complexes or businesses. These bundles typically have several models with multiple options and restrictions, such as:

- Different contract terms that can affect the price
- Different service areas that determine availability of various package items
- Various channel package options driven by region, contract term, and internet speed selection
- Internet speed options that have contract term restrictions and recommended equipment options
- CPQ Cloud also needs to capture other details to send to a fulfillment system. The sales user does not have to select these details (e.g. SKU numbers, internet details, cable wires, warranty information).
- The different products (e.g. cable boxes, internet routers, and phones) can reference the package attributes so the warranty periods for the different products are the same as the contract term, but there should be an option to set these items individually.

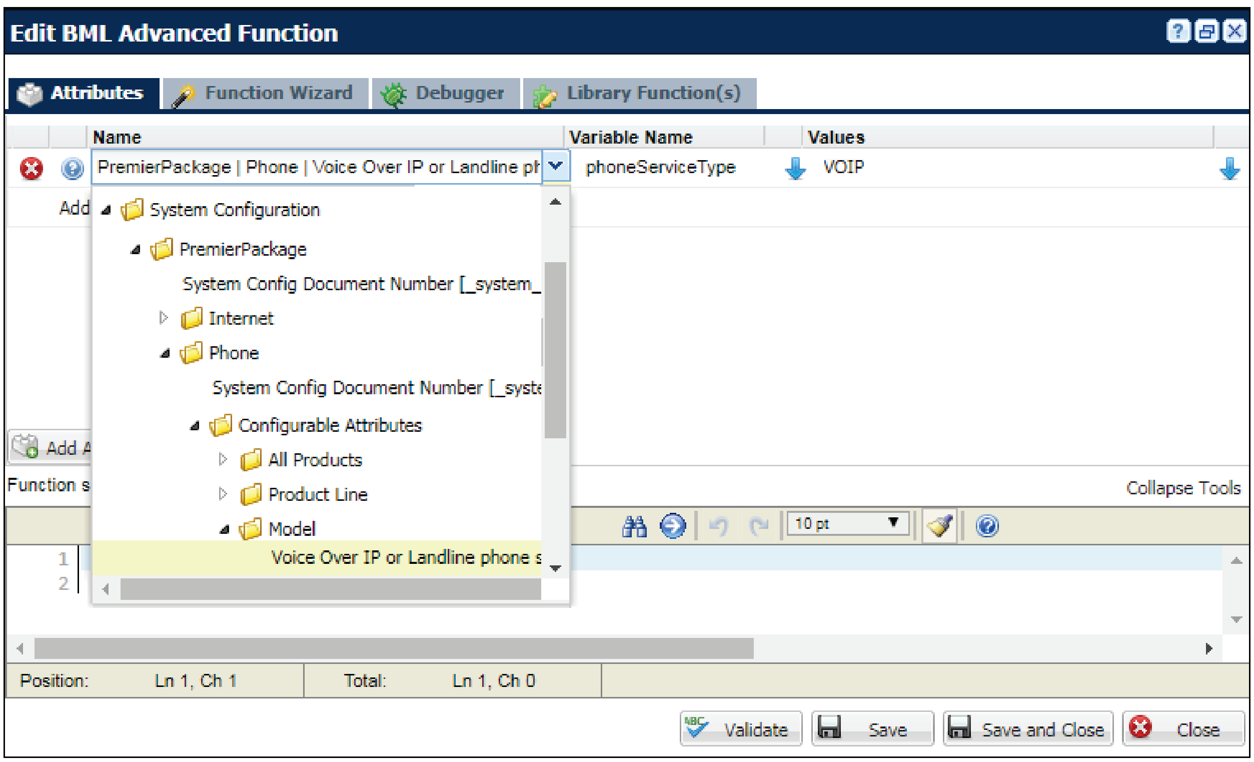
As part of continuing improvements to System Configuration, CPQ Cloud Release 18B enables the selection and migration of System Configuration attributes from other product families in advanced inter-model rules. These inter-model relationships can drive restrictions to define which selections can be made in each model. Such restrictions or recommendations help the end users (e.g. Sales, Self service, or resellers) accurately identify items for each configuration in context of the larger product set which is being sold to their customer. This feature supports the following Configuration rules types: recommendations, constraints, hiding, pricing, Configuration flows, and BOM Mapping rules for conditions or actions, when applicable.

Inter-Model Rules with References to Attributes in Other Product Families

CPQ Cloud Release 18B enables administrators to create configuration rules that reference configuration attributes from different product families. The System Configuration folder is available when there is at least one root item defined in an active BOM Item Definition Table, and will be shown when an administrator selects Add Attributes from within an advanced BML function.

The System Configuration folder shows all available root items on the site. Upon expanding a folder, the model and its associated attributes are displayed. In prior releases, only the models within the same product family as the rule being defined had the Configurable Attributes folder. Administrators select attributes from the Configurable Attributes folder to populate the advanced BML function.

For example: The following image shows a Constraint Rule for a cable modem within the Internet model, that references the phoneServiceType attribute within the Phone model.



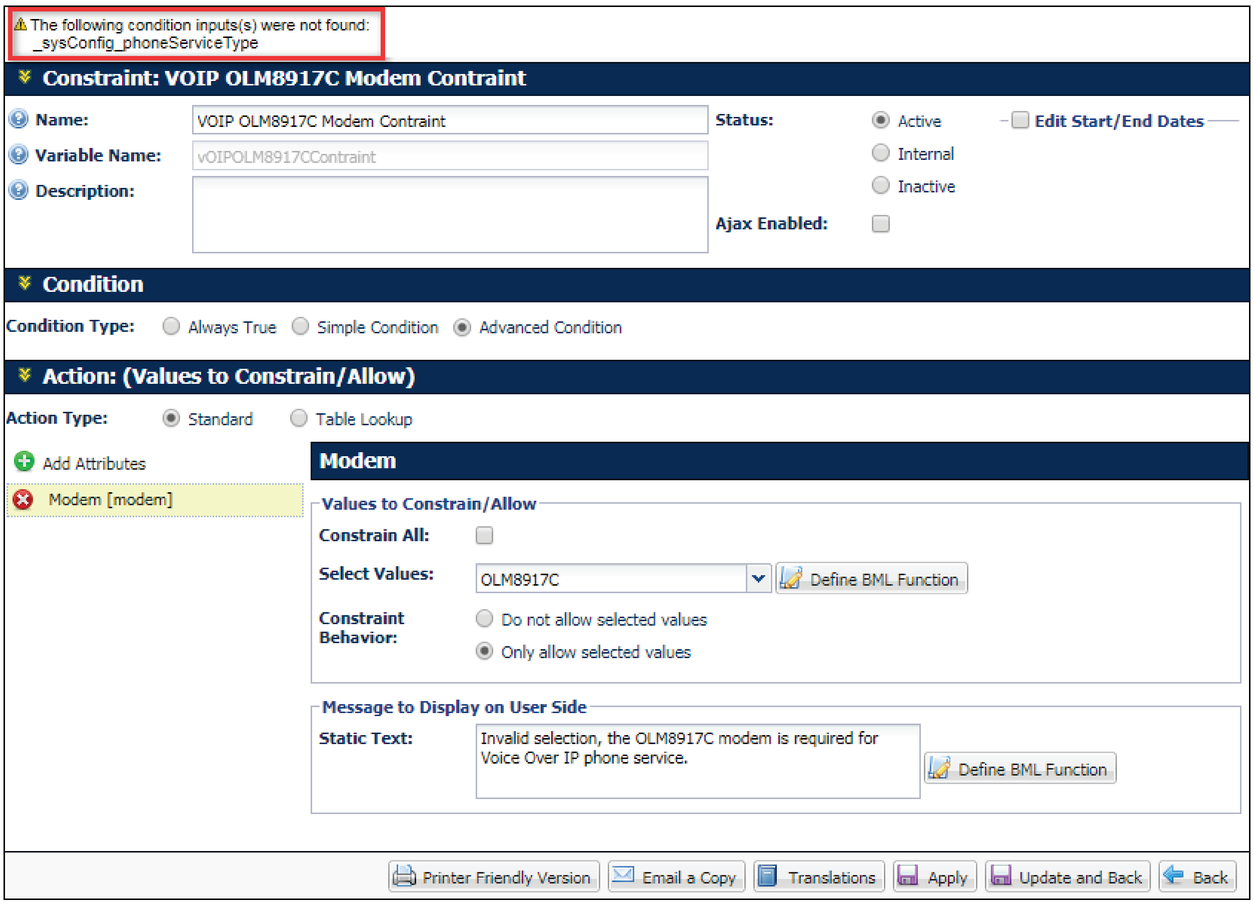
Constraint Rule with Inter-Model Attribute

IMPORTANT: Attribute values from BOM models will be empty until the BOM model is configured.

Cross-Product Family Migration

CPQ Cloud Release 18B provides the ability to migrate Configuration rules that reference System Configuration attributes even if they do not exist on the target site. Upon opening a migrated Configuration rule with references to an attribute that does not exist on the current site, administrators are given a warning message stating a reference is missing. During Configuration, an empty result value is returned when a referenced attribute does not exist.

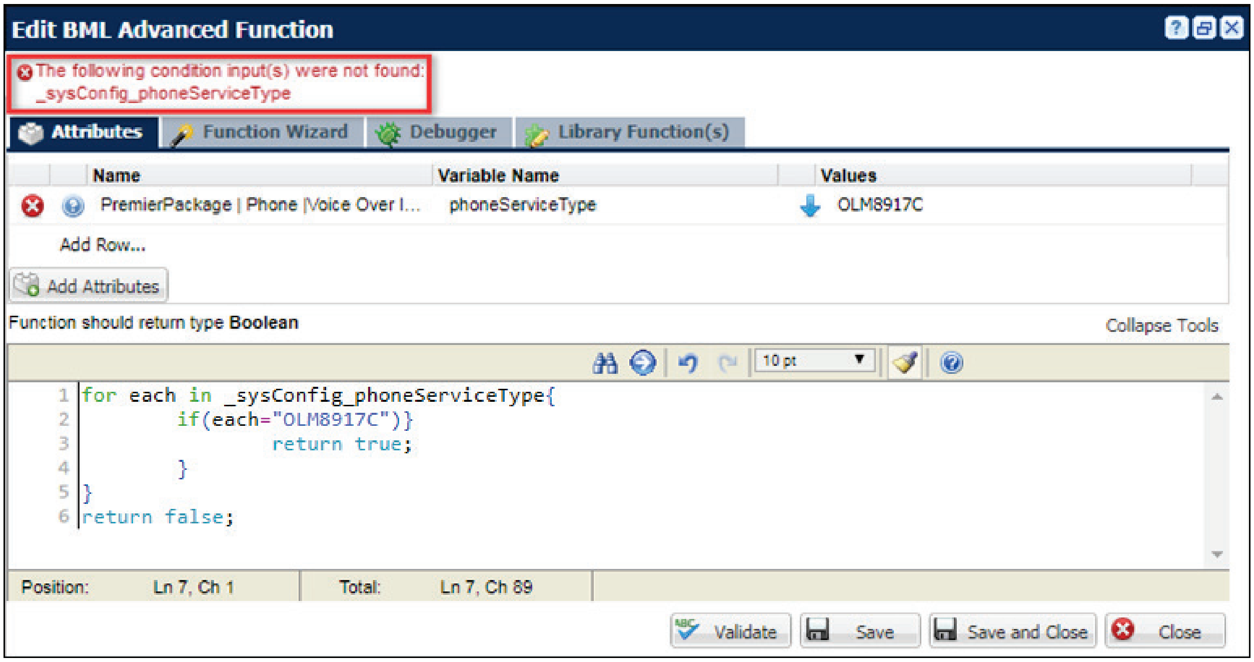
For example: The following image shows a warning message that is displayed when an administrator opens a migrated rule where the attribute does not exist on the current site.



Constraint Rule with Warning Message

Administrators can close the rule, but no changes to the rule can be saved until the reference is removed or the corresponding attribute exists on the current site. The warning message will change to an error message if the administrator attempts to validate or save a rule with a missing reference warning. Warning and error messages are also displayed in the BML Editor when the administrator views the advanced BML function.

For example: The following image shows a warning message that is displayed when an administrator attempts to validate or save the advanced BML function for a migrated rule where an attribute does not exist on the current site.



Edit BML Advanced Function with Error Message

STEPS TO ENABLE

The System Configuration enhancements are automatically available on CPQ Cloud 18B sites.

TIPS AND CONSIDERATIONS

Consider the following tips when using the CPQ Cloud 18B System Configuration enhancements:

- System Configuration and Subscription Ordering are incompatible and both implementations cannot exist on the same site.
- The getSystemAttrValues and getSystemMultipleAttrValues BML functions are recommended to retrieve attribute values in inter-model rules for multi-level models to ensure the correct attribute value path is retrieved. The attribute value path retrieved using the "System Configuration" folder in BML will change depending on whether the parent model is configured or not.
- Oracle recommends setting the "The Disable BOM-Mapping Rules During Updates" Configuration Options setting to "Yes" when multi-node Configuration flows are used with System Configuration.
- In prior releases, the System Configuration inter-model attributes were not updated until the System Configuration or BOM was invoked into Commerce. Beginning in Release 18B, all values are updated when an update is performed after a Configuration rule runs.

KEY RESOURCES

Refer to CPQ Cloud Administration Online Help for additional information.

PRE-UPGRADE CONSIDERATIONS

KNOWN FUNCTIONALITY

In CPQ Cloud Release 18B, the Alta Transaction UI is disabled by default. Open a Service Request (SR) on My Oracle Support to have it enabled. If customers later choose to disable the Alta Transaction UI, they must open a SR on My Oracle Support to re-enable it.

When customers currently using the Alta Transaction UI upgrade to Release 18B, the Alta Transaction UI will remain enabled.

MIGRATION

When migrating from one site to another using the Migration Center, both sites must use the same major release. Content may only be migrated across minor releases within the same major release. Migration across major releases cannot occur.

"Major release" = A major product release, e.g. Release 18B

"Minor release" = A release update, e.g. Release 18B Update 1

RESOLVED KNOWN ISSUES

For information on bugs fixed in Release 18B, refer to the CPQ Cloud 18B 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 18B. 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 18B before upgrading to production.

BROWSER SUPPORT

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

Supported Browsers

Windows

- Major releases of Google Chrome upon general browser availability and until Google no longer supports the version
- Major releases of Mozilla Firefox upon general browser availability and until Mozilla no longer supports the version
- Major releases of Internet Explorer/Microsoft Edge within nine months of general browser availability and until Microsoft no longer supports the version

Mac OS X

- Major releases of Google Chrome upon general browser availability and until Google no longer supports the browser version
- Major releases of Mozilla Firefox upon general browser availability and until Mozilla no longer supports the version
- Major releases of Safari within nine months of general browser availability and until Apple no longer supports the version

iOS

- Major releases of Safari within nine months of general browser availability, and until Apple no longer supports the browser version.

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 64.x
- Mozilla Firefox 59.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 the Spring 18 update of the Oracle Adapter for Salesforce Lightning (the Salesforce Adapter) and version 7.2 of the oracle CPQ Commerce Integration (the Managed Package). Previous versions of these packages are expected to continue to work, but Oracle will not address new issues that arise. We strongly encourage customers to upgrade to a 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 18B. 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 18B 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.