



Oracle CPQ Cloud

Release 17D

What's New

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REVISION HISTORY

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

Date	What's Changed	Notes
DEC 2017		Initial Document Creation

OVERVIEW

This guide outlines the information you need to know about new or improved functionality in Oracle CPQ Cloud 17D 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, 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 take advantage of. To assist you Appendix A provides a listing of the new features and the security attributes needed to employ the new features when you have decided to implement them.

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 'New Features UI' is available to you from your cloud homepage, where you can make your choices and do any configuration necessary. The table below offers a quick view of the actions required to enable each of the new features.

Feature	Action Required to Enable Feature			
	Automatically Available	End User Action Required	Administrator Action Required	Oracle Service Request Required
Modern Selling Experience				
Oracle Alta UI Enhancements			✓	
Lead Innovation				
Deal Management Enhancements			✓	
Enterprise Platform				
System Configuration Enhancements			✓	
Subscription Ordering Enhancements	✓			
Migration Enhancements	✓			
Integrated Suite				
Use OAuth Tokens in BML Libraries	✓			
User Integration for Microsoft Azure Active Directory				✓
JD Edwards Integration			✓	
Commerce Cloud Integration Enhancements			✓	
Simplify				
Hide Commerce Actions with Hiding Rules			✓	
Document Designer Enhancements	✓			
Single Select Pick List Enhancements	✓			
Additional CPQ Cloud Enhancements	✓			
Upgrade Consideration				
Pre-Upgrade Considerations			✓	
Post-Upgrade Considerations		✓		

MODERN SELLING EXPERIENCE

Leverage the rich interface and interactive capabilities available in CPQ Cloud to provide a smarter selling experience.

ORACLE ALTA UI ENHANCEMENTS

Alta UI is a design system that delivers modern, simple, and more engaging UIs across Oracle's web-based and mobile applications. Alta is the new standard for Oracle applications and Oracle Cloud-based services.

Introduced in CPQ Cloud 2017 R2, the Alta Responsive Transaction UI provides sales users with an improved user experience by focusing on fewer elements and a cleaner design aimed at accelerating performance and information delivery. As part of continuing improvements to the Alta Responsive Transaction UI, the following enhancements are available in CPQ Cloud 17D:

- Secure Text Attribute Support
- Copy Transaction Action
- Deal Management Support
- Advanced Panel Options

SECURE TEXT ATTRIBUTES

CPQ Cloud 17D supports Secure Text attributes in the Alta Responsive Transaction layout. Secure Text attributes can be placed in both the Document and Sub-Document layouts, providing the same functionality as in the Legacy Desktop layout. This attribute can be used to handle sensitive data with encryption when a user enters user IDs or passwords. The administrator adds the Secure Text attribute to a Commerce Process and then places it in the Alta Responsive Layout.

Main Refresh Save Version Back Email

bs_id 19855109 Document Currency USD

Approver ID * Document Language English

Approver Password Version Number 1

Line Item Grid

View Freeze Copy Line Items Add From Catalog Update Line Items Reconfigure Remove Sub

Doc #	Item	Quantity	Unit Price	Subtotal	Price Score	List Price	Net Price	Discount	Discount %
8	part1	1	100	\$100.00	2	100	5	90	90
9	part10	2	100	\$200.00	5	100	50	150	75
10	part100	3	100	\$300.00	9	100	300	0	0
		6	\$300.00	\$600.00	16	\$300.00	\$355.00	\$240.00	165

Alta Transaction UI with Secure Text Attributes

COPY TRANSACTION ACTION

CPQ Cloud 17D allows a user to create a new Transaction from an existing Transaction in the Alta UI. From the Transaction Manager, the user can select a Transaction and click **Copy** to create a copy of the selected Transaction. The copied Transaction will contain the attributes as defined by the Copy action Initialization tab. The Transaction ID, User Name, and Creation Date are updated accordingly.

Select	ID#	Transaction Number	Version Number	Status	Total Contract Value	Prepared By	Created Date	Last Updated	Annual Contract Value
<input type="checkbox"/>	53192605	CPQ-3307	1	Created	\$96,607.62	Super User	10/06/2017	10/06/2017 11:47 AM	\$55,590.86
<input type="checkbox"/>	53192337	CPQ-3299	1	Created	\$96,607.62	Super User	10/06/2017	10/06/2017 11:47 AM	\$55,590.86
<input type="checkbox"/>	53203548	CPQ-3309	1	Created	\$23,248.39	Super User	10/19/2017	10/19/2017 1:26 PM	\$12,231.63
<input type="checkbox"/>	53203801	CPQ-3313	1	Created	\$2,548.93	Super User	10/19/2017	10/19/2017 4:04 PM	\$2,548.93
<input type="checkbox"/>	53192826	CPQ-3308	1	Created	\$96,607.62	Super User	10/06/2017	10/06/2017 11:47 AM	\$55,590.86
<input checked="" type="checkbox"/>	53192540	CPQ-3305	1	Created	\$96,607.62	Super User	10/06/2017	10/06/2017 11:47 AM	\$55,590.86
<input type="checkbox"/>	53192589	CPQ-3306	1	Created	\$96,607.62	Super User	10/06/2017	10/06/2017 11:47 AM	\$55,590.86

Copy Transaction in Transaction Manager with Alta UI

DEAL MANAGEMENT SUPPORT

The option to display Price Scores and Deal Comparison Scatter Plots in the Alta Transaction UI layout is supported for CPQ Cloud 17D sites. Administrators can add Price Score and Deal Comparison attributes to the Alta Transaction layout.

Doc #	Seq #	Item	* Quantity	Unit Price	Subtotal	Price Score	List Price	Net Price
8	1	part1	1	100	\$100.00	2	100	5
9	2	part10	2	100	\$200.00	5	100	50
10	3	part100	3	100	\$300.00	9	100	300
			6	\$300.00	\$600.00	16	\$300.00	\$355.00

Alta UI Line Item Grid with Price Score



Alta UI Transaction Line Detail with Deal Comparison Scatter Plot

ADVANCED PANEL OPTIONS

CPQ Cloud 17D supports the ability to perform the following adjustments of a panel using the Alta Responsive layout:

- Hide panel labels
- Set collapsible panels
- Set panels to default collapsed position

To access the advanced panel settings for the Alta Responsive UI, the administrator should first navigate to the Alta Responsive Layout.

Document List

Process : Oracle Quote to Order

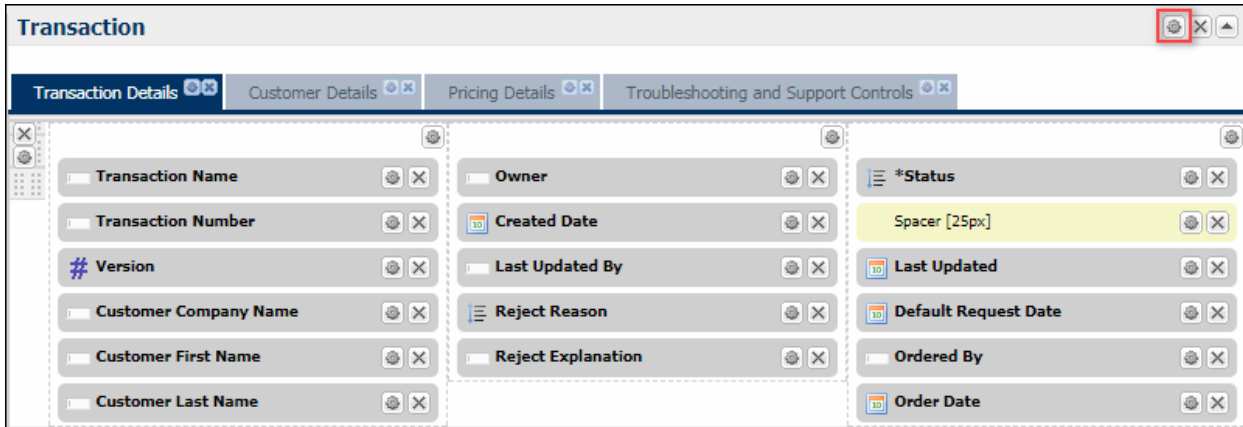
Select	Order	Document Name	Navigation	Date Last Modified
	1	Transaction	Attributes	10/18/2017 12:14 PM
		Transaction Line	Attributes	10/18/2017 12:14 PM
			Actions	
			Library Functions	
			Rules	
			Legacy Desktop Layout	
			Alta Responsive Layout	
			Mobile Layout	

Back to Top

Translations Back

Access Alta Responsive Layout

From the layout editor, select the **Cog** icon of a panel to view these settings.



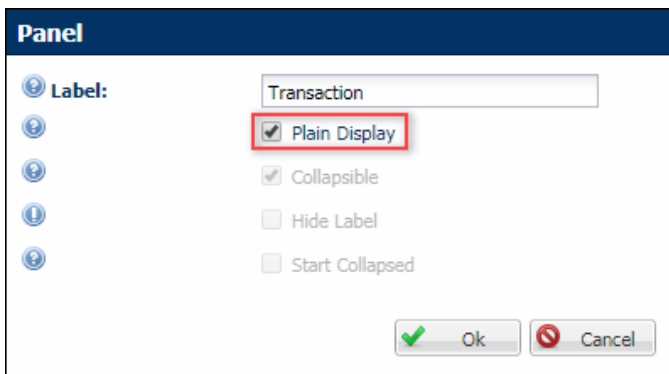
Access Panel Settings

The **Panel** dialog appears. This dialog has four options: Plain Display, Collapsible, Hide Label, and Start Collapsed.

PLAIN DISPLAY

The Plain Display option displays the panel without labels or the ability to expand or collapse. If this option is selected, Collapsible, Hide Label, and Start Collapsed options are disabled.

To hide the panel header, select **Plain Display**.

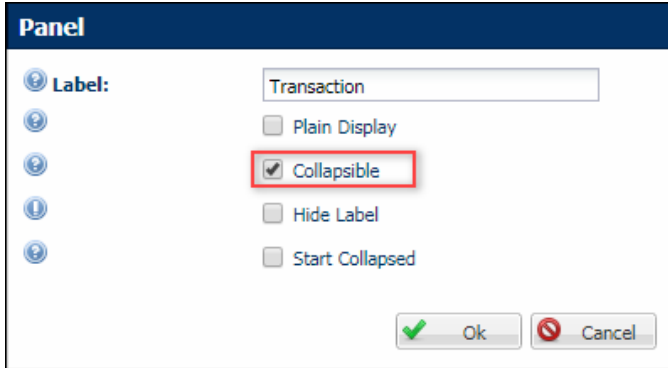


Plain Display Option for Alta UI Panel

COLLAPSIBLE

The Collapsible option allows users to collapse and expand the panel by clicking in the header. If the Collapsible option is not selected, the Start Collapsed option will be disabled.

To allow the panel to collapse, select **Collapsible**.



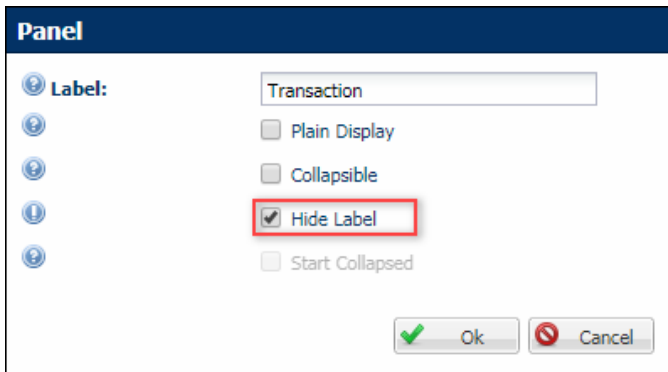
The screenshot shows a dialog box titled "Panel" with a dark blue header. On the left, there is a vertical list of five circular icons: a question mark, a question mark, a question mark, an exclamation mark, and a question mark. The first icon is followed by the text "Label:". To the right of this text is a text input field containing the word "Transaction". Below the input field are four checkboxes: "Plain Display" (unchecked), "Collapsible" (checked and highlighted with a red box), "Hide Label" (unchecked), and "Start Collapsed" (unchecked). At the bottom right of the dialog are two buttons: "Ok" with a green checkmark icon and "Cancel" with a red prohibition sign icon.

Collapsible Option for Alta UI Panel

HIDE LABEL

The Hide Label option will display the panel without a label.

To hide the panel title, select **Hide Label**.



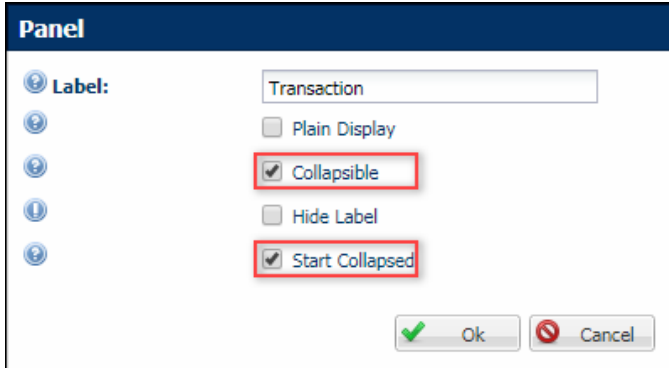
The screenshot shows a dialog box titled "Panel" with a dark blue header. On the left, there is a vertical list of five circular icons: a question mark, a question mark, a question mark, an exclamation mark, and a question mark. The first icon is followed by the text "Label:". To the right of this text is a text input field containing the word "Transaction". Below the input field are four checkboxes: "Plain Display" (unchecked), "Collapsible" (unchecked), "Hide Label" (checked and highlighted with a red box), and "Start Collapsed" (unchecked). At the bottom right of the dialog are two buttons: "Ok" with a green checkmark icon and "Cancel" with a red prohibition sign icon.

Hide Label Option for Alta UI Panel

START COLLAPSED

The Start Collapsed option will collapse the panel when the page is initially loaded. The Collapsible option must be enabled to use this option.

To set a panel to appear collapsed by default, select both **Collapsible** and **Start Collapsed**.



The screenshot shows a configuration window titled "Panel". On the left, there are five circular icons: a question mark, a question mark, a question mark, an exclamation mark, and a question mark. The main area contains the following options:

- Label:** A text input field containing "Transaction".
- Plain Display
- Collapsible (highlighted with a red box)
- Hide Label
- Start Collapsed (highlighted with a red box)

At the bottom right, there are two buttons: "Ok" (with a green checkmark icon) and "Cancel" (with a red prohibition sign icon).

Start Collapsed Option for Alta UI Panel

STEPS TO ENABLE

For instructions on how to enable this feature, refer to the *Alta Responsive Layout* topic in the CPQ Cloud Administration Online Help.

TIPS AND CONSIDERATIONS

For a list of Oracle Alta UI limitations refer to the *Alta Responsive Layout* topic in the CPQ Cloud Administration Online Help.

KEY RESOURCES

Refer to the CPQ Cloud Administration Online Help for additional information

LEAD INNOVATION

Pioneer the next generation selling platform using the CPQ Cloud 17D Deal Management enhancements.

DEAL MANAGEMENT ENHANCEMENTS

CPQ Cloud's 2017D release builds on the Deal Negotiation and Win Probability features of previous releases by introducing Price Optimization, improving flexibility for existing features, and adding visualizations for Win Probability and Price Optimization for both sales and administrative users.

CPQ Cloud's Deal Management features guide sales representatives in negotiating the right prices and discounts to maximize revenues and margin by providing contextual information for both Transactions and Transaction Lines and real-time analytic visualizations. In Release 2017D, CPQ Cloud introduces machine learning Price Optimization for Transactions, and adds numerous enhancements to existing features to further enable intelligent quoting. The following features are available in CPQ Cloud 2017D:

Price Optimization

- Maximize the profitability of a Transaction by providing guidance to sales users on the optimal discount to maximize margins or net revenue
- Visualize the impact of discounting decisions on expected margin or net revenue
- Define Price Optimization analytics and initiate machine learning training sessions to develop the predictive model
- Preview Price Optimization analytics in Administration before exposing them in a Commerce Transaction

Win Probability

- Visualize the impact of discounting decisions on Win Probability
- Preview a Win Probability chart in administration before exposing it in a Commerce Transaction
- Use Advanced Filters in Win Probability analytic to filter out test and other Transactions that do not represent real quotes

Deal Comparison Scatter Plot

- Easily locate and grasp the relationship of the current deal to historical deals in a Deal Comparison analytic
- Define Advanced filters for Scatter Plot analytics to control the data included using operators and literal comparison values
- Preview a Deal Comparison Scatter Plot in administration before exposing it in a Commerce Transaction

Price Score

- Define a customized Price Score using BML or formulas
- Define Advanced Price Score calculations on a Transaction Line through point and click selection of expressions, boundary conditions, and override values

Last Price Paid

- Use a status filter to filter "Won" prices for the Last Price Paid value

PRICE OPTIMIZATION

CPQ Cloud 2017D provides an out-of-the-box machine learning Price Optimization feature to maximize either margins or net revenue. Customers with low or zero marginal costs, such as software companies, typically manage the discount percentages off standard list prices, without capturing costs or margins. Customers with meaningful variable costs, such as manufacturers, typically capture costs and margins in CPQ Cloud, and manage either net revenue or margin percentages. CPQ Cloud's Price Optimization feature supports both use cases in predicting the optimal discount percentage for a Transaction.

Since CPQ Cloud customers use different metrics to determine profitability, the Price Optimization feature supports selection of the site specific custom attributes to optimize to provide easy, code free setup. Administrators can define which attribute value to maximize, attributes to be considered in the optimization (i.e. driver attributes), and which attributes will be populated with the optimization results.

After set up and the initial machine learning tasks are complete, the predictive model produced by the machine learning training is applied to generate optimization results that can be displayed to sales users in the Commerce UI. Sales users can view the optimal value attributes, including the optimal discount percentage, and the optimization functions can be visualized on a Price Optimization analytic. The optimal discount percentage value may also be used as a basis for discounting guidelines (e.g. the discount cannot exceed 120% of the optimal discount). The discounting guidelines can then be enforced via approval reasons.

Administrators can present optimization results to sales users in two ways, optimal value attributes and a visual representation or chart.

- **Optimal Value Attributes** require users to perform a 'Trigger Action' specified in Optimization setup to update the values for the current Transaction (e.g. Update Predictions).

Summary

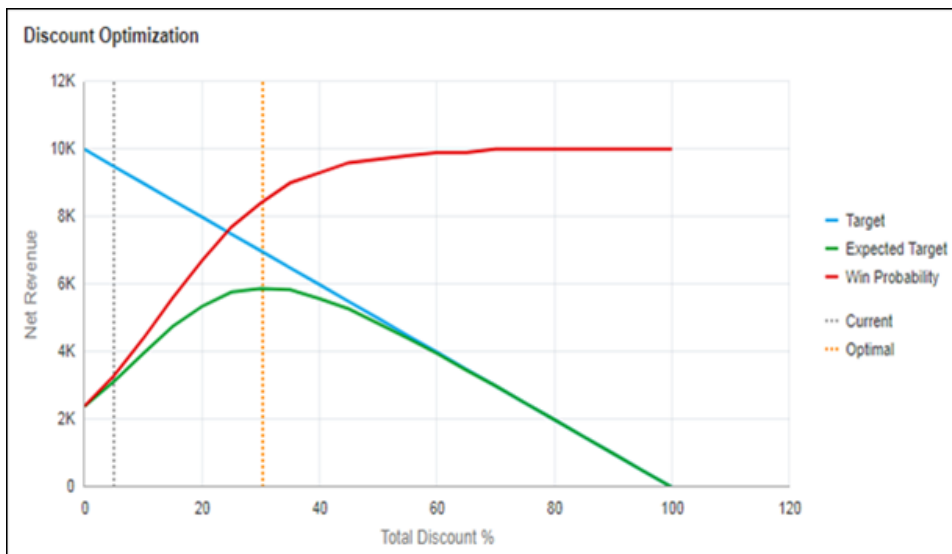
Pricing Deal Analytics

Total (List)	\$10,000.00	Total (List) Per Month	\$0.00
Total Discount	\$500.00	Total Discount Per Month	\$0.00
Total (Net)	\$9,500.00	Total (Net) Per Month	\$0.00

Price Score	9	Industry	Financial Services
Total Discount %	5.00	Optimal Discount %	30.3
Win Probability %	33.1	Win Prob at Optimal Disc	84.7
Update Predictions		Net Rev at Optimal Disc	\$6,969.17

Optimize Values to Maximize Net Revenue

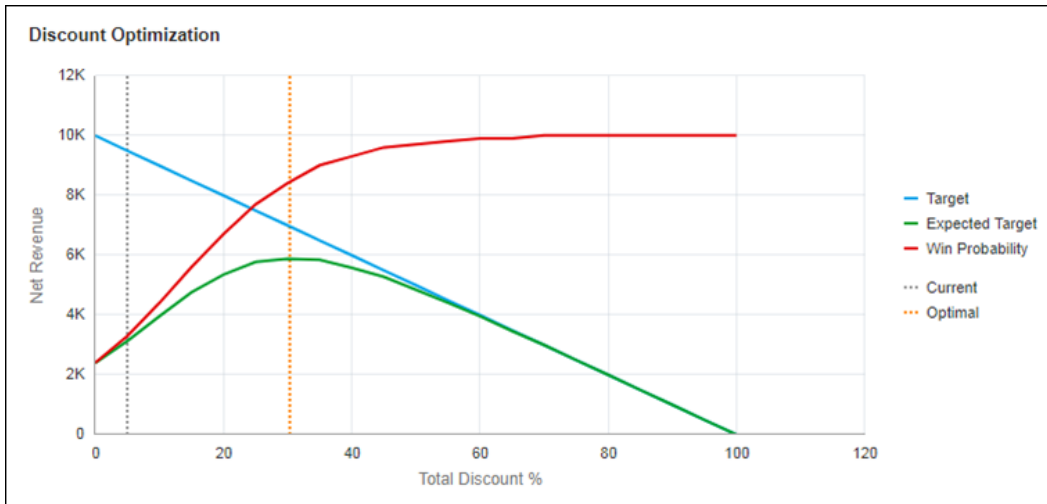
- **Visual Representation or Chart** - the Price Optimization Chart updates dynamically as the Transaction is edited.



Price Optimization Chart for Maximize Net Revenue

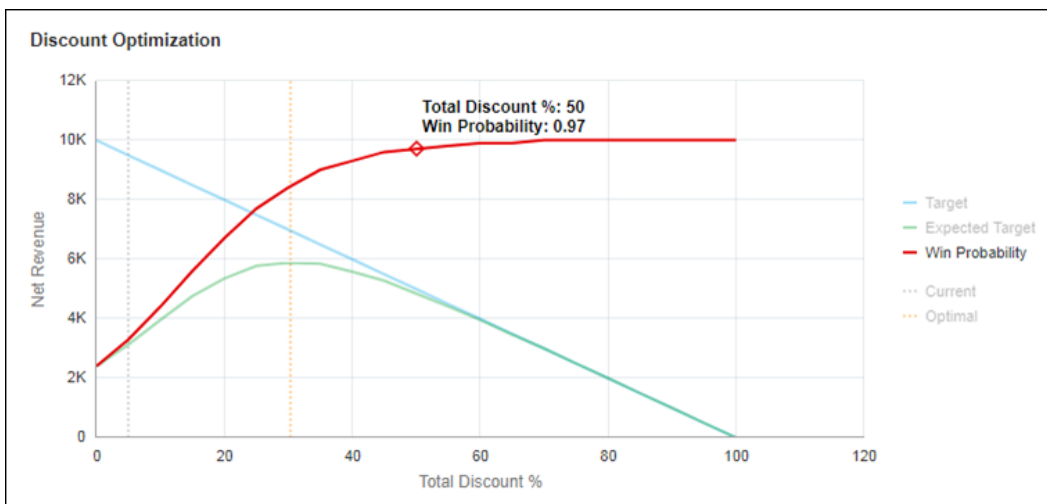
Price Optimization Chart

Sales users can now visualize the Price Optimization functions for a Transaction to negotiate optimal pricing. The Price Optimization chart depicts the following functions: **Win Probability** (shown below in red), the **Target Profitability** (shown below in blue), and the **Expected Target** (shown below in green). Interactive hover actions on the chart enable sales users to understand the relationship of discounts to Win Probability and profitability, and to visualize the resulting optimization or Expected Target.



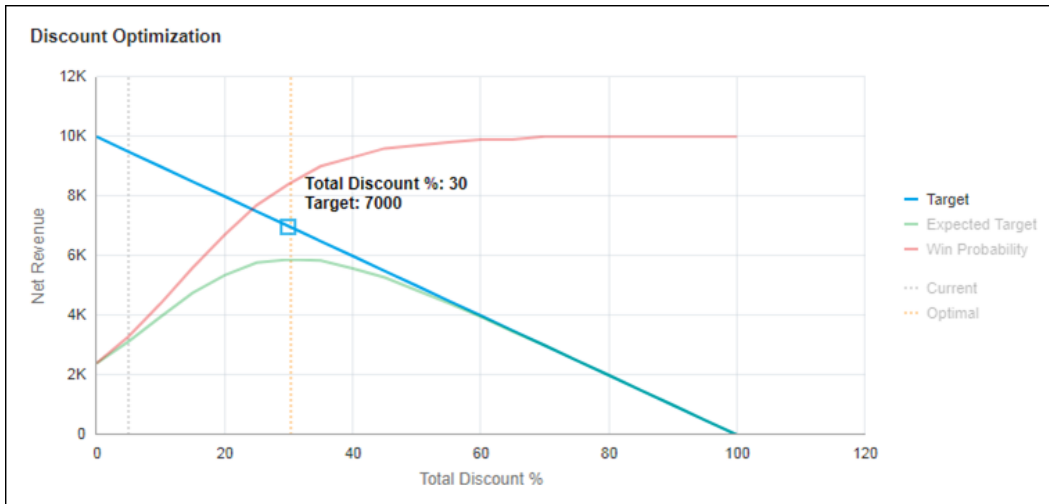
Price Optimization Chart

The predicted **Win Probability** for the range of possible discounting levels displays as a red curve on the chart, enabling users to understand the price sensitivity of the customer. Users can hover on the function line to see the exact Win Probability and Discount Values. In the following chart, the customer is predicted to buy 24% of the time given no discount, but 97% of the time given a discount of 50%.



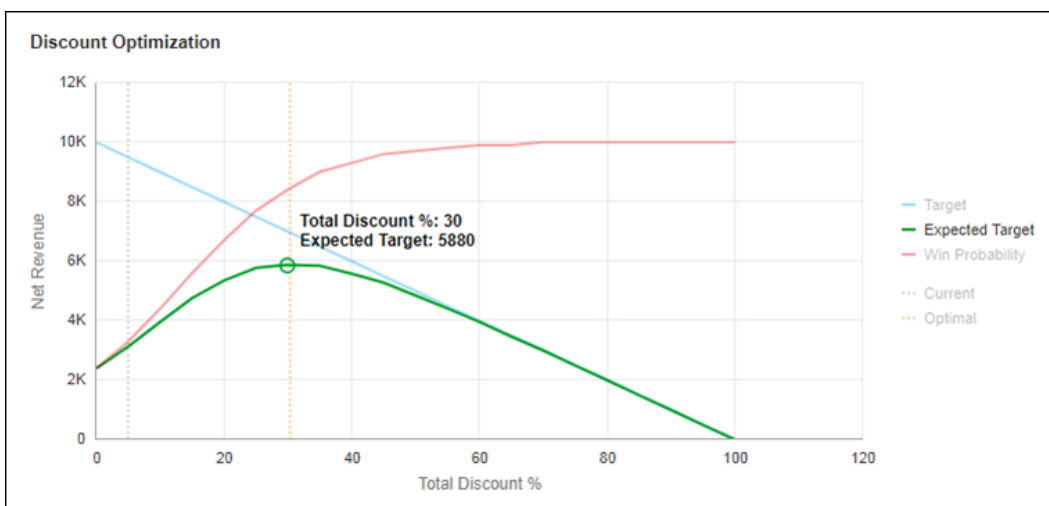
Price Optimization Chart with Win Probability Hover

The **Target** function (i.e. profitability or objective function) displays as a blue line indicating the profitability objective or target of the optimization over the range of possible discounts. In Release 17D, the Target or objective to be maximized may be either Net Revenue or Margin, as defined by the administrator. In the following Price Optimization Chart, Net Revenue is used as the Target function. Hovering on the Target function line in the chart below indicates that the Target (Net Revenue in this example) for the Transaction will be \$7,000 when the Total Discount % is 30%.



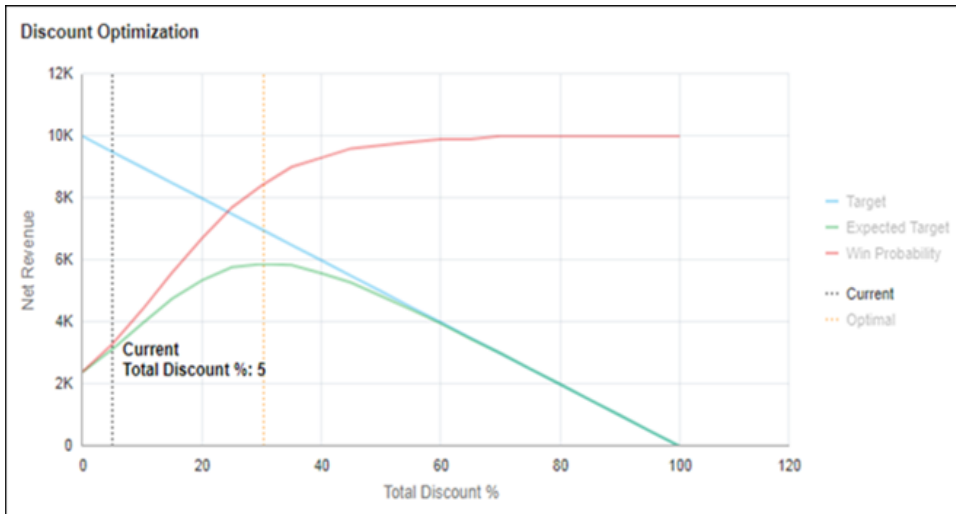
Price Optimization Chart with Target Hover

The **Expected Target** function (i.e. optimization function), displays as a green line, depicting the expected value of the Net Revenue or Margin Target predicted by CPQ Cloud's Price Optimization machine learning for the range of possible discounts. This function represents the combination of the Win Probability and Target Profitability functions. Hovering on the Expected Target function line in the example below informs the user that the Expected Target value (Net Revenue in this example) is predicted to be \$5,880 given a discount of 30%. As delineated in the chart, this is also the maximum or optimal value for expected net revenue predicted by the machine learning model.

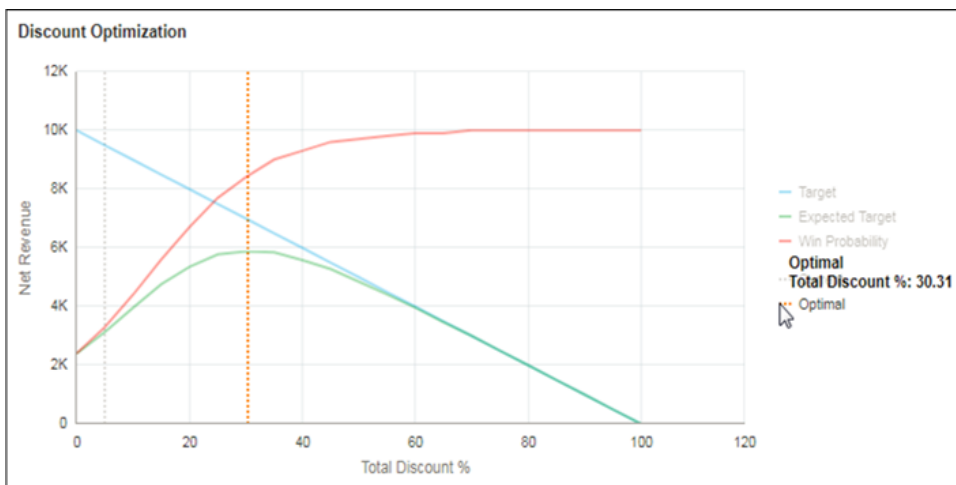


Price Optimization Chart with Expected Target Hover

The Price Optimization Chart enables sales users to easily discover how near or far the Transaction's current discount is from the optimal value by plotting the Current value as a grey dashed line, and the Optimal value as a gold dashed line. Sales users can hover on of either the dashed lines or the legend entry for Current and Optimal values to discover the exact values for each.



Price Optimization Chart with Current Value Line Hover



Price Optimization Chart with Optimal Value Legend Hover

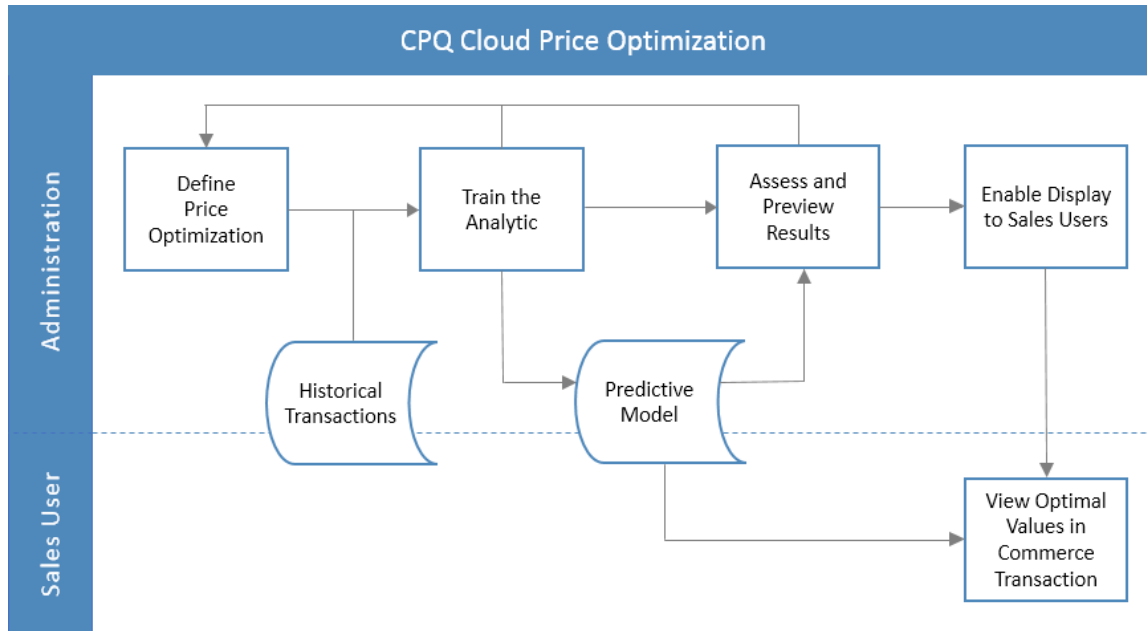
Administrators enable the Price Optimization Chart by creating a Price Optimization analytic, then creating a Commerce HTML attribute and selecting the analytic as the default value on the attribute Default tab.

The screenshot shows the 'Read-only text or HTML Attribute Editor' for the attribute 'optimizationDiscountChart'. The 'Default' tab is active, showing various options for the 'Default Value'. The 'Transaction Analytics' option is selected, and its value is set to 'Discount Optimization'. The 'None' option is set to 'No Default Entry'. The 'System Variable' and 'Data' options are both set to 'Current Date'. The 'Function' option has a 'Define Function' button. The 'Formula' option has a message 'A Formula has not yet been defined'. The 'BOM Hierarchy Display' option has a description: 'A multi-level structure of root and child items associated with BOM-derived line items.' At the bottom right, there is a 'Back to Top' link and a row of buttons: 'Translations', 'Apply', 'Update', 'Update and New', and 'Back'.

Analytic Selection on Attribute Editor Page

Enable Price Optimization

Price Optimizations are implemented as a type of Commerce Process analytic. Since Price Optimization incorporates Win Probability as a factor in the optimization, the setup process for a Price Optimization analytic is similar to that for a Win Probability analytic. Both apply machine learning to generate a predictive model, require model training, can be previewed by administrators, and are exposed to sales users as Commerce attributes and analytic charts.



Define Price Optimization Analytic

Perform the following steps to define a Price Optimization analytic:

1. Navigate to the Admin Home page.
2. Click **Process Definition** in the **Commerce and Documents** section.
The **Processes** page opens.
3. Select **Analytics** from the **Navigation** menu, next to the applicable process, then click **List**.
The **Analytics List** page opens.
4. Click **Add**.
The **Analytics Definition Editor** page opens.

Analytics Definition Editor Process : Copy Of Oracle Quote to Order > Transaction

Properties

*Name:

*Variable Name:

Description:

*Type:

*Document:

*Title:

Sample Win-Loss Analysis

Analytics Definition Editor

5. Select **Win Probability** from the **Type** menu, enter the following variables, and then click **Next**.
 - a. ***Name**: The name for the analytic
 - b. ***Variable Name**: The variable name for the analytic
 - c. **Description**: The description for the analytic
 - d. ***Type**: The type of analytic
 - e. ***Document**: The selected Commerce document. For Price Optimization and Win Probability, the analytic can only be defined for the Main Commerce Document (i.e. Transaction).

NOTES:

- Variables preceded by an asterisk (*) are required.
- Since the Price Optimization analytic adds optimization to a Win Probability analytic, the administrator initially selects **Win Probability** as the analytic **Type**.

The **Analytics Definition Editor** displays the settings for the Win Probability analytic.

Analytics Definition Editor Process : Copy Of Oracle Quote to Order > Transaction

Build **Train**

Properties

*Name: Discount Optimization

*Variable Name: discountOptimization

Description: [Empty text area]

*Type: Win Probability with Optimization

*Document: Transaction

*Title: Optimal Discount

Sample Price Optimization

Net Revenue vs. Total Discount %

Legend: Target (blue line), Expected Target (green line), Win Probability (red line), Current (dotted vertical line), Optimal (dashed vertical line).

Enable Optimization for Win Probability

6. Select the **with Optimization** checkbox to enable price optimization. The **Analytics Definition Editor** page will display Win Probability and Price Optimization settings.

7. Define **Win Probability Settings**

Win Probability Settings

*Primary Driver Attribute: Total Discount %

#	Additional Driver Attributes
1	Industry

Add Row

*Status Attribute: Win/Loss Status

* Won Value: Won

Lost Value: Lost

Win Probability Settings

- a. ***Primary Driver Attribute:** The attribute name for the primary input value from the Transaction. This attribute is the primary driver of the customer's acceptance or rejection of a quote for the analytic. While any numeric Main Document Data Column attribute may be selected from the drop-down, release 17D requires the selection of a Transaction-level discount percentage attribute as the Primary Driver Attribute for optimization.

- b. **Additional Driver Attributes:** The attribute name(s) for the secondary input value(s) from the Transaction. Additional Driver Attributes are additional factors that may drive price sensitivity for a Transaction (e.g. industry, customer segment, geography, or lead time to fulfillment). One or more numeric or text Main Document Data Column attributes may be selected. Administrators may define an unlimited number of Additional Driver Attributes.
- c. ***Status Attribute:** The name of the Main Document attribute that indicates if the Transaction was won or lost.
- d. ***Won Value:** The Status Attribute value that indicates that a Transaction was won. The drop-down displays all possible values for the Status Attribute.
- e. **Lost Value:** The Status Attribute value that indicates that a Transaction was lost. The drop-down displays all possible values for the Status Attribute.

NOTES:

- Variables preceded by an asterisk (*) are required.
- The **Lost Value** is not required. If no **Lost Value** is specified, all Transactions with values other than the **Won Value** will be evaluated as Lost in the machine learning. .

8. Define **Filters**

Filters

Date Filter System Last Modified Date ▼

Duration All ▼

Advanced Filters

#	Query Attribute	Operator	Specified Value
1	Quote Type ▼	= ▼	Standard ▼
2	Test Quote ▼	<> ▼	True ▼

Add Row

Price Optimization Filters

- a. **Date Filter:** The name of the Commerce date attribute used to filter historical Transactions for the analysis. System attributes such as 'System Last Modified Date' may also be selected.
- b. **Duration:** The time period prior to today's date to include in the analysis. The data selection duration is cumulative. Administrators may select from options including Last 30 days, Last 90 days, Last 6 months, Last 12 months, and All Transactions.

c. **Advanced Filters:** Advanced Filters provide a means for administrators to select the Transactions to be included in the optimization. Only those Transactions meeting the filter criteria will be included in the machine learning to build the predictive model. Attributes mapped to a Data Column will display in the drop-down list of available attribute names, the Data Column label is not displayed. The administrator can perform the following:

- Select one or more **Query Attributes** from Data Columns,
- Select an **Operator** to be applied, and
- Select or define the **Specified Value:**
 - Select a value from a drop-down list (Menu or Boolean attributes),
 - Select a date (Date attributes),
 - Enter a value (Text or Numeric attributes) to be used in the query filter.

Operators relevant to the query data type display to enable administrators easy and accurate editing of filters. Attributes without values can also be filtered out using the 'Is Empty' and 'Is Not Empty' operators, providing administrators with flexibility to assure that only clean data is included in their predictive model.

NOTE: Administrators can create an unlimited number of filters for each Optimization analytic.

9. Define **Optimization Settings**

<div style="border: 1px solid #ccc; padding: 5px;"> <p>Optimization Settings</p> <p>*Optimization Function Maximize Net Revenue ▼</p> <p>*Total Revenue at List Price Total Contract Value (List) ▼</p> <p>Total Discount % Total Discount %</p> <p style="font-size: small; text-align: right;"><i>Primary Driver Attribute must be Total Discount % for Price Optimization.</i></p> </div>	<div style="border: 1px solid #ccc; padding: 5px;"> <p>Optimization Settings</p> <p>*Optimization Function Maximize Margin ▼</p> <p>*Total Revenue at List Price Total Contract Value (List) ▼</p> <p>*Total Cost Total Contract Value (Net) ▼</p> <p>Total Discount % Total Discount %</p> <p style="font-size: small; text-align: right;"><i>Primary Driver Attribute must be Total Discount % for Price Optimization.</i></p> </div>
---	---

Maximize Net Revenue Optimization Settings

Maximize Margin Optimization Settings

The following settings are used to select the optimization function and identify the site-specific Commerce attributes used to measure profitability.

- a. **Optimization Function:** Select to **Maximize Margin** or **Maximize Net Revenue** as the Target or objective of the optimization.
- **Maximize Margin** will provide the optimal discount amount to maximize expected or realized margin.
 - **Maximize Net Revenue** will provide the optimal discount to maximize expected or realized net revenue.

- b. **Total Revenue at List Price:** Select the attribute for gross revenue or total revenue at list price used in this implementation. Attributes must be mapped to a Data Column to be available for selection.
- c. **Total Cost** (this attribute is only required for Maximize Margin): Select the attribute for total Transaction cost used in this implementation. Attributes must be mapped to a Data Column to be available for selection.
- d. **Total Discount %:** Release 17D supports maximizing net revenue or margin based upon a Transaction-level discount percentage attribute such as 'Total Discount %' as the Primary Driver Attribute for optimization. The Primary Driver Attribute specified in the **Win Probability** portion of the analytic displays as the attribute used in optimization.

10. Define **Output** Attribute Settings

The **Output** settings are used to identify attributes to display on the Transaction UI. These are optional and need only be selected when the values will be displayed to sales users in Commerce. Output attributes do NOT need to be mapped to Data Columns.

Output	
Trigger Action	Update Predictions ▼
Win Probability Value Prediction Attribute	Win Probability % ▼
Optimal Primary Driver Attribute	Optimal Discount % ▼
Optimal Win Probability Value	Win Prob at Optimal Disc ▼
Optimal Target Value	Net Rev at Optimal Disc ▼

Output Settings

- a. **Trigger Action:** Select the Commerce Modify-type Action that will be used to update the Win Probability and Optimization Output attributes.

NOTE: Commerce Output attributes are only updated when the Action is invoked, whereas the analytic charts are updated real-time as data on Transaction are edited.

- b. **Win Probability Value Prediction Attribute:** Select the Commerce Attribute to be populated with the predicted Win Probability.
- c. **Optimal Primary Driver Attribute:** Select the Commerce Attribute to be populated with the predicted optimal value for the Primary Drive Attribute. Typically, this will be the optimal Total Discount percentage for the Transaction. This is the most important output attribute and may be used to drive other logic on the quote related to approvals or scoring.

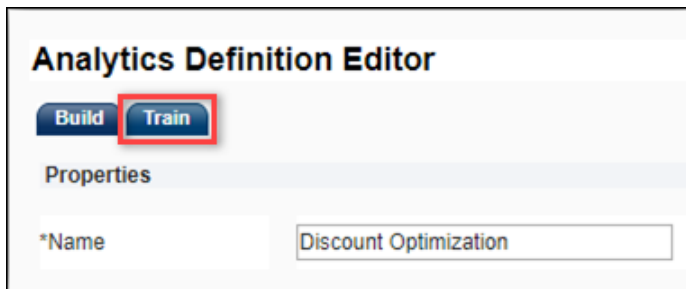
- d. **Optimal Win Probability Value:** Select the Commerce Attribute to be populated with the predicted Win Probability at the optimal discount.
- e. **Optimal Target Value:** Select the Commerce Attribute to be populated with the predicted Target Value (net revenue or margin) at the optimal discount.

11. Click **Update**.

Train the Analytic

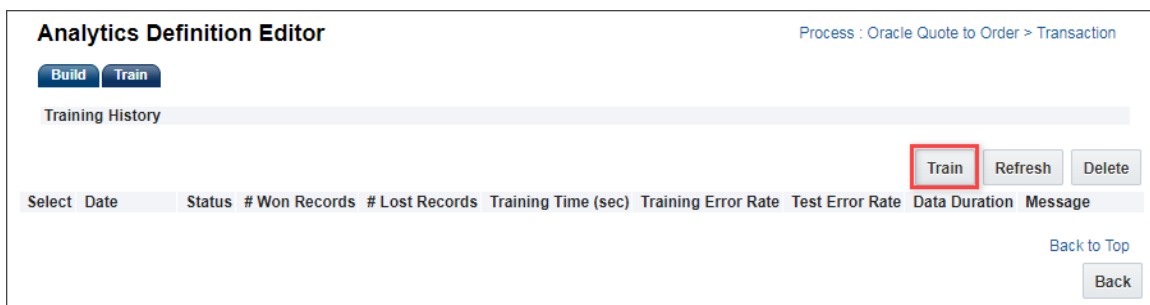
Administrators initiate machine learning sessions (i.e. 'training') in order to build the predictive optimization model. Perform the following steps to train a Price Optimization analytic:

1. Navigate to the Admin Home page.
2. Click **Process Definition** in the Commerce **and Documents** section. The **Processes** page opens.
3. Select **Analytics** from the **Navigation** menu, next to the applicable process, then click **List**. The **Analytics List** page opens.
4. Select the applicable Price Optimization analytic link. The **Analytics Definition Editor** page opens.



Machine Learning Training

5. Click the **Train** tab. The **Training History** is displayed.



Training History

- Click **Train** to initiate a training session.
When the training session is finished, the results will be displayed in the Training History.
The **Refresh** button may be used to refresh the training results.
- Evaluate the training session results. Modify the analytic filters and initiate a new training session if the results are unacceptable.

NOTE: Thirty Transactions must be created before initiating a Training session. Training and Test Error Rates measure the accuracy of the predictions made by the Win Probability model. If the Training or Test Error Rates are too high, messages will display with recommended actions to improve the model's predictions.

Analytics Definition Editor Process : Oracle Quote to Order > Transaction

Build **Train**

Training History **Train** **Refresh** **Delete**

Select	Date	Status	# Won Records	# Lost Records	Training Time (sec)	Training Error Rate	Test Error Rate	Data Duration	Message
<input type="checkbox"/>	12/05/2017 8:46 AM	Completed	23	21	2.27	0.27273	0.42857	All	Warning: The Training error rate is high indicating weak predictive value for the model. Add or modify the parameters or increase the number of transactions included in the training to increase the predictive value of the model.
<input type="checkbox"/>	11/28/2017 2:15 PM	Completed	23	21	1.41	0.27273	0.42857	All	Warning: The Training error rate is high indicating weak predictive value for the model. Add or modify the parameters or increase the number of transactions included in the training to increase the predictive value of the model.
<input type="checkbox"/>	11/28/2017 11:51 AM	Completed	23	21	.91	0.27273	0.42857	All	Warning: The Training error rate is high indicating weak predictive value for the model. Add or modify the parameters or increase the number of transactions included in the training to increase the predictive value of the model.
<input type="checkbox"/>	11/28/2017 10:46 AM	Completed	19	16	1.3	0.31429	0.38462	All	Warning: The Training error rate is high indicating weak predictive value for the model. Add or modify the parameters or increase the number of transactions included in the training to increase the predictive value of the model.

Training Error Rate	Test Error Rate	Data Duration	Message
0.27273	0.42857	All	Warning: The Training error rate is high indicating weak predictive value for the model. Add or modify the parameters or increase the number of transactions included in the training to increase the predictive value of the model.

Training Session Warning Message

Assess and Preview Results

Administrators can preview the Price Optimization Chart for a training session to assess the quality of the optimization functions visually. Refer to the [Preview Price Optimization Chart](#) procedure for steps to preview.

Enable Display to Sales Users

1. Display Price Optimization Chart in Commerce UI

Administrators enable the Win Probability chart by creating a Commerce HTML attribute and selecting an Optimization analytic as the default value on the attribute Default tab.

Read-only text or HTML Attribute Editor (optimizationDiscountChart_t) Document : Oracle Quote to Order > Transaction

General **Default** Document Views Mapping

Default Value

- None: No Default Entry
- System Variable: Current Date
- Data: Current Date
- Function:
- Formula: A Formula has not yet been defined
- Transaction Analytics: Discount Optimization
- BOM Hierarchy Display: A multi-level structure of root and child items associated with BOM-derived line items.

[Back to Top](#)

Select Optimization Analytic in Attribute Editor

Once enabled, the associated HTML attribute displays as a **Related Attribute** on the Analytics Definition Editor page.

Related Attributes

- 1. HTML Attribute Reference : (optimizationDiscountChart_t)

Analytics Definition Editor - Related Attributes

2. Display Optimal Value Attributes in Commerce UI

Administrators add the Optimization Output attributes and action in the Commerce UI.

Preview Price Optimization Chart

Administrators can preview the Price Optimization chart before displaying it in a Commerce Transaction. To initiate a preview, the administrator clicks the **Train** tab on the **Analytics Definition Editor** page.

Analytics Definition Editor

Build **Train**

Properties

*Name: Price Optimization

*Variable Name: priceOptimization

Description:

*Type: Win Probability with Optimization

*Document: Main

*Title: Price Optimization

Sample Price Optimization

Analytics Definition Editor Preview

The **Train** tab displays the **Training History**. Click on the link for a completed session to view Training Details.

Analytics Definition Editor

Build **Train**

Training History

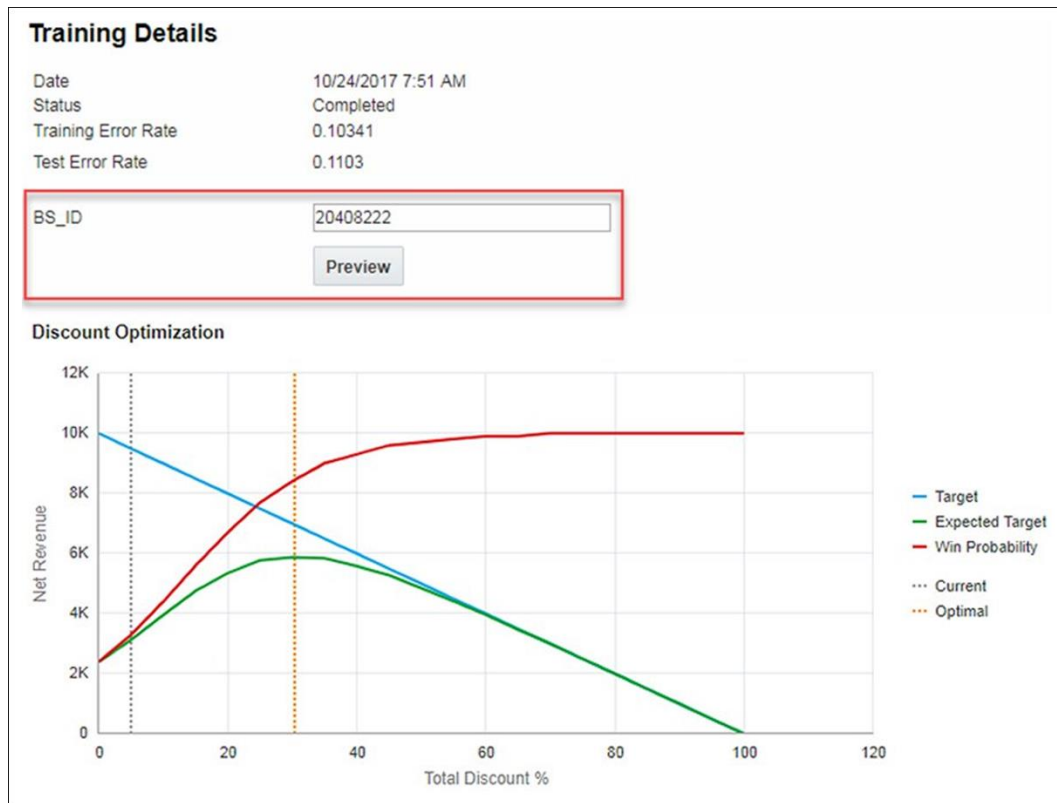
Train Refresh Delete

Select	Date	Status	# Won Records	# Lost Records	Training Time (sec)	Training Error Rate	Test Error Rate	Data Duration	Message
<input type="checkbox"/>	10/30/2017 7:35 AM	Failed							Training failed due to ORA-20101: insufficient number of historical records: 0. It must be greater than 30. See the log file for more details.
<input type="checkbox"/>	10/30/2017 7:04 AM	Failed							Training failed due to ORA-20101: insufficient number of historical records: 0. It must be greater than 30. See the log file for more details.
<input type="checkbox"/>	10/26/2017 9:14 AM	Completed	2721	1234	.86	0.11884	0.12727	All	The model's error rates are acceptable. Predictions based on this model should be of value.
<input type="checkbox"/>	10/24/2017 8:34 AM	Completed	685	3312	.71	0.17238	0.17629	All	The model's error rates are acceptable. Predictions based on this model should be of value.
<input type="checkbox"/>	10/24/2017 7:52 AM	Completed	1107	2889	.79	0.11011	0.11952	All	The model's error rates are acceptable. Predictions based on this model should be of value.
<input type="checkbox"/>	10/24/2017 7:51 AM	Completed	1107	2732	.71	0.10341	0.1103	All	The model's error rates are acceptable. Predictions based on this model should be of value.
<input type="checkbox"/> Select All Back to Top									

Back

Training History

On the **Training Details** page, enter a BS_ID (the identifier for an individual Commerce Transaction) for a Transaction, and then click **Preview**.



Price Optimization Preview

Administrators may interact with the Price Optimization Chart by hovering for additional details, just as in the sales user UI.

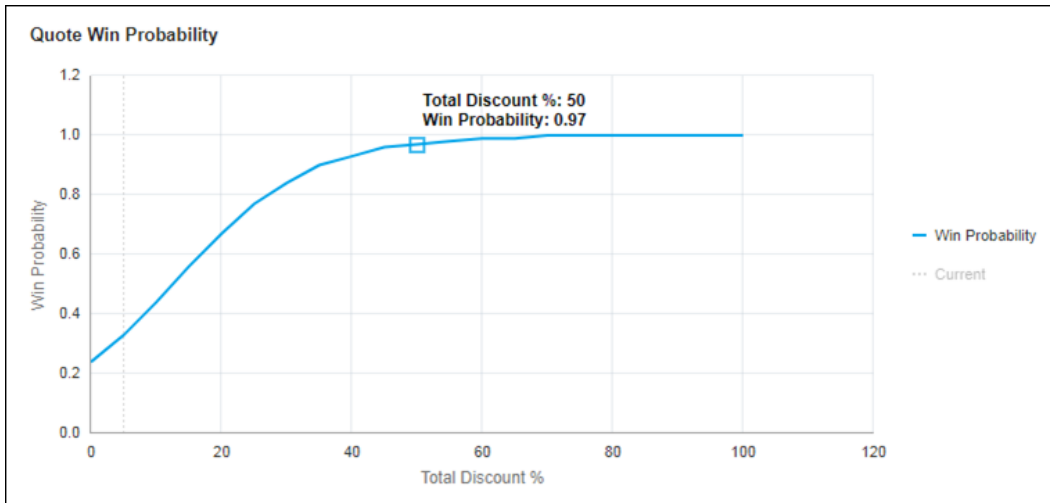
WIN PROBABILITY ENHANCEMENTS

In 2017 R2, CPQ Cloud introduced the machine learning-based Win Probability feature to guide sales users in their negotiation of pricing and discounts by predicting the likelihood that a customer will buy at the current level of pricing of a Transaction. In Release 17D, CPQ Cloud enhances the feature with a visualization of the Win Probability function for sales users and administrators, and the ability to fine tune the predictive model with advanced filtering of the Transactions included in the analytic.

Win Probability Chart

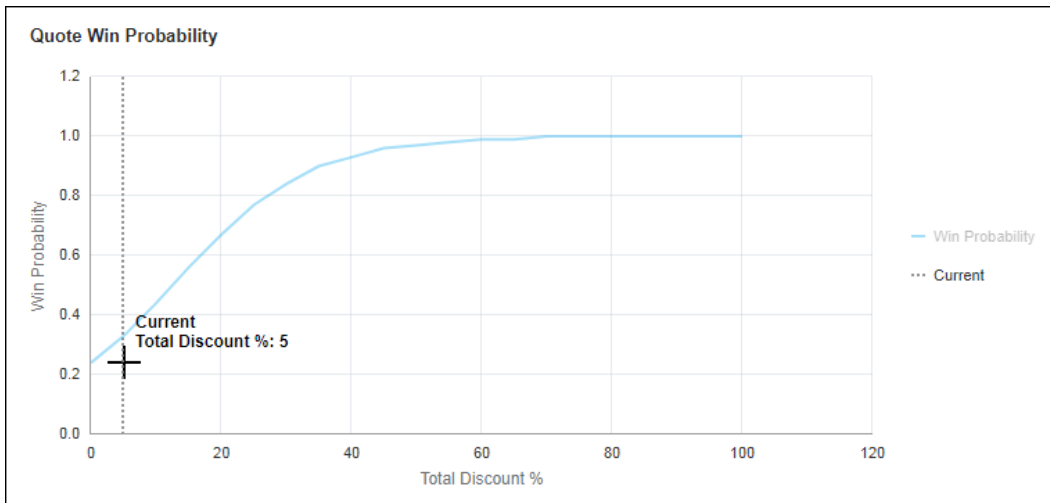
Sales users can now visualize the Win Probability function for a Transaction to better negotiate pricing with customers. The predicted Win Probability for the range of possible discounting levels displays as a curve on the Win Probability Chart, enabling users to understand the price-sensitivity of the customer.

In the example chart below, the customer is predicted to buy 24% of the time given no discount, but 97% of the time given a discount of 50%. The chart indicates that increasing the discount from the current level of 5% to 40% will yield the greatest gain in Win Probability. Users can hover on the function line to see the exact Win Probability and discount values.



Win Probability Chart Function Line Hover

The current discount on the Transaction is displayed as a dashed line on the chart to indicate the relationship of current discounting to the Win Probability function. Hovering on either the dashed line or the **Current** legend displays the current discount value on the Transaction.



Win Probability Chart Current Hover

Administrators enable the Win Probability chart by creating a Commerce HTML attribute and selecting a Win Probability analytic as the default value on the attribute Default tab.

The screenshot shows the 'Read-only text or HTML Attribute Editor (winProbabilityChart_t)' interface. The 'Default Value' tab is active, displaying several options for setting the default value. The 'Transaction Analytics' option is selected and highlighted with a red box, with 'Win Probability for a Quote' selected in its dropdown menu. Other options include 'None', 'System Variable', 'Data', 'Function', 'Formula', and 'BOM Hierarchy Display'. The interface includes navigation buttons like 'Translations', 'Apply', 'Update', 'Update and New', and 'Back' at the bottom.

Select Win Probability Analytic in Attribute Editor

Once enabled, the associated HTML attribute displays as a **Related Attribute** in the Analytics Definition Editor page.

The screenshot shows the 'Related Attributes' section of the Analytics Definition Editor. It contains a single entry: '1. HTML Attribute Reference : (winProbabilityChart_t)'. The section is titled 'Related Attributes' in a light blue header.

Analytics Definition Editor - Related Attributes

Preview Win Probability Chart

Administrators can now preview a Win Probability analytic before displaying it in a Commerce Transaction. To initiate a preview the administrator would click on the **Train** tab on the **Analytics Definition Editor** page.

Analytics Definition Editor

Build
Train

Properties

*Name

*Variable Name

Description

*Type with Optimization

*Document

*Title

Sample Win-Loss Analysis

Analytics Definition Editor Preview

The **Train** tab displays the Training History. Click on the link for a completed session to view the Training Details for that machine learning session.

Analytics Definition Editor

Build
Train

Training History

Train Refresh Delete

Select	Date	Status	# Won Records	# Lost Records	Training Time (sec)	Training Error Rate	Test Error Rate	Data Duration	Message
<input type="checkbox"/>	11/02/2017 9:34 AM	Completed	2662	1293	5.29	0.11884	0.10335	All	The model's error rates are acceptable. Predictions based on this model should be of value.
<input type="checkbox"/>	11/02/2017 9:34 AM	Failed							Training failed due to ORA-20101: insufficient number of historical records: 0. It must be greater than 30. See the log file for more details.
<input type="checkbox"/>	11/01/2017 6:09 AM	Completed	540	232	.88	0.11658	0.12234	All	The model's error rates are acceptable. Predictions based on this model should be of value.
<input type="checkbox"/>	11/01/2017 5:58 AM	Completed	2768	1188	.75	0.10819	0.12249	All	The model's error rates are acceptable. Predictions based on this model should be of value.
<input type="checkbox"/>	11/01/2017 5:56 AM	Completed	2768	1188	.88	0.10819	0.12249	All	The model's error rates are acceptable. Predictions based on this model should be of value.
<input type="checkbox"/> Select All									Back to Top
									Back

Training History

On the **Training Details** page, enter a BS_ID (the identifier for an individual Commerce Transaction) for a Transaction, and then click **Preview**.



Win Probability Preview

Administrators may interact with the Win Probability chart by hovering for additional details, just as in the sales user UI.

Win Probability Advanced Filters

Advanced Filters provide a means for administrators to select the Transactions to be included in the Win Probability machine learning. Only those Transactions meeting the filter criteria will be included in the machine learning to build the predictive model.

#	Query Attribute	Operator	Specified Value
1	Quote Type	<=>	Budgetary
2	Test Quote	<=>	True
3	Total Contract Value (List)	=	

Advanced Filters for Win Probability

The administrator can perform the following:

- Select one or more Query Attributes from Data Columns,
- Select an operator to be applied, and
- Select or define the Specified Value:
 - Select a value from a drop-down list (Menu or Boolean attributes),
 - Select a date (Date attributes), or
 - Enter a value (Text or Numeric attributes) to be used in the query filter.

Operators relevant to the query data type display to enable administrators easy and accurate editing of filters. Attributes without values can also be filtered out using the 'Is Empty' and 'Is Not Empty' operators, providing administrators with flexibility to assure that only clean data is included in their predictive model.

NOTE: Administrators can create an unlimited number of filters for each Win Probability analytic.

DEAL COMPARISON ENHANCEMENTS

Deal Comparison Scatter Plots provide sales users a visual means for understanding the relationship of the pricing on the current Transaction or Transaction Line to historical pricing. In Release 17D, CPQ Cloud provides additional functionality for Deal Comparison Scatter Plots, an advanced filter for Deal Comparison, and preview capability for administrators.

Deal Comparison Scatter Plot Enhancements

With Release 17D, current deal information is more easily discoverable on Transaction and Transaction Line Scatter Plots as a circular purple symbol. Sales users can better visualize the relationship of the current deal to historical deals and the historical trend line. When a customer hovers over the data point, or on the legend for the **Current Deal**, information for the current deal is displayed.



Deal Comparison Scatter Plot with 'Current Deal' Hover

Deal Comparison Advanced Filters

Advanced Filters allow administrators to limit the results displayed in Transaction and Transaction Line scatter plots. The administrator can select one or more Query Attributes from Data Columns, and compare them with Transaction Attributes from the current Transaction. In Release 17D, the administrator can use operators other than equals "=" to match criteria. Specified Values can also be used in the filter. Administrators can create an unlimited number of filters for each Scatter Plot.

Data is filtered dynamically based upon the current Transaction's characteristics with only Transactions or lines meeting the specified criteria included in the Scatter Plot. For example, Scatter Plots can display only data for the same industry or customer present on the current Transaction.

Filters

Date Filter:

Duration:

Advanced Filters

#	Query Attribute	Operator	Transaction Attribute	Specified Value
1	Quote Type	=	[Use Specified Value]	Standard
2	Test Quote	<>	[Use Specified Value]	True
3	Industry	=	Industry	

Maximum Number Of Records:

Deal Comparison Advanced Filter

Deal Comparison Preview

Administrators can now use a Preview function to view a Scatter Plot before displaying it in a Commerce Transaction. The ability for administrators to view deal comparisons can aid the analysis and definition of pricing rules and guidelines.

To preview a Scatter Plot, navigate to the **Analytics Definition Editor** and click the **Preview** tab.

Analytics Definition Editor

Properties

*Name:

*Variable Name:

Description:

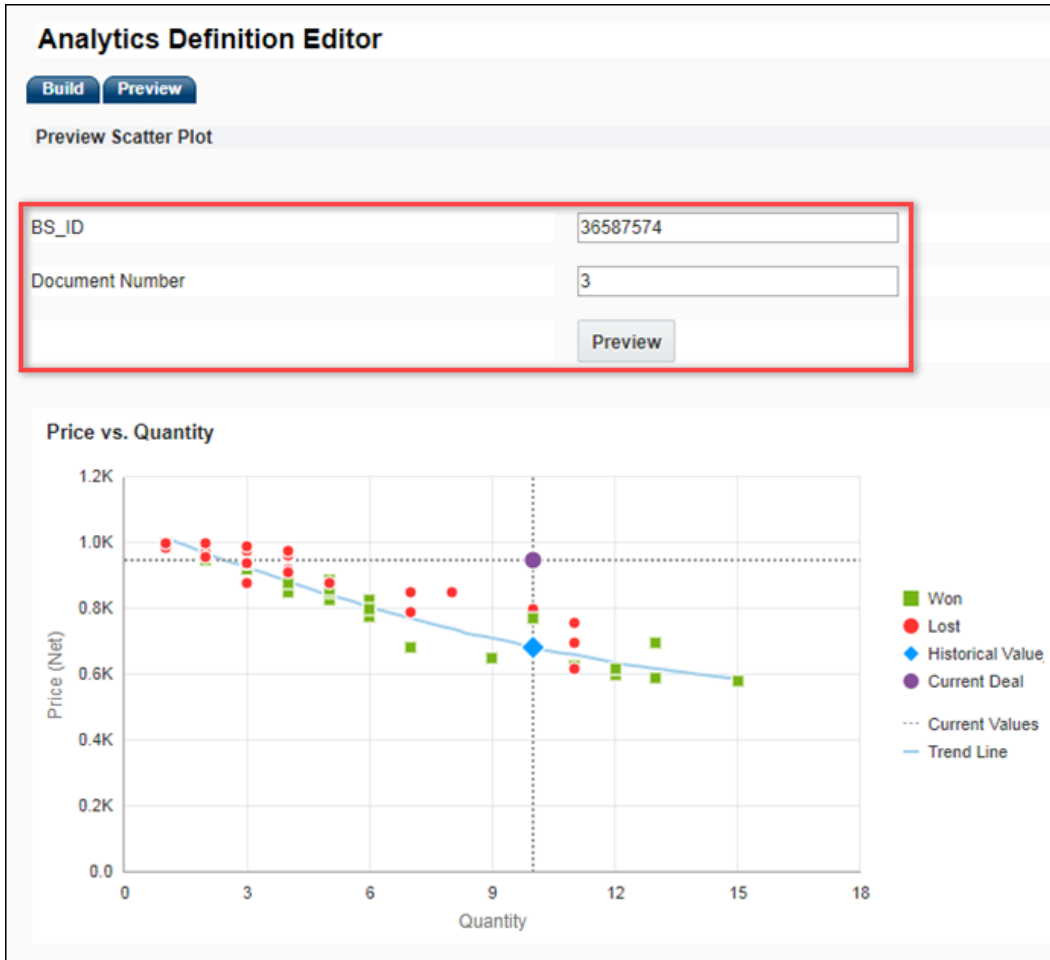
*Type:

*Document:

*Title:

Analytics Definition Editor Preview

On the **Preview Scatter Plot** page, enter a BS_ID (the identifier for an individual Commerce Transaction) for a Transaction, and then click **Preview**. To preview a Line-level Scatter Plot, enter both a BS_ID and the 'Document Number' integer value for the line to be displayed.



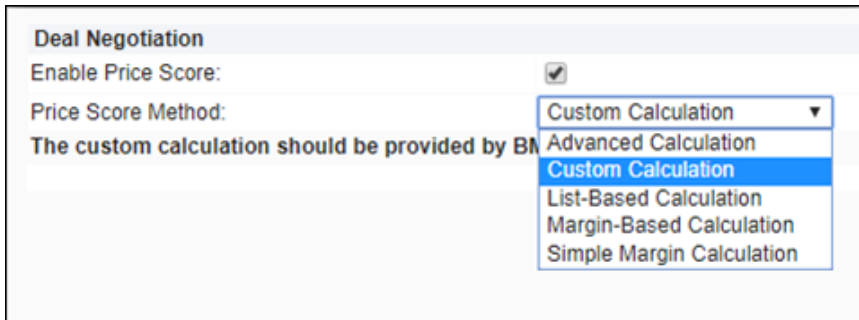
Deal Comparison Scatter Plot Preview

Administrators may interact with the Scatter Plot chart by hovering for additional details, just as in the sales user UI.

PRICE SCORE ENHANCEMENTS

Price Scores enable companies to display a proxy indicator of profitability to sales users, without revealing sensitive cost or margin information. In Release 17D, CPQ Cloud provides greater flexibility for customers to calculate Price Scores. These enhancements include an Advanced Calculation method and Custom Calculations using formulas or BML.

When defining a Price Score attribute in Commerce, Administrators select the method for calculating the Price Score from out-of-the-box calculation methods, custom, or advanced calculation methods.



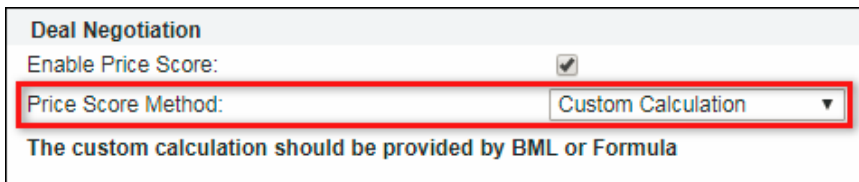
The screenshot shows a configuration window titled "Deal Negotiation". It contains the following elements:

- Enable Price Score:** A checkbox that is checked.
- Price Score Method:** A dropdown menu with the following options:
 - Custom Calculation (selected)
 - Advanced Calculation
 - Custom Calculation
 - List-Based Calculation
 - Margin-Based Calculation
 - Simple Margin Calculation
- The custom calculation should be provided by BML or Formula:** A text label.

Price Score Method

Custom Calculation

Many enterprise CPQ customers have already built customized price scoring calculations into their implementations. The **Custom Calculation** method allows customers to utilize their custom calculations that have been defined using BML or Formulas. The Custom Calculation method is available for both Transaction and Transaction Line integer attributes.



This screenshot is similar to the one above, but with a red rectangular box highlighting the "Price Score Method" dropdown menu, which is currently set to "Custom Calculation".

Custom Calculation Price Score Method

Advanced Calculation

The Advanced Calculation method is only available for Sub-Document (i.e. Transaction Line) integer attributes. Using **Advanced Calculation** administrators can select defined attributes or specify literal values to represent the variables for the given expression: $a * (b - c) / (d - e) + f$

By selecting the variables to be used in the calculation expression, Administrators can create a customized calculation of Price Score, without writing BML or Formulas. The expression is designed to support the majority of use cases for calculating profitability, while including a range of values and factors to deter reverse engineering of the calculation by sales users. Boundary Conditions can be defined for maximum and minimum values, and to specify the Price Score value when List or Net Price values are zero.

The selections illustrated below result in the following calculation: $8 * (List\ Price - Discount) / (List\ Price) + 1$

Deal Negotiation

Enable Price Score:

Price Score Method: Advanced Calculation ▼

Advanced Calculation: $a * (b - c) / (d - e) + f$

	Transaction Attribute		Specified Value
*Attribute a:	Use Specified Value ▼	=	<input type="text" value="8"/>
*Attribute b:	List Price ▼		
*Attribute c:	Discount ▼		
*Attribute d:	List Price ▼		
*Attribute e:	Use Specified Value ▼	=	<input type="text" value="0"/>
*Attribute f:	Use Specified Value ▼	=	<input type="text" value="1"/>

Boundary Conditions:

*Minimum:	<input type="text" value="1"/>
*Maximum:	<input type="text" value="9"/>
*Value when (d - e) = 0 :	<input type="text" value="9"/>

Advanced Calculation Price Score Method

Attribute drop-down menus list sub-document integer, float, and currency attributes that can be assigned as expression variable values.

The "Use Specified Value" option is used to specify literal values. Upon selection of this item, a text box is displayed to enter values. Only integer values are allowed.

Boundary Conditions

These parameters allow administrators to define minimum and maximum values for the Price Score. CPQ displays a range of 1 to 9 with visual icons by default.

Administrators can also define a default value for when variables $(d - e) = 0$. The variables d and e typically represent the Basis or denominator used in the profitability calculation and most often use List Price or Net Price or revenue values. This Boundary condition allows administrators to specify the Price Score value to use when there is either no price or zero pricing on a Transaction Line.

LAST PRICE ENHANCEMENTS

In Release 17D, CPQ Cloud provides an additional filter attribute for the Last Price Paid metric. Administrators can now exclude test, lost, or "in progress" Transactions by filtering the results to consider only Transactions with a "WON" status.

Deal Negotiation	
Enable Deal Negotiation:	Last Price Paid ▼
Customer Attribute:	Customer Id ▼
Net Price Attribute:	Net Price ▼
Date Attribute:	System Last Modified Date ▼
Duration:	Last 30 days ▼
Filter Attribute:	Status ▼
Filter Value :	WON ▼

Last Price Paid Filter Attribute

STEPS TO ENABLE

Deal Management Enhancements are automatically available on CPQ Cloud 17D sites.

TIPS AND CONSIDERATIONS

Consider the following tips when using Deal Management Enhancements:

- The accuracy of Win Probability predictions will increase when the number of quotes provided for the training session is increased. A minimum of 30 transactions are required to generate the machine learning model.
- In order to initiate a Win Probability training session, customers must have an established process to capture which quotes are won and ideally, which quotes are lost.
- Attributes pertinent to price management should be captured as transaction attributes for use in filtering and analysis (ex. trash or test quotes).
- Price sensitivity driver attributes need to be captured for each Transaction (ex. Industry).
- Commerce attributes used in the analysis must exist as Data Columns.
- Price Optimization is only available on the Transaction level in Release 17D.
- Price Optimizations are useful for pricing analysis even if never exposed to sales users.
- Price Optimization and Win Probability visualizations are not yet available in the Oracle Alta UI. Price Optimization, Win Probability, and Scatterplot charts are not yet available in the Lightning sales user UI.

KEY RESOURCES

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

ENTERPRISE PLATFORM

Upgrade the functionality of CPQ Cloud's open and flexible platform to create value and drive results using the following CPQ Cloud 17D features.

- System Configuration Enhancements
- Subscription Ordering Enhancements
- Migration Enhancements

SYSTEM CONFIGURATION ENHANCEMENTS

System Configuration refers to the manner in which customers use CPQ Cloud to configure and bundle the product or series of products they wish to sell using a group of models that together define an entire system. The ability to display BOM Mapping Rule items in Configuration, define any child item in the BOM hierarchy as a model, and reconfigure child models from the Commerce line item grid are all enhancements introduced over the past several releases in support of System Configuration.

As in prior releases, a BOM instance refers to a set of products that customers buy together on a quote. When a number of independent models from different product families or product lines are part of a single BOM instance, there are typically relationships among these models. In Release 17D, CPQ Cloud provides BML functions that allow administrators to configure rules for System Configurations. This section contains the following topics:

- BML Functions for System Configuration
- JSON Object for System Configuration Data
- Use BML for Cross-Model Configuration Rules

BML FUNCTIONS FOR SYSTEM CONFIGURATION

In Release 17D, CPQ Cloud introduces three new BML functions to retrieve System Configuration attribute values from other configured models within the system. The new BML functions are available in Library functions, Util libraries, Configuration Advanced rules, Commerce Advanced rules, Step Transitions, Advanced Step Notifications, and mass update of Transactions. The new BML functions are `getSystemData`, `getSystemAttrValues`, and `getSystemMultipleAttrValues`.

NOTES:

- These functions should only be used with System Configurations. System Configurations are BOM hierarchies that contain one or more nested child models.
- BML functions `getSystemMultipleAttrValues`, `getSystemAttrValues`, `getSystemData` will not return the value of HTML attributes. This behavior is consistent with other configuration rules that do not allow the selection of HTML attributes.

getSystemData

This BML function returns a JSON object representing the entire System Configuration for the current Transaction.

Syntax: `Json getsystemdata()`

Example:

```
systemJson = json();
systemJson = getsystemdata();
```

NOTES:

- When not in the context of a Transaction, an empty JSON object is returned.
- If System Configuration Data does not exist, an empty JSON object is returned.
- This function will also return an empty JSON object if a System Configuration has not yet been configured. The empty JSON object should be handled accordingly.

getSystemAttrValues

This BML function returns a string containing a single attribute's values from a System Configuration.

Syntax: `String[] getsystemattrvalues(String jsonPath)`

Parameters: A string containing the JSON path

Example:

```
modelValue = String[];
modelValue = getsystemattrvalues("$.configAttributes.attributeVarname");
```

NOTES:

- If the JSON Path does not return an array of single values, empty string array ("[]") will be returned.
- The function will also return empty values for any models that are yet to be configured and paths that do not return values. The empty array should be handled accordingly.

getSystemMultipleAttrValues

This BML function returns dictionary key and value string arrays containing attribute values from a System Configuration.

Syntax: Dictionary<String[]> getsystemmultipleattrvalues(Dictionary<String>)

Parameters: Dictionary string (JSON path)

- The key should be an identifier for the attributes identified in the associated value.
- The values are expected to be JSON Path expressions that identify the location of the attribute in the fully expanded system definition (BOM).

Returns: Dictionary (string keys and string values) of attributes' values

- The keys will be the identifiers provided in the input Dictionary.
- The values will be the configured attribute values of the attribute(s) at the JSON Path expressions associated with the input key.

Example:

```
jsonPaths = dict("string");
put(jsonPaths, "attributeVarname", "$.configAttributes.attributeVarname");
put(jsonPaths, "childAttributeVarname", "$.children[*].configAttributes.childAttributeVarname");
interModelValues = dict("string[]");
interModelValues = getsystemmultipleattrvalues(jsonPaths);
values = String[];
values = get(interModelValues, "attributeVarname");
```

NOTES:

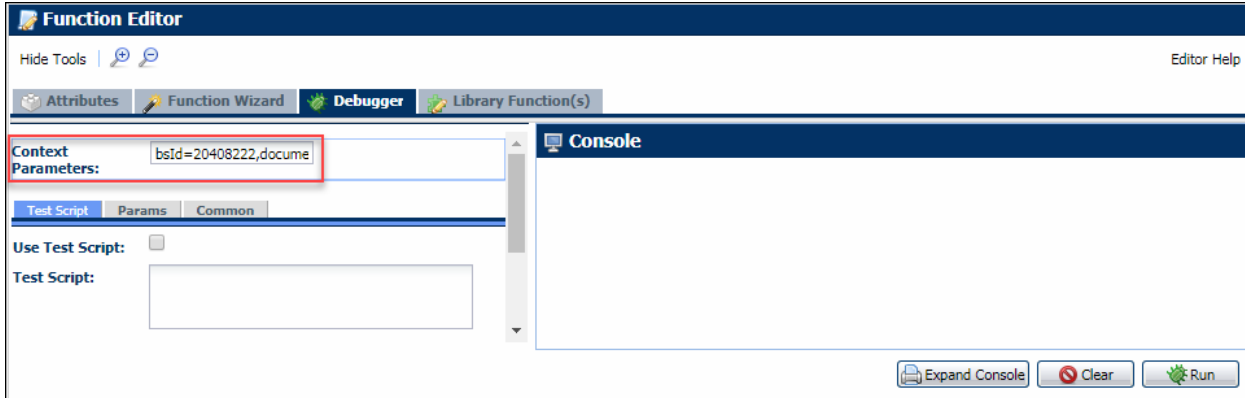
- If a JSON Path does not return an array of single values, that key-value pair will result in an empty array.
- The function will return empty arrays for models that have not been configured and paths that do not return values. The empty arrays should be handled accordingly.

DEBUGGING ADVANCED SYSTEM CONFIGURATION RULES

A Transaction ID and the document number of the root system can be used to debug system configuration inter-model rules. The **Context Parameters** field has been added to Debugger tab for BML Function Editor.

To debug system configuration inter-model rules, enter the bsId and documentNumber, and then run the script using the Debugger's Run action. This will automatically pull the specified system into memory and evaluate the attributes based on the specified system's data.

Syntax: bsId=#####, documentNumber=#



Context Parameters for BML Function Editor

JSON OBJECT FOR SYSTEM CONFIGURATION DATA

In Release 17D, CPQ Cloud provides a new JSON data object for System Configuration. The System Configuration Data JSON is accessible via the `getSystemData` BML function and has four key value pairs. The following are the JSON key names and type:

- **id** - Type: String
Contains the BOM variable name from the BOM Item Definition table.
- **documentNumber** - Type: Integer
Contains the line item document number from Commerce for the system root. This is useful when there is more than one system per Transaction.
- **configAttributes** - Type: JSON Object
Contains a model's attributes and values with the attribute variable name being the key. The attribute values reflect the configuration selections. The configuration attribute values are only updated in this structure during invocation (i.e. transitioning from Configuration to Commerce).
- **children** - Type: JSON Array
This array contains JSON objects of additional System Configuration data nodes. Each JSON object contains the id, documentNumber, configAttributes, and children keys as mentioned in this list.

SYSTEM CONFIGURATION JSON STRUCTURE

The following image displays a sample System Configuration JSON Structure along with a hierarchy diagram and a corresponding Line Item Grid. The System Configuration Hierarchy provides a visual representation of the items in the JSON Structure. This image also shows the relationship between the JSON Structure "documentNumber" field and the Line Item Grid "Doc #" attribute.

System Configuration JSON Structure

```

{
  "id": "BOM_Root",
  "configAttributes": {
    "var1": "val1"
  },
  "docNumber": 2,
  "children": [
    {
      "id": "BOM_Part",
      "docNumber": 3,
      "children": [
        {
          "id": "BOM_Model_Part",
          "configAttributes": {
            "var2": "val2"
          },
          "docNumber": 4,
          "children": [
            {
              "id": "BOM_Part_Model_Child_Model",
              "configAttributes": {
                "var3": "val3"
              },
              "docNumber": 5
            }
          ]
        }
      ]
    }
  ]
}, {
  "id": "BOM_Second_Model",
  "docNumber": 6
}, {
  "id": "BOM_Model",
  "configAttributes": {
    "var1": "val1"
  },
  "docNumber": 7,
  "children": [
    {
      "id": "BOM_Model_Part",
      "docNumber": 8
    }, {
      "id": "BOM_Model_Child_Model",
      "configAttributes": {
        "var1": "val1"
      },
      "docNumber": 9
    }
  ]
}

```

System Configuration Hierarchy

```

graph TD
  BOM_Root --> BOM_Part
  BOM_Root --> BOM_Second_Model
  BOM_Root --> BOM_Model
  BOM_Part --> BOM_Model_Part
  BOM_Model_Part --> BOM_Part_Model_Child_Model
  BOM_Model --> BOM_Model_Part
  BOM_Model_Part --> BOM_Model_Child_Model

```

Line Item Grid

	Doc #	Item #	Product
☰ ☑ + 🍌 🚫 🔄	2	1	BOM_Root
☰ ☑ + 🍌 🚫 🔄	3	2	BOM_Part
☰ ☑ + 🍌 🚫 🔄	4	3	BOM_Model_Part
☰ ☑ + 🍌 🚫 🔄	5	4	BOM_Part_Model_Child_Model
☰ ☑ + 🍌 🚫 🔄	6	5	BOM_Second_Model
☰ ☑ + 🍌 🚫 🔄	7	6	BOM_Model
☰ ☑ + 🍌 🚫 🔄	8	7	BOM_Model_Part
☰ ☑ + 🍌 🚫 🔄	9	8	BOM_Model_Child_Model

System Configuration JSON Structure

NOTE: If a child model within a system configuration does not have a corresponding BOM Item Definition and BOM Mapping Rule associated to it, the child model will not be included within the System Configuration JSON Structure. Attributes from this model cannot be retrieved using `getSystemData`, `getSystemAttrValues`, and `getSystemMultipleAttrValues` BML functions. Child models within a system configuration that do not have a corresponding BOM Item Definition and BOM Mapping Rule associated to it are not supported.

USE BML FOR CROSS-MODEL CONFIGURATION RULES

In Release 17D, administrators can use Advanced Conditions and the new BML functions to retrieve System Configuration attribute values from other configured system models. They can set the configuration flow and build rules to constrain, hide, recommend, and price sub model values.

Cross-model Constraint Rules

Constraint rules are used to let the user know which values are allowed for selection in a particular configuration. Refer to the following use case examples:

- A user changes the power supply on a parent server rack from an American option to a European option, but one of the configured sub model servers does not support the European power supply. The administrator can use a constraint rule on the parent server rack or power supply options to require sub model reconfiguration when a parent attribute is changed.
- An insurance company offers services based on location, as well as other personal information. An administrator can use constraint rules on a root customer model to capture user information and limit sub model services based on location.

Cross-model Hiding Rules

Hiding rules tell the system to hide select attributes when a pre-defined condition is satisfied. Like other rules, hiding rules are made up of a condition and an action. The value of the selected condition attribute determines the result of the condition, which when true triggers the hiding of the selected action attributes. Refer to the following use case example:

- A telecommunication provides various cell phone device models. An administrator can use cross-model hiding rules on the device models to hide attributes on an accessory configurator based on the device model selection.

Cross-model Recommendation Rules

Recommendation Rules can be used to help buyers configure products by offering suggested attribute values. When an administrator sets up a System Configuration, they can use cross-model recommendation rules to set recommended sub model attributes. Refer to the following use case example:

- As part of a training package, Silver certification is available without charge. The administrator can use an array in the certification model sets to set all the values to silver. In addition, the bronze value could be constrained using a constraint rule.

Cross-model Recommended Item Rules

Recommended Item rules enable administrators to associate parts and models with products based on user-configured values. If the recommended item is mandatory, then the user must buy the selected model with the recommended item. If the item is not mandatory, then the user does not have to buy the recommended item. Refer to the following use case example:

- A telecommunications company is having a VoIP promotion, where, if a customer orders over 100 Bluetooth headsets, they will each come with an additional free battery pack. The promotional batteries are not part of a BOM, and have a lower cost to the company than the battery packs regularly offered. The administrator can use a cross-model recommended item rule add the free battery packs when the VOIP promotion is selected.

Cross-model Pricing Rules

Pricing rules are used to calculate price based on how a product is configured. Pricing rules can be based on a combination of one or more configured values. Like most rules, a pricing rule also has a condition and an action. The action determines the price of the model being configured. Refer to the following use case example:

- A telecommunication company has a pricing rule on a phone plan model to cover initial connection fees. The company is offering a promotional bundle with 90% off the connection fee. The administrator can use a cross-model pricing rule on promotional bundle that will set the price for sub model phone plan. The original rule will not fire on the phone plan sub model.

Cross-model Configuration Flows

Configuration Flows are used to walk buyers through the Configuration Process. Configuration Flows help arrange and organize configuration attributes to make Configuration user-friendly. For products with large sets of configuration attributes, Configuration Flows can be used to group different attributes and display them on separate tabs. Configuration Flows can also be set up to direct users to different pages or flows based on their input selections.

- A user selects an Android or Apple phone, and the phone model determines which configuration flow to show the user based on the parent selection.

STEPS TO ENABLE

System Configuration Enhancements are automatically available on CPQ Cloud 17D sites.

TIPS AND CONSIDERATIONS

Rules should be unidirectional (i.e. they travel in one direction) to simplify maintenance of System Configurations.

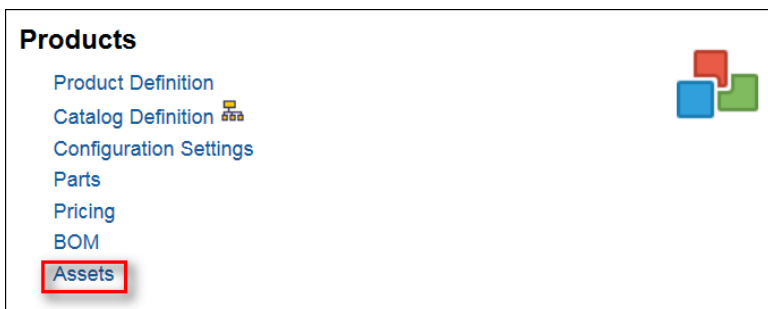
KEY RESOURCES

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

SUBSCRIPTION ORDERING ENHANCEMENTS

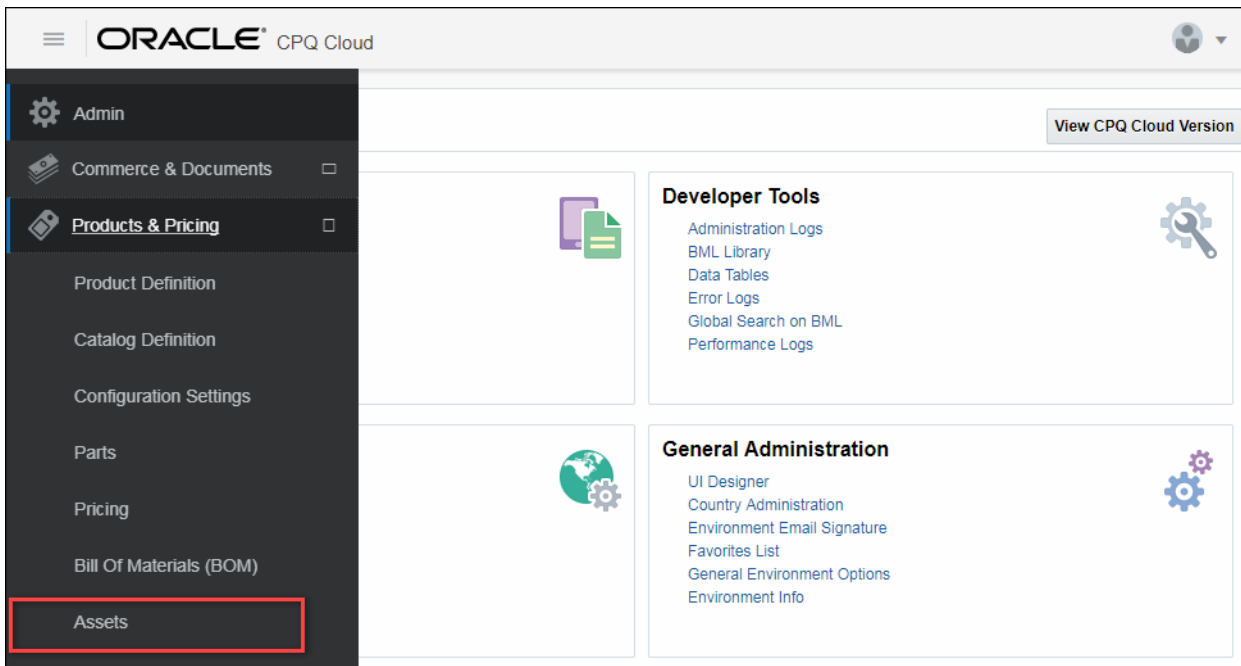
Using the Subscription Ordering enhancements available in CPQ Cloud 17D, administrators can extend the asset table by adding custom asset attributes that suit their company's business needs. In support of this functionality, 15 Integer and Float (includes Currency) columns and 35 String and Single Select Menu columns are available in the asset table. Administrators can use these columns to create custom asset attributes. Upon creating and deploying the custom asset attributes, administrators can then modify the **Customer Assets** page by displaying the custom asset attributes as fields.

In support of the CPQ Cloud 17D Subscription Ordering enhancements, an **Assets** option is available under the **Products** section on the Admin Home page.



Admin Home Page – Assets Option

If using the Alta Navigation option introduced in CPQ Cloud 2017 R2, an **Assets** option is also available on the Admin Navigation Drawer.



Assets Option on Admin Navigation Drawer

VIEW A LIST OF ASSET DEFINED FIELDS AND ASSET AVAILABLE FIELDS

By clicking **Assets** on the Admin Home page, administrators can access an interface for viewing, creating, modifying, deleting, and deploying custom asset attributes. The interface consists of a new page containing an **Asset Defined Fields** section and an **Asset Available Fields** section.

Asset Defined Fields

The **Asset Defined Fields** section contains a list of the custom asset attributes created by the CPQ Cloud administrator. Custom asset attributes displayed in red indicate an un-deployed attribute. After the successful deployment of a custom asset attribute, the attribute no longer displays in red.

Administrators can use the **Asset Defined Fields** section to select one or more custom asset attributes to delete.

Asset Defined Fields			Last Deployed : 10/13/2017 12:38 PM		
Delete	Order	Field Name	Variable	Type	Last Modified
<input type="checkbox"/>	1	Subscription Feedback	_asset_custom_subscriptionFeedback	String	10/13/2017 12:38 PM
<input type="checkbox"/>	2	Transaction Number	_asset_custom_transactionNumber	Integer	10/13/2017 12:38 PM
<input type="checkbox"/>	3	Discounted Price	_asset_custom_discountedPrice	Float	10/13/2017 12:38 PM
<input type="checkbox"/>	4	SSMTest	_asset_custom_sSMTest	Single Select Menu	10/13/2017 12:38 PM
<input type="checkbox"/>	5	singleSelectNew	_asset_custom_ssmVarName	Single Select Menu	10/13/2017 12:38 PM
<input type="checkbox"/>	6	Test	_asset_custom_test	String	10/16/2017 9:31 AM

Asset Defined Fields Section

Alternatively, administrators can select a link in the **Field Name** column to open the corresponding attribute editor and modify the associated attribute properties. For all custom asset attribute types, administrators can update the name of the attribute. Upon deploying the custom asset attribute, the attribute name displays in UI Designer under the list of attributes. Administrators can then modify the **Customer Assets** page by displaying the custom asset attribute as a field on the page. The name given to the custom asset attribute becomes the field name.

String Editor

General

*Field Name:

*Variable Name:

[Back to Top](#)

String Editor

Integer Attribute Editor

General

*Field Name:

*Variable Name:

[Back to Top](#)

Integer Attribute Editor

Floating Point Number Attribute Editor

General

*Field Name:

*Variable Name:

Currency:

Number of Decimal Places

Precision:

[Back to Top](#)

Float Attribute Editor

Menu Editor

General

*Field Name:

*Variable Name:

Menu Population

Menu Entry: Displayed Text Variable Name

a [a]
b [b]

[Back to Top](#)

Menu Editor

Asset Available Fields

The **Asset Available Fields** section contains the 15 pre-defined Integer and Float columns and the 35 String and Single Select Menu columns available in the asset table, which stores the details of un-deployed custom asset attributes. Administrators can use these 50 columns to extend the asset schema by creating custom asset attributes.

Asset Available Fields			Delete
Field Number	Data Type	Type	
2.	Text	String	Create Field
3.	Text	String	Create Field
4.	Text	String	Create Field
5.	Text	String	Create Field
6.	Text	String	Create Field
7.	Text	String	Create Field
8.	Text	String	Create Field
9.	Text	String	Create Field
11.	Text	String	Create Field
12.	Text	String	Create Field
13.	Text	String	Create Field
14.	Text	String	Create Field
15.	Text	String	Create Field
16.	Text	String	Create Field
17.	Text	String	Create Field
18.	Text	String	Create Field
19.	Text	String	Create Field
20.	Text	String	Create Field
21.	Text	String	Create Field
22.	Text	String	Create Field
23.	Text	String	Create Field
24.	Text	String	Create Field
26.	Text	String	Create Field
27.	Text	String	Create Field
29.	Text	String	Create Field
30.	Text	String	Create Field
31.	Text	String	Create Field
32.	Text	String	Create Field
33.	Text	String	Create Field
34.	Text	String	Create Field
35.	Text	String	Create Field
37.	Number	Float	Create Field
38.	Number	Float	Create Field
39.	Number	Float	Create Field
40.	Number	Float	Create Field
42.	Number	Float	Create Field
43.	Number	Float	Create Field
44.	Number	Float	Create Field
45.	Number	Float	Create Field
46.	Number	Float	Create Field
47.	Number	Float	Create Field
48.	Number	Float	Create Field
49.	Number	Float	Create Field
50.	Number	Float	Create Field

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ORACLE

Asset Available Fields

CREATE CUSTOM ATTRIBUTES

The creation of custom asset attributes works similarly to the creation of custom part fields, where pre-defined fields of various types exist in a table. Administrators use these pre-defined fields to create custom asset attributes. The variable name for all custom asset attributes contains the "_asset_custom_" prefix followed by the field name provided by the administrator.

Complete the following steps:

1. Navigate to the Admin Home page.
2. Under **Products**, click **Assets**.
3. Under the **Asset Available Fields** section, find a row with the data type for the custom attribute you want to create.
4. From the **Type** menu, select the type of custom attribute you want to create.
 - For the **Text** Data Type, **String** and **Single Select Menu** options are available.
 - For the **Number** Data Type, **Float** and **Integer** options are available.
5. Click **Create Field**.
The corresponding attribute editor opens.
6. Populate the associated fields.

Attribute Type	Associated Fields
String	Field Name Variable Name
Float	Field Name Variable Name Currency checkbox Number of Decimal Places
Integer	Field Name Variable Name
Single Select Menu	Field Name Variable Name Displayed Text (i.e. the 'Displayed Text' and 'Variable Name' UI attribute names)

7. Click **Add**.
The newly created custom asset attribute displays in red under **Asset Defined Fields**, indicating it is an un-deployed attribute.

DELETE CUSTOM ASSET ATTRIBUTES

Administrators can use the **Asset Defined Fields** section to delete one or more un-deployed custom asset attributes. Deleting a custom asset attribute removes the attribute from the **Asset Defined Fields** section.

Administrators can delete custom asset attributes not yet referenced in a UI Designer layout. If administrators attempt to delete a deployed custom asset attribute used in a layout, an error message will display.

Complete the following steps:

1. Navigate to the Admin Home page.
2. Under **Products**, click **Assets**.
3. Under **Asset Defined Fields**, select the custom asset attributes you want to delete.
4. Click **Delete**.

The custom asset attribute no longer displays in the **Asset Defined Fields** section.

NOTES:

- If using deployed custom fields in the UI layout, administrators cannot delete the attribute until after the custom field is removed from the UI layout.
- When a deployed custom attribute is deleted and re-deployed, the data associated with the attribute column is also deleted when a new custom attribute is created using the same field number as the deleted attribute.

DEPLOY CUSTOM ASSET ATTRIBUTES

By deploying one or more custom asset attributes, administrators are adding the attributes to the list of UI Designer attributes. Administrators can then use UI Designer to add deployed, re-deployed, and updated custom asset attributes to the **Customer Assets** page layout, which adds the attributes as fields in the **Customer Assets** page.

NOTES:

- After the successful deployment of a custom asset attribute, the attribute no longer displays in red under **Asset Defined Fields**.
- Deployed custom asset attributes are available for asset REST services.
- Deployed custom asset attributes of type Integer, Float, String, and Single Select Menu are available in the **Customer Assets** page layout.

Complete the following steps:

1. Navigate to the Admin Home page.
2. Under **Products**, click **Assets**.
Under the **Asset Defined Fields** section, all newly created or modified custom asset attributes display in red.

NOTE: Administrators do not need to select the custom attributes to deploy. Upon clicking **Deploy**, all custom attributes displayed in red are deployed.

Asset Defined Fields			Last Deployed : 10/13/2017 11:18 AM		
Delete	Order	Field Name	Variable	Type	Last Modified
<input type="checkbox"/>	1	Subscription Feedback	_asset_custom_subscriptionFeedback	String	10/13/2017 11:18 AM
<input type="checkbox"/>	2	Transaction Number	_asset_custom_transactionNumber	Integer	10/13/2017 11:18 AM
<input type="checkbox"/>	3	Discounted Price	_asset_custom_discountedPrice	Float	10/13/2017 11:18 AM
<input type="checkbox"/>	4	SSMTest	_asset_custom_sSMTest	Single Select Menu	10/13/2017 11:18 AM
<input type="checkbox"/>	5	singleSelectNew	_asset_custom_ssmVarName	Single Select Menu	10/13/2017 11:18 AM
<input checked="" type="checkbox"/>	6	Test	_asset_custom_test	String	10/13/2017 11:18 AM

[Delete](#)

Custom Asset Attribute Selected for Deployment

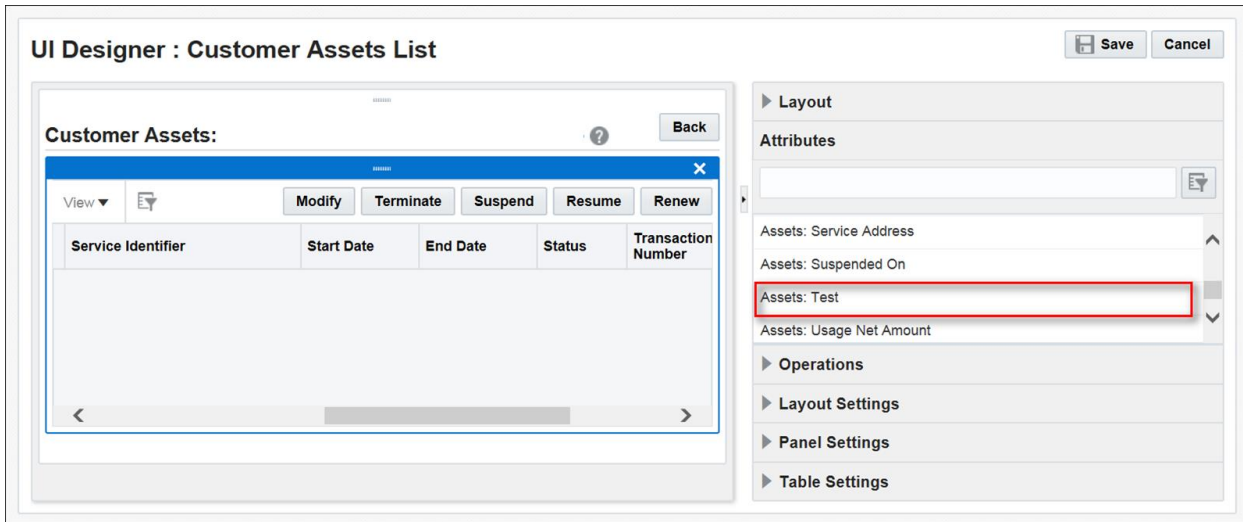
3. Click **Deploy**.
The deployed custom asset attribute remain in the **Asset Defined Fields** section, but no longer display in red.

Asset Defined Fields			Last Deployed : 10/13/2017 12:38 PM		
Delete	Order	Field Name	Variable	Type	Last Modified
<input type="checkbox"/>	1	Subscription Feedback	_asset_custom_subscriptionFeedback	String	10/13/2017 12:38 PM
<input type="checkbox"/>	2	Transaction Number	_asset_custom_transactionNumber	Integer	10/13/2017 12:38 PM
<input type="checkbox"/>	3	Discounted Price	_asset_custom_discountedPrice	Float	10/13/2017 12:38 PM
<input type="checkbox"/>	4	SSMTest	_asset_custom_sSMTest	Single Select Menu	10/13/2017 12:38 PM
<input type="checkbox"/>	5	singleSelectNew	_asset_custom_ssmVarName	Single Select Menu	10/13/2017 12:38 PM
<input type="checkbox"/>	6	Test	_asset_custom_test	String	10/13/2017 12:38 PM

[Delete](#)

Custom Asset Attribute After Deployment

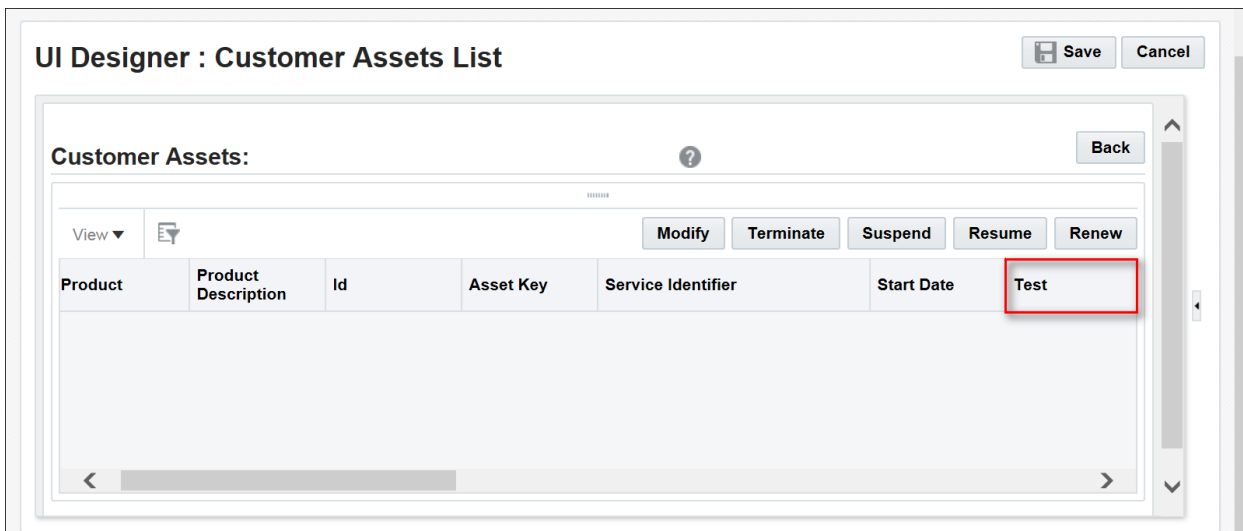
As shown below, the deployed custom asset attribute displays among the list of attributes in UI Designer.



Deployed Asset Displayed in the UI Designer Attributes List

ADD CUSTOM ASSET ATTRIBUTES AS FIELDS ON THE CUSTOMER ASSETS LIST LAYOUT

After deploying a custom asset attribute, the attribute displays in the list of UI Designer attributes. Administrators can use the standard UI Designer drag-and-drop functionality to add the custom asset attribute as a field in the **Customer Assets List** layout. When referenced in a layout, custom asset attributes display as read-only fields.



Customer Assets List Layout with Custom Asset Attribute as Field

NOTES:

- New and updated custom asset attributes are visible in UI Designer after the custom asset attributes are deployed.
- Administrators can add updated and re-deployed custom asset attributes to the Customer Assets page layout.
- To update a field name in UI Designer, administrators must use UI Designer to remove the attribute from the layout, update the attribute, deploy the changes, and then add the attribute back to the layout.
- For more information about UI Designer, refer to the CPQ Cloud Administration Online Help.

STEPS TO ENABLE

Subscription Ordering Enhancements are automatically available on CPQ Cloud 17D sites.

TIPS AND CONSIDERATIONS

Consider the following tips when using the Subscription Ordering integration.

- The **Assets** option on the Admin Home page and the Admin Navigation Drawer is available upon upgrading to CPQ Cloud 17D.
- Administrators can successfully migrate all CRUD operations performed on custom asset attributes, similar to regular asset attributes using Asset Import-Export Action REST endpoints.

KEY RESOURCES

- CPQ Cloud Administration Online Help

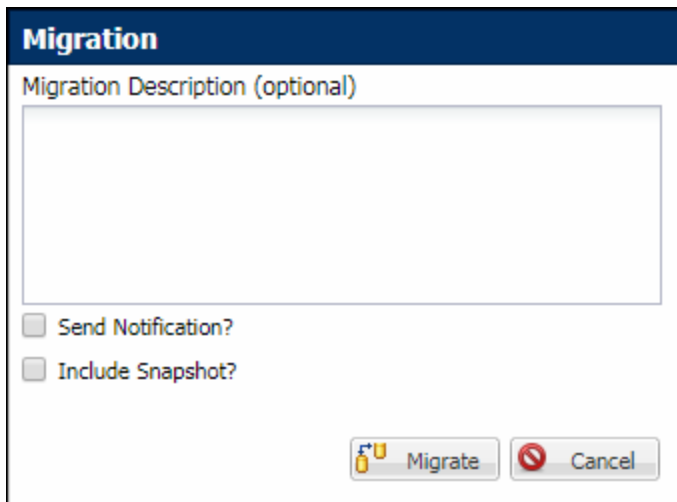
MIGRATION ENHANCEMENTS

CPQ Cloud 17D extends the functionality available in the Migration Center by providing migration status notifications. When a migration completes, CPQ Cloud currently sends an email notification to the email address provided in the profile of the administrator who initiated the migration. Prior to initiating a migration in CPQ Cloud 17D, administrators can now specify the email address of each individual who is to receive the migration status notification.

NOTE: Migrations will successfully complete if notification emails fail to send.

Complete the following steps:

1. Navigate to the Admin Home page.
2. Under **Utilities**, click **Migration**.
The Migration Center opens.
3. From the **Select A Mode** drop-down, select a Migration Mode.
4. Complete online prompts to perform one of the following migrations: Import From Source, Import Package, or Connect to Destination.
5. Select the components to migrate.
6. Click **Migrate**.
The Migration dialog opens.



Migration Dialog with Send Notification Option

7. Mark the **Send Notification?** checkbox.
A text box displays and is by default populated with the email address of the logged in user.

8. (Optional) Enter the email addresses of any additional individuals who are to receive the status notification. Separate each email address with a semi-colon.

Migration

Migration Description (optional)

Send Notification? admin1@yoursite.com; admin2@yoursite.com

Include Snapshot?

Migrate Cancel

Populated Migration Dialog

9. When the migration completes, a status notification is sent to each email address specified in the **Migration** dialog. The email indicates the success or failure of the migration.

Migration completed without errors - Message (Plain Text)

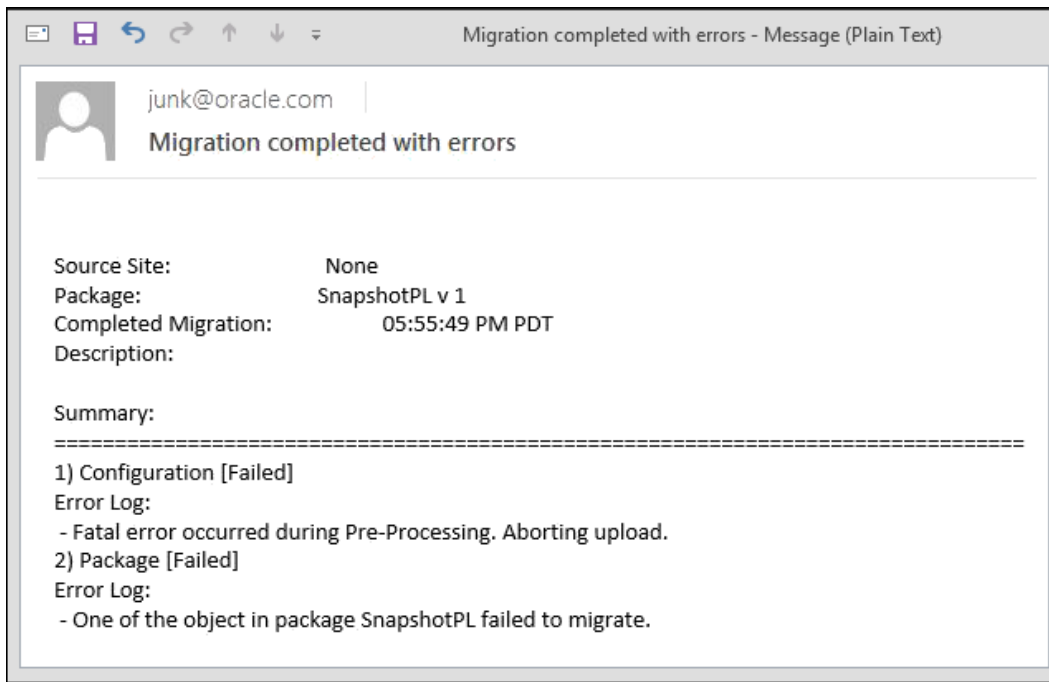
junk@oracle.com |
Migration completed without errors

Source Site: None
Package: CPQCS-80063 v 1
Completed Migration: 12:55:05 PM PDT
Description:

Summary:
=====

1) Configuration [Successful]
2) Package [Successful]

Status Notification - Migration Success



Status Notification – Migration Failure

STEPS TO ENABLE

The Migration enhancements are automatically available on CPQ Cloud 17D sites.

KEY RESOURCES

[CPQ Cloud Administration Online Help](#)

INTEGRATED SUITE

Leverage the power of CPQ Cloud by integrating with other software applications. CPQ Cloud administrators can use the following pre-defined integrations out-of-the-box or enhance the provided integration patterns to build a strong Oracle Cloud suite.

USE OAUTH TOKENS IN BML LIBRARIES

OAuth is an industry standard technology that allows customers to grant third-party access to their application without sharing their passwords. When integrating CPQ Cloud with a CRM system such as Salesforce or Microsoft Dynamics 365, the integration uses an OAuth access token to authenticate user access to the CRM system. Generated automatically when the user accesses CPQ Cloud from the CRM system, the token supports the synchronization of data between CPQ Cloud and the CRM system.

INSERT TOKEN IN HEADER OF URL DATA FUNCTION

In prior releases, administrators could not use BML to access generated tokens. CPQ Cloud 17D allows administrators to use a BML function to retrieve a user's access token during a Microsoft Dynamics 365 or a Salesforce v5 or greater integrated session. By inserting an access token into the header of a BML URL data function, CPQ Cloud can securely write data to the CRM system.

`$_access_token_dynamics365$` - For Microsoft Dynamics 365 integrated sessions
`$_access_token_salesforce$` - For Salesforce integrated sessions

When a user has used an OAuth-based Single Sign-On from their CRM to access CPQ Cloud, the system will replace the access token variables above in an "urlData" function with the user's active access token. This establishes a secure connection between CPQ Cloud and the CRM system.

For example:

The header would appear as follows to request a list of Microsoft Dynamics 365 opportunities:

```
headers=dict("string");
put(headers, "Authorization", "Bearer $_access_token_dynamics365");
response=urldata(https://api/data/v8.2/opportunities , GET,
headers);
print response; //prints out opportunity information
```

NOTES:

- If the user does not have an integrated session, the access token variable is replaced with a blank.
- The partner login icon will generate a token for the user as long as the user has generated a token and logged in at least once in the past.
- An invalid or expired access token results in an error from the target system.

STEPS TO ENABLE

This enhancement is available on all CPQ Cloud 17D sites.

TIPS AND CONSIDERATIONS

Consider the following tips when using this enhancement:

- Administrators and users can use the CPQ Cloud **User Integration** page to generate an OAuth access token to enable the synchronization of data between CPQ Cloud and a CRM system, such as Salesforce or Microsoft Dynamics 365. Likewise, they can use the **User Integration** page to revoke the token.
- If a user's CRM access token has expired, the CRM system will not allow the user to synchronize data and will return an error. The user must refresh their token by clicking the partner login icon or by returning to the quote through the CRM system.

KEY RESOURCES

CPQ Cloud Administration Online Help

USER INTEGRATION FOR MICROSOFT AZURE ACTIVE DIRECTORY

The CPQ Cloud and Microsoft Dynamics 365 user integration supports the use of Microsoft Azure Active Directory to grant application access to user data. This enhancement provides initial functionality in support of a BML-based integration between CPQ Cloud and Microsoft Dynamics 365. Using Azure Active Directory as the identify provider (IdP), Microsoft Dynamics 365 users can seamlessly access CPQ Cloud using the integration's Single-Sign On (SSO) functionality.

LOCATE YOUR TENANT NAME

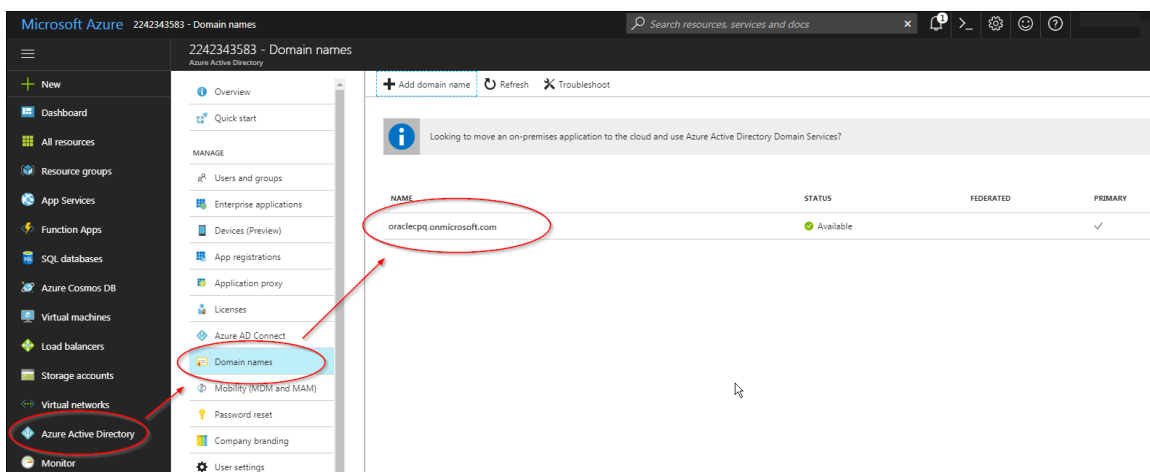
An organization receives a tenant ID upon signing up for a Microsoft cloud service. The tenant ID is used as a reference in Azure Active Directory and Microsoft Dynamics 365. The tenant name is the domain name of the Azure Active Directory.

In CPQ Cloud 17D, administrators can configure SSO between Azure Active Directory and CPQ Cloud by completing the following steps:

- Locate your tenant name in Azure Active Directory
- Create an app registration in Azure Active Directory
- Define Permissions in Azure Active Directory
- Prepare the Azure App for CPQ Cloud integration
- Prepare CPQ Cloud for Azure App integration

Complete the following steps:

1. Log in to Microsoft Azure.
2. Navigate to **Azure Active Directory > Domain names**.



Domain Name in Azure Active Directory

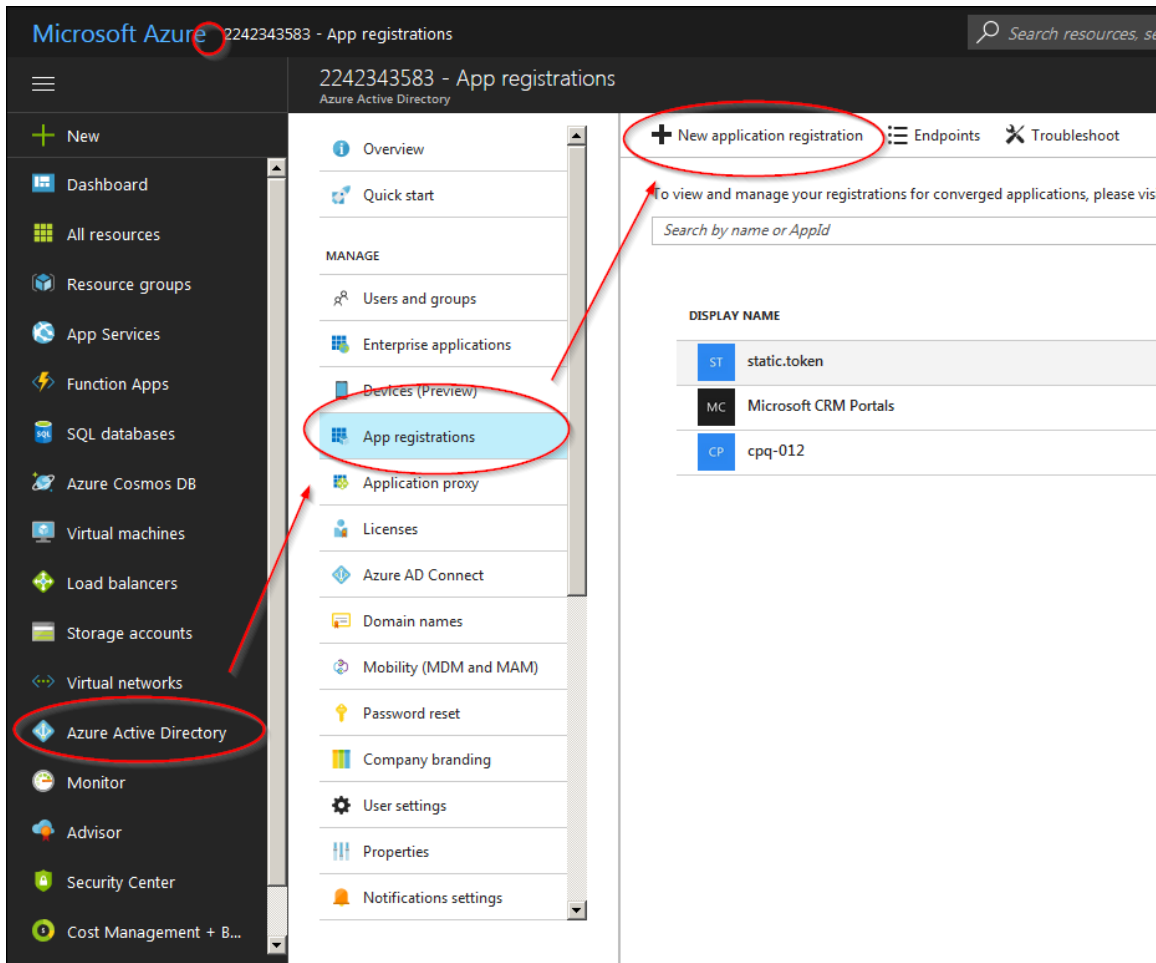
3. Copy the domain name.
You will use the domain name (i.e. tenant name) when creating an app registration.

CREATE AN APP REGISTRATION

Register Microsoft Dynamics 365 in the Azure portal to add the application to the Microsoft Azure Active Directory and create an Application ID. The Application ID allows Microsoft Dynamics 365 to receive access tokens.

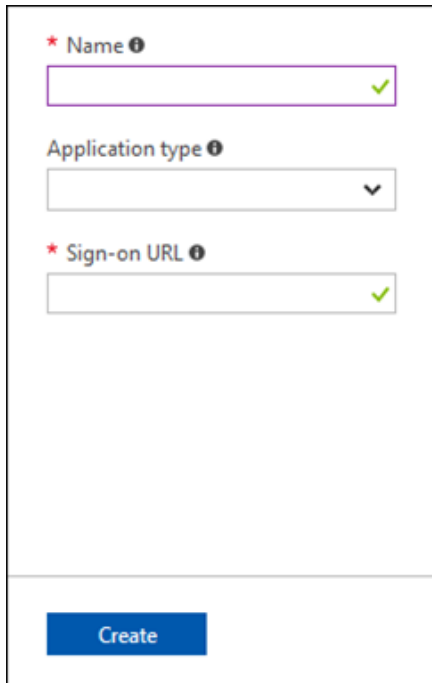
Complete the following steps:

1. Log in to Microsoft Azure.
2. Navigate to **Azure Active Directory > App registrations**.



Microsoft Azure Portal

3. Click **New application registration**.
A dialog for creating the registration opens.



The image shows a dialog box titled "Registration Details". It contains three input fields and a "Create" button. The first field is labeled "* Name" with an information icon and a green checkmark. The second field is labeled "Application type" with an information icon and a dropdown arrow. The third field is labeled "* Sign-on URL" with an information icon and a green checkmark. The "Create" button is blue and located at the bottom left of the dialog.

Registration Details

4. In the **Name** field, enter a name for the app registration.
5. In the **Application type** field, enter Web app / API.
6. In the **Sign-on URL** field, enter the following:
`https://<root_domain>/admin/oauth2/dynamics365/oauth_callback.jsp`

NOTE: The Sign-on URL is used to populate the default "Reply URLs".

7. Click **Save**.

DEFINE PERMISSIONS

Define the permissions to which the Microsoft Dynamics 365 app requires access. Select the following options when setting permissions:

- Application Permissions
- Delegated Permissions
- Access CRM Online as organization users

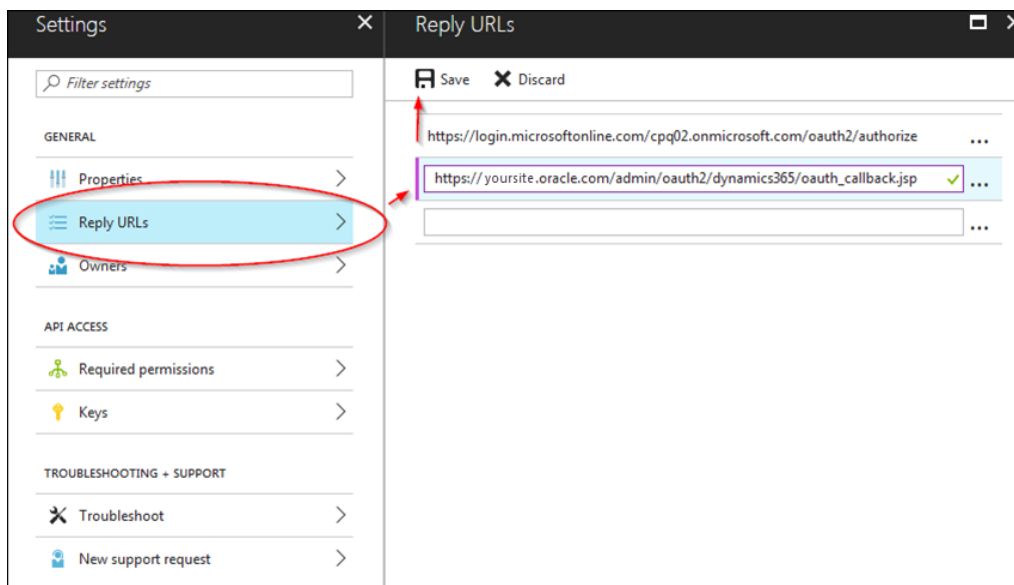
NOTE: For additional information, refer to the [Azure Active Directory](#) documentation.

PREPARE THE AZURE APP FOR CPQ CLOUD APP INTEGRATION

A Reply URL is the location to which Azure Active Directory sends an authentication response (i.e. token) when authentication is successful. Administrators must specify a Reply URL, which is the URL from which Dynamics sales users can access CPQ Cloud.

Complete the following steps:

1. Log in to Microsoft Azure.
2. Navigate to **Azure Active Directory** > **App registrations** > **Your_pre_existing_app**.
3. Click **Reply URLs**.
4. Enter the Reply URL for CPQ Cloud, which is typically:
`https://<root_domain>/admin/oauth2/dynamics365/oauth_callback.jsp`



Reply URL

5. Click **Save**.

PREPARE CPQ CLOUD FOR AZURE APP INTEGRATION

Administrators must open a Service Request (SR) on [My Oracle Support](#) to enable SSO for a CPQ Cloud – Microsoft Dynamics 365 integration. Before doing so, locate the following information and include the information in the SR:

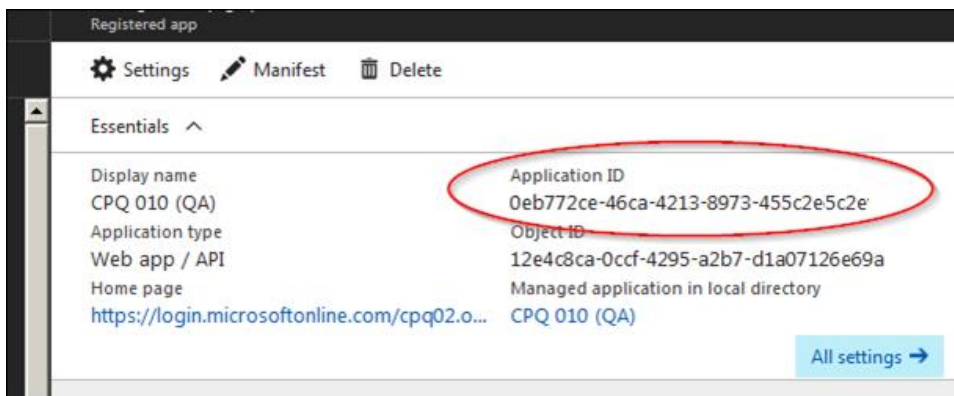
- Client ID
- Identity Provider URI and Tenant
- Client Secret
- Resource URI

Get the Client Id

A Client ID is a unique ID synonymous with the Application ID that allows Microsoft Dynamics 365 to receive access tokens.

Complete the following steps:

1. Log in to Microsoft Azure.
2. Navigate to **Azure Active Directory > App registrations > Your_pre_existing_app**.
3. Copy the Application ID.



Application ID

Get the Identity Provider URI and Tenant

In a CPQ Cloud – Microsoft Dynamics 365 integration, Microsoft Azure functions as a cloud-based identity and access management solution. The Identity Provider URI is the domain of the Azure Active Directory URL. The tenant is the first path in the Azure Active Directory URL and proceeds the Identity Provider URI. Only the Active Directory URLs specified can authenticate users.

Complete the following steps:

1. Log in to Microsoft Azure.
2. Navigate to **Azure Active Directory > App registrations**.
3. Click **Endpoints**.
4. Copy the OAUTH 2.0 AUTHORIZATION ENDPOINT.

The screenshot shows the Azure Active Directory 'App registrations' interface. The 'Endpoints' tab is selected, displaying a list of endpoints for various applications. The 'OAUTH 2.0 AUTHORIZATION ENDPOINT' is highlighted with a red circle, and a red arrow points from the 'Endpoints' tab to it.

DISPLAY NAME	APPLICATION TY...	APPLICATION ID
CPQ 010 (QA)	Web app / API	0eb772ce-46ca-4213-8973-45...
static.token	Native	1665276f-181b-4231-95bc-c7...
Microsoft CRM Portals	Web app / API	def2274b-0383-4e8d-9225-53...
cpq-012 (native)	Native	bf28a05d-bf70-4372-a4ec-b8...
cpq-012	Web app / API	45f96ba4-a506-4a80-a2b5-60...

Endpoints:

- FEDERATION METADATA DOCUMENT
<https://login.microsoftonline.com/38e...>
- WS-FEDERATION SIGN-ON ENDPOINT
<https://login.microsoftonline.com/38e...>
- SAML-P SIGN-ON ENDPOINT
<https://login.microsoftonline.com/38e...>
- SAML-P SIGN-OUT ENDPOINT
<https://login.microsoftonline.com/38e...>
- MICROSOFT AZURE AD GRAPH API ENDPOINT
<https://graph.windows.net/38ef3fd8-d...>
- OAUTH 2.0 TOKEN ENDPOINT
<https://login.microsoftonline.com/38e...>
- OAUTH 2.0 AUTHORIZATION ENDPOINT
<https://login.microsoftonline.com/38e...>

OAuth 2.0 Authorization Endpoint

5. Locate the Identity Provider URI and the tenant.

- The Identity Provider URI is the domain of the Azure Active Directory URL and looks similar to: `https://login.microsoftonline.com`
- The tenant is the first path in the Azure Active Directory URL and looks similar to: `38ef3fd8-dad2-4d94-b186-f508effa50af`

URI Breakdown	
Identity Provider	tenant
<code>https://login.microsoftonline.com/38ef3fd8-dad2-4d94-b186-f508effa50af</code>	

Identity Provider URI and Tenant

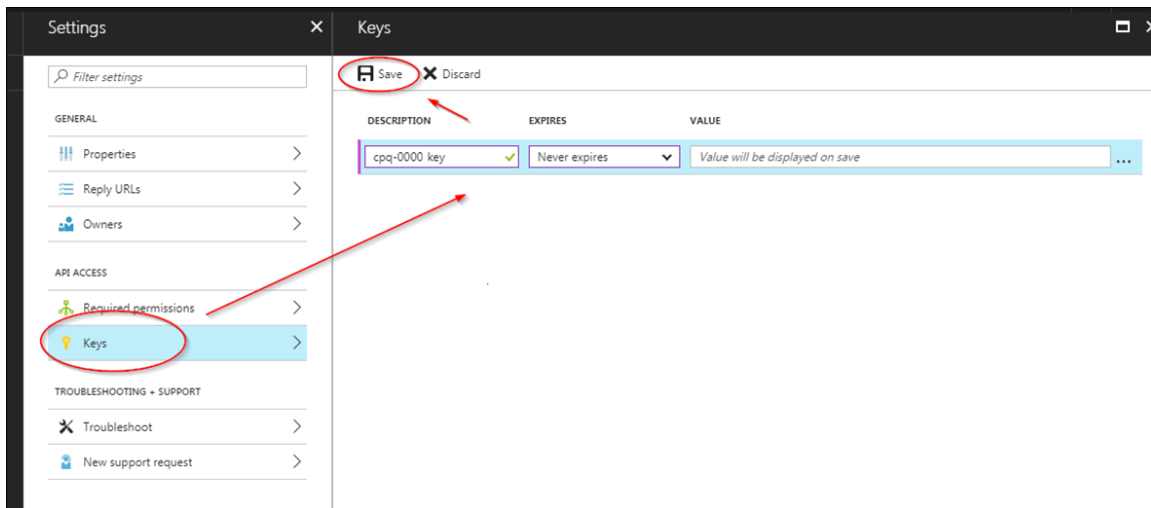
NOTE: The tenant ID shown above and the tenant name referenced in the Locate Your Tenant Name section are interchangeable. Microsoft accepts both the Azure Portal's domain and the ID as acceptable tenants. The values both point to the same location.

Get the Client Secret

SSO between Dynamics and CPQ Cloud requires a client secret.

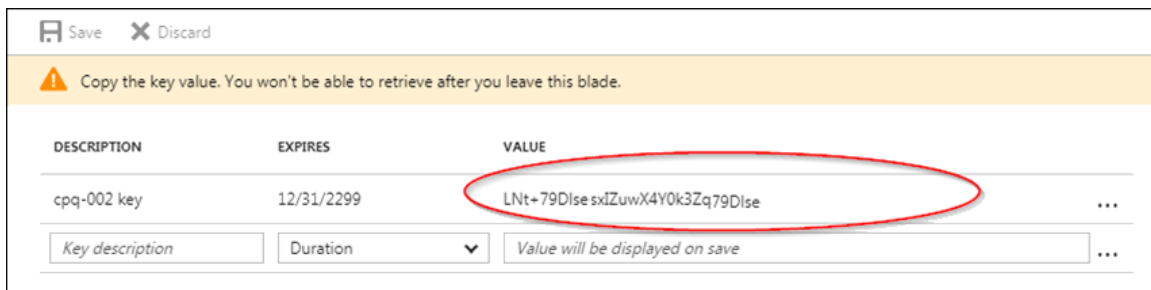
Complete the following steps:

1. Log in to Microsoft Azure.
2. Navigate to **Azure Active Directory > App registrations > Your_pre_existing_app**.
3. Click **Keys**.
4. Create your key, which will generate your secret.
 - Provide a description for the key.
 - Select **Never expires** from the **Expires** menu.
 - Leave the **Value** field blank.



Key Details

5. Click **Save** to generate the client secret.
6. Copy the value in plain text and include it in the Service Request (SR) you create on [My Oracle Support](#). An Oracle support technician will encrypt your client secret.



Client Secret

NOTE: Administrators must copy the client secret. They cannot access the client secret at a later time.

Get the Resource URI

The Resource URI is the environment to which the app registration has data access, which is either the Dynamics 365 production or sandbox environment.

Complete the following steps:

1. Log in to the Microsoft Dynamics 365 site that will use SSO to access CPQ Cloud.
2. Copy the URL, trimming off everything except the domain.
For example: <https://yoursite.crm.dynamics.com>

STEPS TO ENABLE

After completing the above steps, open a Service Request (SR) on [My Oracle Support](#). Include the following information in the SR:

- Client ID
- Identity Provider URI and Tenant
- Client Secret
- Resource URI

KEY RESOURCES

- [Azure Active Directory Documentation](#)
- CPQ Cloud Administration Online Help

JD EDWARDS INTEGRATION

CPQ Cloud 17D provides JD Edwards customers with an integration that enhances their direct, channel, and web Commerce sales experience. After receiving customer approval of a quote, CPQ Cloud sales users can use the information in the quote to create an order in JD Edwards and maintain an up-to-date view of order status in CPQ Cloud.

Supported by Oracle Integration Cloud Service (ICS) and Commerce attributes, actions, and BML functions created within the CPQ Cloud platform, the integration substantially reduces the risk, time, and effort associated with implementing a custom integration between CPQ Cloud and JD Edwards.

NOTE: For information about how to implement the integration, refer to the *Oracle CPQ Cloud – JD Edwards Implementation Guide*.

CREATE AN ORDER IN JD EDWARDS

As part of the order creation process, CPQ Cloud sales users retrieve the customer's Sold To, Ship To, and Bill To address information from JD Edwards, add line items to a Transaction, generate a quote, and invoke a Create Order action to create the order in JD Edwards.

Complete the following steps:

1. Create a CPQ Cloud Transaction.
2. In the **Customer ID** field, enter the Customer ID of the JD Edwards customer for whom you are creating an order. The Customer ID is used to retrieve the customer's Sold To, Ship To, and Bill To address information.
3. From the **Business Unit** drop-down menu, select the business unit associated with this Customer ID.

CPQ and JDE Integration

*Customer ID	<input type="text" value="701"/>	*Business Unit	<input type="text" value="Western Distribution"/>
	<input type="button" value="Get Customer Details"/>	*Status	
Created By	Super User	Order Date	
Created Date	10/11/2017	Transaction Number	CPQ-297

Line Item Details

Order Line #	Item	Description	Order Line Type	Branch	List Price	Quantity	Discount	Discount Type	Net Price	Net Amount	Order Line Status
No Line Items Attached											
<input type="button" value="Add Line Item"/>											

CPQ Cloud Transaction and Associated Business Unit

4. Click **Get Customer Details**.

The customer Sold To Party ID, Ship To Party ID, and Billing Company Name is retrieved from JD Edwards. Company Name, Address, City, State, Zip, and Country information is also retrieved.

CPQ and JDE Integration

*Customer ID: *Business Unit:

Created By: Super User *Status: Order Date: Transaction Number: CPQ-297

Created Date: 10/11/2017

Customer Information

Sold To Party ID	701	Ship To Party ID	701	Billing Company Name	French Distribution Center
Sold To Company Name	French Distribution Center	Ship To Company Name	French Distribution Center	Billing Address	Avenue, Louise, 200
Sold To Address	Avenue, Louise, 200	Ship To Address	Avenue, Louise, 200	Billing City	Paris
Sold To City	Paris	Ship To City	Paris	Billing State	
Sold To State		Ship To State		Billing Zip	10500
Sold To Zip	10500	Ship To Zip	10500	Billing Country	FR
Sold To Country	FR	Ship To Country	FR		

Line Item Details

Order Line #	Item	Description	Order Line Type	Branch	List Price	Quantity	Discount	Discount Type	Net Price	Net Amount	Order Line Status
No Line Items Attached											

Customer Information from JD Edwards

NOTE: If the Customer ID field is left blank or an invalid value is entered, an error message will display upon clicking **Get Customer Details**. The sales user must correct the invalid entry in order to proceed.

5. Click **Add Line Item** to add one or more line items to the Transaction.

If a non-existing JD Edwards part is added, the sales users are unable to create the order.

Part Search Results

Select	Number	Display Number	Description	Lead Time(Days)	Part Type	Price
<input checked="" type="checkbox"/>	CR006	Office Desk Phone	Office Desk Phone	N/A	Stocked Item	\$50.00
<input type="checkbox"/>	CR007	Office Printers	Office Printers	N/A	Stocked Item	\$70.00
<input checked="" type="checkbox"/>	CR008	Office Furniture	Office Furniture	N/A	Stocked Item	\$100.00
<input type="checkbox"/>	SRM1304	Installation Services	Installation Services	N/A	Non-Stock Item	\$25.00

[Select All](#) 1 - 4 of 4 | [Back to Top](#)

List of Potential Line Items to Add to Transaction

6. Click **Add to Transaction**.

As shown below, the line items are added to the CPQ Cloud Transaction.

Save Submit Generate Proposal Test Email Pipeline Viewer

CPQ and JDE Integration

***Customer ID** ***Business Unit**
Get Customer Details ***Status**
 Created By Super User Order Date
 Created Date 10/11/2017 Transaction Number CPQ-297

Line Item Details

<input type="checkbox"/>	Order Line #	Item	Description	Order Line Type	Branch	List Price	Quantity	Discount	Discount Type	Net
<input type="checkbox"/>	2	CR006	Office Desk Phone	S	30	\$50.00	1			\$
<input type="checkbox"/>	3	CR008	Office Furniture	S	30	\$100.00	1			\$

< Add Line Item Copy Line Items >

Line Items Added to Transaction

7. Click **Submit** to invoke the **Create Order** action. An order is placed in the JD Edwards system. The pricing details of the entire CPQ Cloud Transaction are transferred to the order.

CPQ and JDE Integration

***Customer ID** 701 ***Business Unit** Western Distribution Center
Get Customer Details ***Status** Ordered
Order ID 14568 Order Status Check Date 10/11/2017
 Created By Sales User Order Date 10/11/2017 9:58 AM
 Created Date 10/11/2017 Transaction Number CPQ-297

Customer Information

Sold To Party ID	701	Ship To Party ID	701	Billing Company Name	French Distribution Center
Sold To Company Name	French Distribution Center	Ship To Company Name	French Distribution Center	Billing Address	Avenue, Louise, 200
Sold To Address	Avenue, Louise, 200	Ship To Address	Avenue, Louise, 200	Billing City	Paris
Sold To City	Paris	Ship To City	Paris	Billing State	
Sold To State		Ship To State		Billing Zip	10500
Sold To Zip	10500	Ship To Zip	10500	Billing Country	FR
Sold To Country	FR	Ship To Country	FR		

Line Item Details

Order Line #	Item	Description	Order Line Type	Branch	List Price	Quantity	Discount	Discount Type	Net Price	Net Amount	Order Line Status
2	CR006	Office Desk Phone	S	30	\$50.00	1			\$50.00	\$50.00	Entered Sales Order
3	CR008	Office Furniture	S	30	\$100.00	1			\$100.00	\$100.00	Entered Sales Order

< Check Order Status >

Order ID and Status in CPQ Cloud

NOTE: As shown above, the order ID is returned to CPQ Cloud and the Status field populates with an "Ordered" status.

RECEIVE ORDER STATUS UPDATES FROM JD EDWARDS

Once an order is created in JD Edwards, CPQ Cloud sales users can obtain order status updates from JD Edwards using a **Check Order Status** action, which is invoked from a button on the CPQ Cloud Transaction page. When an order status changes at the Transaction or Transaction Line level, CPQ Cloud sales users can click **Check Order Status** to retrieve the latest status information from JD Edwards.

Line Item Details										
Item	Description	Order Line Type	Branch	List Price	Quantity	Discount	Discount Type	Net Price	Net Amount	Order Line Status
R006	Office Desk Phone	S	30	\$50.00	1			\$50.00	\$50.00	Entered Sales Order
R008	Office Furniture	S	30	\$100.00	1			\$100.00	\$100.00	Entered Sales Order

Check Order Status Button

The Status field in the CPQ Cloud Transaction changes to the most advanced line item. For example: If the status of one line item is "Shipment Confirmation," then the status of the Transaction reflects the line item status. In the below screenshot, the Transaction status is "Awaiting Shipment".

CPQ and JDE Integration

<p>*Customer ID 77</p> <p>Order ID 14369</p> <p>Created By Sales User</p> <p>Created Date 09/27/2017</p> <p style="text-align: center;">Get Customer Details</p>	<p>*Business Unit Western Distribution Center</p> <p>*Status Awaiting Shipment</p> <p>Order Date 09/27/2017 2:15 AM</p> <p>Transaction Number CPQ-200</p>
---	---

Customer Information

Sold To Party ID	77	Ship To Party ID	77	Billing Company Name	
Sold To Company Name	Canadian Compan	Ship To Company Name	Canadian Compan	Billing Address	
Sold To Address	35021 Queen Stre	Ship To Address	35021 Queen Stre	Billing City	
Sold To City	Toronto	Ship To City	Toronto	Billing State	
Sold To State	ON	Ship To State	ON	Billing Zip	
Sold To Zip	M9C 12X	Ship To Zip	M9C 12X	Billing Country	
Sold To Country	CA	Ship To Country	CA		

Line Item Details

escription	Order Line Type	Branch	List Price	Quantity	Discount	Discount Type	Net Price	Net Amount	Order Line Status
2.5" Replacement grate	S	30	\$600.00	1			\$600.00	\$600.00	Entered Sales Order
Charcoal Grill - 12"	S	30	\$700.00	1			\$700.00	\$700.00	Shipment Confirmation

[Check Order Status](#)

Status Field Reflecting Most Advanced Line Item

NOTE: Once the status of an order is "Shipped," CPQ Cloud sales users cannot cancel or modify the Transaction.

STEPS TO ENABLE

Refer to the *Integrating Oracle CPQ Cloud and JD Edwards Implementation Guide*.

TIPS AND CONSIDERATIONS

Consider the following tips when using the Oracle CPQ Cloud – JD Edwards' integration.

- CPQ Cloud sales users can only retrieve the Sold To, Ship To, and Bill To information for a single customer at a time.
- Upon creating an order in JD Edwards, sales users cannot modify the order.
- Administrators can extend the integration to implement configurable and recurring pricing items.

KEY RESOURCES

- *Integrating Oracle CPQ Cloud and Oracle JD Edwards Implementation Guide*
- CPQ Cloud Administration Online Help

COMMERCE CLOUD INTEGRATION ENHANCEMENTS

The Commerce Cloud integration allows CPQ Cloud to deliver Configuration and quoting functionality to Commerce Cloud self-service users. The integration uses Oracle Integration Cloud Service (ICS) to provide pre-built integrations for the Configurator and Request for Quote flows. As part of continuing improvements to the Commerce Cloud integration, CPQ Cloud 17D enhances the ICS flows to reflect new asset and part fields in the "getConfigurations" SOAP API and the "getConfigBom" action for the "configBomInstance" REST API.

These enhancements support the following functionality:

- Verification of recurring charges and service periods during price validation, which occurs at checkout.
- Retrieval of service and billing account information as well as recurring charges and service periods when using a Configuration's BOM for pending orders or performing actions such as Suspend, Resume, Terminate, or Renew.

ENHANCED INTEGRATION CLOUD SERVICE FLOWS

As in prior releases, administrators must import an ICS Integration Package to an ICS environment that connects Commerce Cloud and CPQ Cloud through a common configuration. The ICS Integration Package creates connections that allow users to adjust order and quote details in CPQ Cloud, approve or reject changes in Commerce Cloud, and complete or cancel orders in Commerce Cloud. Each connection corresponds to a different CPQ Cloud SOAP API.

New Fields for getConfigurations SOAP API

The "getConfigurations" SOAP API returns data related to adding items to a Commerce Cloud cart using the "Add to Cart" action. The following new asset fields are available in the "getConfigurations" SOAP API:

- assetKey
- startDate
- endDate
- actionCode

New Fields for configBomInstance REST API

The following new asset fields are available in the "getConfigBom" action for the "configBomInstance" REST API:

- assetId
- billingAccountId
- serviceAccountId
- startDate
- endDate
- amount

Part Custom Fields

Part custom fields are always included in the "getConfigurations" SOAP API and the "getConfigBom" action for the "configBomInstance" REST API.

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 CPQ Cloud 17D Commerce Cloud integration enhancements.

- The asset fields are always included in the "getConfigurations" SOAP API. If there is no asset associated to the Configuration, blank values display.
- The asset fields are only included in "getConfigBom" when there is an asset associated to the Configuration.
- The asset and Configuration are related by matching the asset's "assetKey" with the "bomInstanceId" of the configBomInstance. The "bomInstanceId" is also known as "itemInstanceId_I" when running the "getConfigBom" action.

KEY RESOURCES

CPQ Cloud Administration Online Help

SIMPLIFY

Provide a simple way for administrators and end users to leverage CPQ Cloud using the following enhancements.

- Hiding Rules for Commerce Actions
- Document Designer Enhancements
- Single Select Pick List Enhancements

HIDING RULES FOR COMMERCE ACTIONS

As in prior releases, customers can use hiding rules in Commerce to hide select attributes when a pre-defined condition is satisfied. CPQ Cloud 17D extends this functionality by providing customers with the flexibility of using hiding rules to limit access to Commerce actions.

This section contains the following topics:

- Hide Actions on Desktop or Mobile UI
- View Commerce Actions as Components to Hide
- Create a Hiding Rule for Commerce Actions
- View and Access Hiding Rules from the Commerce Action List
- View Actions Associated with a Hiding Rule in the Migration Center
- REST API Action State for Hidden Commerce Actions

HIDE ACTIONS ON DESKTOP OR MOBILE UI

Administrators can now use hiding rules to hide Commerce actions on the Desktop or Mobile UI when certain conditions are satisfied.

For example: an administrator can build a hiding rule to hide the **Save** button unless the Sales Region is specified. This would prevent a sales user from saving Transactions without Sales Region information.

The screenshot shows a quote form with the following details:

- Buttons: Refresh, Version, Back
- Section: Quote Information
- Fields: CreatedBy (superuser), Document Currency (USD), bs_id (20247480), Document Pricebook (_default_price_book), ***Sales Region** (dropdown menu), *Document Language (English)
- Section: Line Item Grid
- Table:

	Doc #	Seq #	Item	PDN	Quantity	Unit Price	Subtotal
	2	1	Quick Items (Performance)		1	\$0.00	\$0.00
Totals						\$300.99	\$701.98
- Buttons: Add From Catalog, Copy Line Items, Reconfigure, Remove Sub, Update Line Items

Transaction without Region

In the following image, the Sales Region has been provided and the **Save** button is displayed. Since the sales user has provided Sales Region information, they will be allowed to save the Transaction.

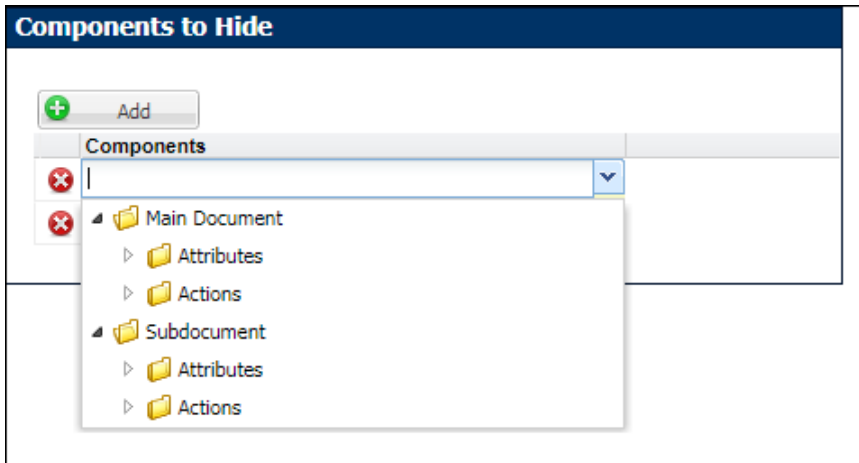
The screenshot shows the same quote form as above, but with the following changes:

- Buttons: Refresh, **Save**, Version, Back
- Fields: ***Sales Region** (dropdown menu) is now set to "North America"
- Buttons: Add From Catalog, Copy Line Items, Reconfigure, Remove Sub, Update Line Items

Transaction with Region

VIEW COMMERCE ACTIONS AS COMPONENTS TO HIDE

In CPQ Cloud 17D, administrators have the ability to hide attribute or action components when using a Commerce hiding rule. The Rule Editor now displays **Main Document** and **Subdocument** components to hide under **Actions** and **Attributes** folders. Hierarchical drop-down menus display available attributes and actions for the specified Commerce process.



Attribute and Action Components for Commerce Hiding Rules Creating a Hiding Rule

CREATE A HIDING RULE FOR COMMERCE ACTIONS

Like other rules, hiding rules are made up of a condition and an action. The values of the attribute(s) selected as the condition attribute(s) determines the result of the condition, which when true triggers the hiding of the action.

Perform the following steps to create a hiding rule for a Commerce action.

1. Navigate to the Admin Home page.
2. Click **Process Definition** in the **Commerce and Documents** section.
The **Processes** page opens.
3. Select **Documents** from the **Navigation** drop-down menu for the applicable Commerce process.
4. Click **List**.
The **Document List** page opens.

5. Select **Rules** from the **Navigation** drop-down menu for the applicable Commerce document.

Document List				Process : Oracle Quote to Order	
Select	Order	Document Name	Navigation	Description	Date Last Modified
	1	Transaction	Rules <input type="button" value="List"/>	Main (Header Level) Commerce Document - serves as Quote/Order depending on step in process flow	05/26/2017 2:53 PM
		Transaction Line	Attributes <input type="button" value="List"/>	Line Level Document - Captures pricing and data at the line level	10/02/2017 1:28 PM

Select Rules from the Navigation Drop-Down Menu

6. Click **List**.
The **Commerce Rule Editor** page opens.
7. Select **Hiding** from the **Add** drop-down menu.
The **Hiding Rule: New Rule** page opens.

Hiding: Hide Currency			<input type="button" value="Back"/>	<input type="button" value="Translations"/>	<input type="button" value="Save"/>
<input type="button" value="Add"/> <input type="button" value="Delete"/>	<input type="button" value="Constraint"/>	<input type="button" value="Hiding"/>	<input type="button" value="Validation"/>	Name: <input type="text" value="Hide Currency"/>	Description: <input type="text" value="This rule hides the Change Currency action when the document language is German or English."/>
				Variable Name: <input type="text" value="hideCurrency"/>	
				Status: <input checked="" type="radio"/> Active <input type="radio"/> Inactive	

Add Hiding Rule

8. Enter the Name, Variable Name, Description, and Status of the rule.
9. Select the Condition Type.
 - a. **Always True** - The rule will fire automatically, every time, because a specific condition does not need to be met.
 - b. **Simple** - Use the rule editor to define condition attribute values. Choose from System, Main Document, and/or Sub-Document attributes.
 - c. **Advanced** - Define advanced conditions using BML.

Condition

Condition Type: Always True Simple Advanced

#	Attribute	Operator	Value
1	Document Language	Equals	German [de] OR English [en]

[Add Row](#)

Row Grouping (Order of Operations):

1

Condition Summary

(Document Language Equals "German [de]" OR "English [en]")

[AND All](#) [OR All](#) [Convert to Advanced Condition](#)

Define Simple Condition for Hiding Rule

- Click **Add** under the **Components to Hide** section.

Components to Hide

[Add](#)

Components

Change Currency

- Main Document
 - Attributes
 - Actions
 - Add From Catalog [addFromCatalog]
 - Cancel [_action_esig_cancel]
 - Change Currency [_change_currency]
 - Copy Line Items [copyLineItems]

Add Commerce Action to Hide

- Select the applicable action from the **Components** drop-down.
- Click **Save**.

VIEW HIDING RULES FROM THE COMMERCE ACTION LIST

Hiding rules that affect actions are now displayed on the Commerce **Action List** in the **Related Rules** column. Administrators can click on the rule name under the **Related Rules** column to open the associated hiding rule.

Navigate to **Admin > Commerce and Documents > Process Definition > Documents > Actions** to view the **Action List** page.

Action List						Document : Oracle Quote to Order > Transaction
Select	Action Name	Type	Description	Date Last Modified	Related Rules	
<input type="checkbox"/>	Add From Catalog	Add From Catalog		10/05/2017 3:33 AM		
	Autofill	Auto Fill	Action to autofill address information from customer id	10/05/2017 3:33 AM		
<input type="checkbox"/>	Back	Back		10/05/2017 3:33 AM		
	Browse	Browse	Action to browse for customer id	10/05/2017 3:33 AM		
	Change Currency	Change Currency	Change the currency of an existing quote.	10/05/2017 3:33 AM	Hide Currency	
<input type="checkbox"/>	Copy Line Items	Copy Line Items		10/05/2017 3:33 AM		
	Open - Sub	Open Document		10/05/2017 3:33 AM		
<input type="checkbox"/>	Print	Print		10/05/2017 3:33 AM		
	Reconfigure	Reconfigure		10/05/2017 3:33 AM		
	Reconfigure Inbound	Reconfigure Inbound		10/05/2017 3:33 AM		
	Update Line Items	Update Line Item	Default Update Line Items Action	10/05/2017 3:33 AM		

Select All [Back to Top](#)

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

Action List Related Rules

VIEW ACTIONS ASSOCIATED WITH A HIDING RULE IN THE MIGRATION CENTER

Administrators can migrate Commerce hiding rules that affect actions as granular items or as part of the migration for an entire Commerce process. The Migration Center reflects changes made to hiding rules and allows administrators to migrate the changes between sites.

View:	Migrate	Migration Preview : Commerce > Oracle Quote	Source: Hide Tax Exempt	Cancel																																
<ul style="list-style-type: none"> Util Library (0) Product Definition (0) Catalog (0) Configuration (0) Commerce (1) * <ul style="list-style-type: none"> Oracle Quote * (Doesn't match the source) Document Engine (0) Email Designer (0) Document Designer (0) Data Table (0) File Manager (0) 		<table border="1"> <thead> <tr> <th>Details</th> <th>Migration Action</th> <th>Modified Date</th> <th>Modified By</th> </tr> </thead> <tbody> <tr> <td><input checked="" type="checkbox"/> Oracle Quote</td> <td>Overwritten</td> <td></td> <td></td> </tr> <tr> <td><input checked="" type="checkbox"/> Document(s)</td> <td>Overwritten</td> <td></td> <td></td> </tr> <tr> <td><input checked="" type="checkbox"/> Transaction</td> <td>Overwritten</td> <td></td> <td></td> </tr> <tr> <td><input checked="" type="checkbox"/> Rule(s)</td> <td>Overwritten</td> <td></td> <td></td> </tr> <tr> <td><input checked="" type="checkbox"/> Tax Exempt</td> <td>Inserted</td> <td>10/17/2017 5:24 PM</td> <td>superuser</td> </tr> <tr> <td><input checked="" type="checkbox"/> Components</td> <td>Inserted</td> <td>05/16/2016 2:47 PM</td> <td></td> </tr> <tr> <td><input checked="" type="checkbox"/> Condition</td> <td>Inserted</td> <td>05/16/2016 2:47 PM</td> <td></td> </tr> </tbody> </table>	Details	Migration Action	Modified Date	Modified By	<input checked="" type="checkbox"/> Oracle Quote	Overwritten			<input checked="" type="checkbox"/> Document(s)	Overwritten			<input checked="" type="checkbox"/> Transaction	Overwritten			<input checked="" type="checkbox"/> Rule(s)	Overwritten			<input checked="" type="checkbox"/> Tax Exempt	Inserted	10/17/2017 5:24 PM	superuser	<input checked="" type="checkbox"/> Components	Inserted	05/16/2016 2:47 PM		<input checked="" type="checkbox"/> Condition	Inserted	05/16/2016 2:47 PM			
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<input checked="" type="checkbox"/> Condition	Inserted	05/16/2016 2:47 PM																																		

[Logs](#) [Refresh](#)

Commerce Action Hiding Rule in Migration Center

REST API ACTION STATE FOR HIDDEN COMMERCE ACTIONS

REST API responses for Commerce interact and action services will reflect the hidden state for actions that are hidden using Hiding Rules. When an action is hidden, the state object for the appropriate action will show "visible": false.

Sample Request:

```
{
  "documents": {
    "readyForApproval": false
  }
  "criteria": {
    "state": true
  }
}
```

Sample Response:

```
"_state": {
  ...
  "actions": {
    ...
    "addFromCatalog": {
      "enabled": true,
      "visible": false
    },
    ...
  }
}
```

STEPS TO ENABLE

Hiding Rules for Commerce actions are automatically available on CPQ Cloud 17D sites.

KEY RESOURCES

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

DOCUMENT DESIGNER ENHANCEMENTS

Document Designer is a drag and drop tool for creating and administering document templates. As part of continuing improvements to Document Designer, several enhancements are available in CPQ Cloud 17D.

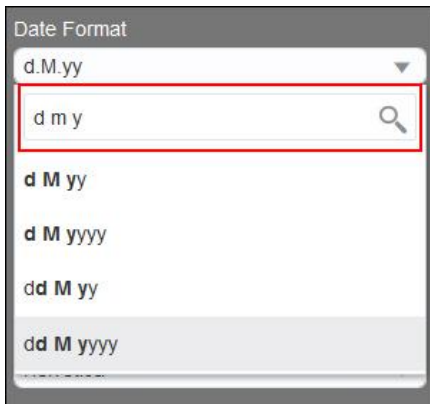
DATE FORMAT ENHANCEMENTS

The following date format enhancements provide increased flexibility for more dynamic proposal documents:

- Space and Period Separators (e.g. d.MM.yy or d MM yy)
- Day and Month Translations

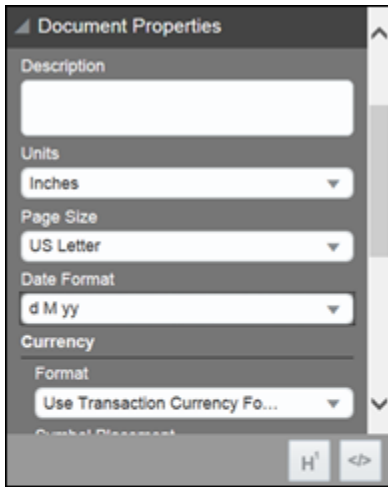
SPACE AND PERIOD SEPARATORS

In support of European countries that use periods and spaces as date separators, CPQ Cloud 17D now supports the use of space and period separators for date formats in both Document Designer and Email Designer. Administrators can search for newly supported date formats at the Document, Section, and Text levels using the **Date Format** search field.

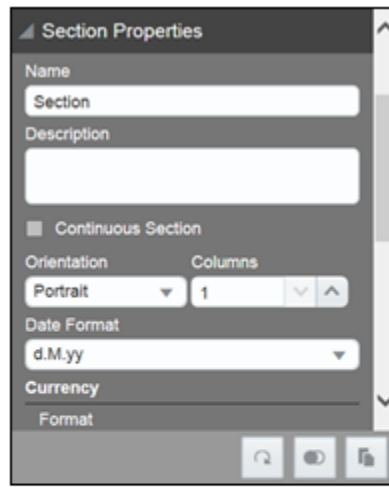


Date Format Search Field

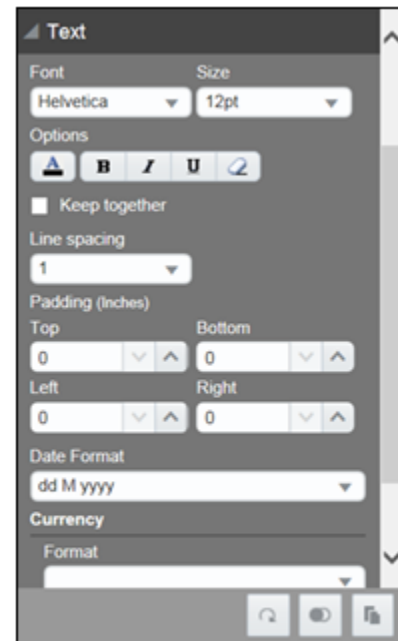
The following screenshots show examples of the space and period separators in Document Properties, Section Properties, and Text Properties.



Space Separator
In Document Properties



Period Separator
In Section Properties



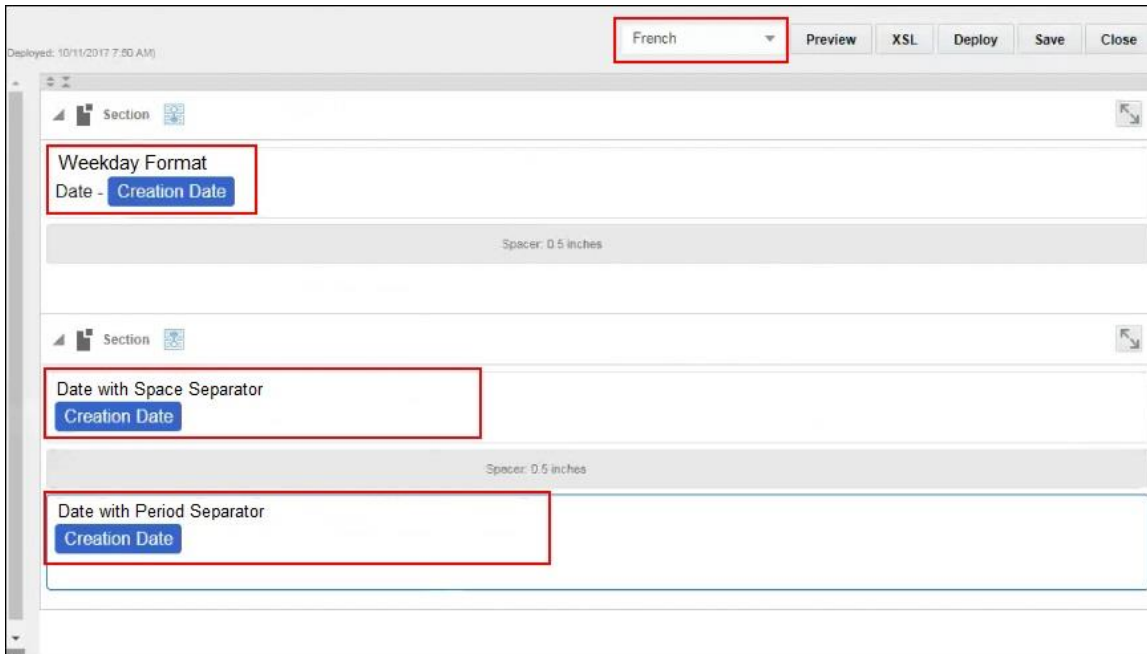
Space Separator
In Text Properties

NOTE: When a user switches to a different language when using a multi-language template, the date format is editable at the Document, Section, and Text level.

DAY AND MONTH TRANSLATIONS

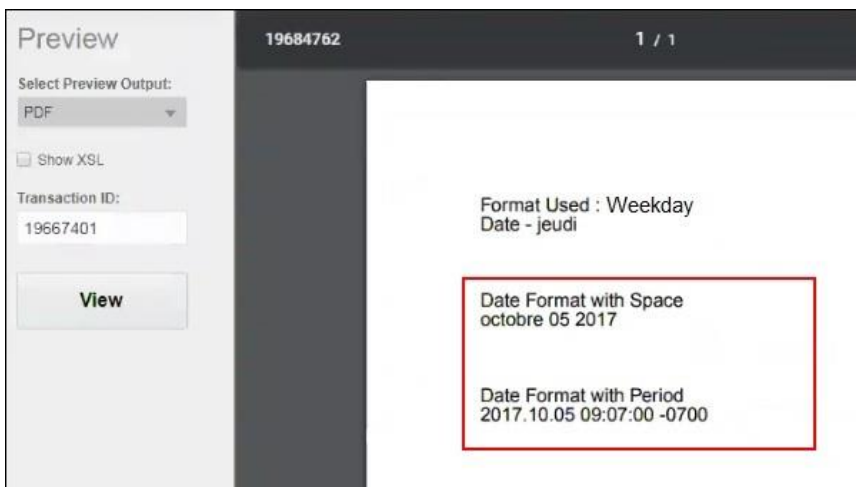
For multi-language templates, dates (i.e. month and day labels) are now translated to the output document language and visible when previewing the template in Document Designer or Email Designer.

In the following example, an administrator selected French as the template's language. The date translations do not appear when viewing the template in Document Designer Editor.



Multi-Language Template in Document Designer Editor

As shown below, the dates translate to their French equivalent when previewing the template in Document Designer or Email Designer.



Preview of Multi-Language Template with Translated Date Format

NOTE: The grammar for translated languages is set in the Java Library. French, Italian, and Spanish months and days are not capitalized. This is grammatically correct and the capitalization is not modifiable.

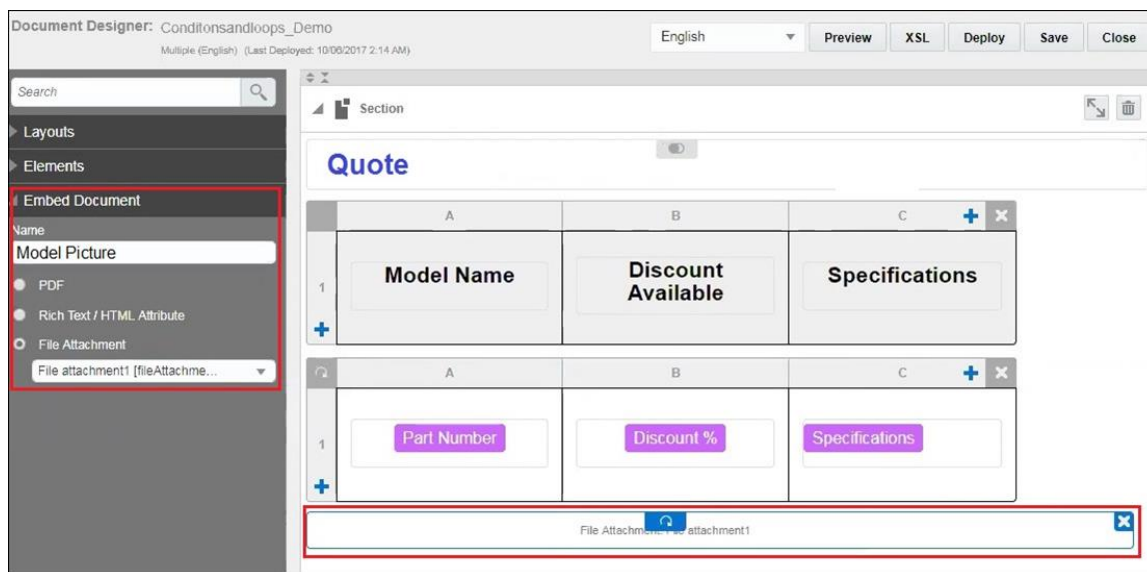
CONDITION AND LOOP ENHANCEMENTS

Conditions and loops enable customers to make their templates dynamic. CPQ Cloud 17D introduces several enhancements to conditions and loops.

Enhancement	Associated Fields
Condition Enhancements	Use simple or advanced conditions on Heading, Spacer, Page Break, and Column Break elements. When building templates in prior releases, odd spacing was sometimes visible when Text or Table elements contained conditions. The ability to add conditions to Heading, Spacer, Page Break, and Column Break elements resolves these spacing issues.
Loop Enhancements	Apply a simple or advanced loop on an Embed Document element in Document Designer. This enhancement allows sales users to generate documents for customers with various model details attached for each product in a Transaction. CPQ Cloud 17D also supports creating a simple or advanced loop over an entire table in Document Designer or Email Designer, allowing administrators to associate the data in a Transaction to associated details in the output document.

For example:

A car manufacturing company can generate documents for customers with various model details attached for each product in a Transaction. This is accomplished by looping over an entire table, so the data in the Transaction relates to the car details in the output document. Administrators can also use the file attachments linked to line items in an Embedded Document and loop over the Embed Document element.



Looping Applied to an Embed Document Element in Document Editor

As shown below, the model details from the Transaction display in the output document and when previewing the output document.

Preview
19684701
1 / 3

Select Preview Output:
PDF

Show XSL

Transaction ID:
19667401

View

Quote

Model Name	Discount Available	Specifications
Bre	10,00	Alloy wheels Leather-wrapped steering Rear parking sensors Fog lamps Rear defogger Keyless go Auto climate control and Electric retract wing mirrors.
Swift	15,00	Wheel covers, Body-coloured bumpers and wing mirrors Wood inserts in the cabin Tachometer Remote locking Audio system with CD USB Aux and Bluetooth connectivity Rear AC vents Rear centre armrest Central locking system Power windows Electric adjust wing mirrors and Height adjustable driver seat.

Model Details from Transaction

Embedded files also display in the output document and when previewing the output document.

Preview
19684701
2 / 3

Select Preview Output:
PDF


Show XSL

Transaction ID:
19667401

View

of
n

Engine Displacement: 1248 cc
 Ex-showroom Price New Delhi: Rs 7,23,962Fi..
 Fuel Type: Diesel
 BHP: 88.5bhp@4000rpm



Embedded Document Displayed when Previewing Output Document

STEPS TO ENABLE

The Document Designer enhancements are automatically available on CPQ Cloud 17D sites.

KEY RESOURCES

[CPQ Cloud Administration Online Help](#)

SINGLE SELECT PICK LIST ENHANCEMENTS

A Single Select Pick List is an attribute type created in Configuration for Text, Integer, and Float data types. Administrators manage the value for a Single Select Pick List attribute within a defined resource. As part of continuous improvements to Single Select Pick Lists, administrators have new ways to set the value for a Single Select Pick List.

SET THE VALUE OF A SINGLE SELECT PICK LIST USING A PUNCH-IN VALUE

A punch-in is a link used to navigate users directly from one page to another. CPQ Cloud 17D extends the functionality available in Configuration by allowing administrators to set the initial value of a Single Select Pick List by specifying a parameter in a punch-in value.

Complete the following steps:

1. Navigate to the Admin Home page.
2. Under **Styles and Templates**, select **Home Page**.
The **Home Page Setup** page opens.

The screenshot shows the 'Home Page Setup' page. At the top, there are radio buttons for 'Standard' (selected) and 'Custom', and a 'Set' button. Below this, there are sections for 'Parts' and 'Catalog'. The 'Parts' section has a table with columns 'Name', 'Restrict Access', and 'Punch-in'. The 'Catalog' section has a table with columns 'Product Family', 'Restrict Access', 'Selector Punch-in', and 'Last Refreshed On'. The 'Product Family' table has rows for 'Communication', 'Product Lines', and 'Integration'. The 'Product Lines' row has a sub-row 'Product Line 1'. The 'Model Punch-in' icon in the 'Product Line 1' row is highlighted with a red box. At the bottom, there are buttons for 'Refresh', 'Deployment Center', 'Define XSL Template', and 'Back'.

Name	Restrict Access	Punch-in
Parts Search		

Product Family	Restrict Access	Selector Punch-in	Last Refreshed On
Communication			11/03/2017 6:50 AM
Product Lines			Model Punch-in
Product Line 1			
Integration			12/22/2016 9:42 AM

Home Page Setup Page

3. Select the icon under the **Model Punch-In** column.
The **Model Punch-ins List** page opens.
4. Click **New**.

- Set the initial value for the Single Select Pick List by browsing to a specific variable name and specifying a parameter in the URL.

Sample Parameter: exampleSSPL=<variable value>

Model Punch-ins List Page

- Click **Save**.

In the following example, the initial value of the Single Select Pick List is set to Phone 1.

Initial Single Select Pick List Value

NOTE: The phone attribute is a Single Select Pick List attribute. Administrators can map the various phone attributes to the associated phone descriptions by creating pick maps. As shown below, the description will then change when users select a different phone option. For additional information about pick maps, refer to the *Single Select Pick List* topic in the CPQ Cloud Administration Online Help.

Different Phone Option and Different Description

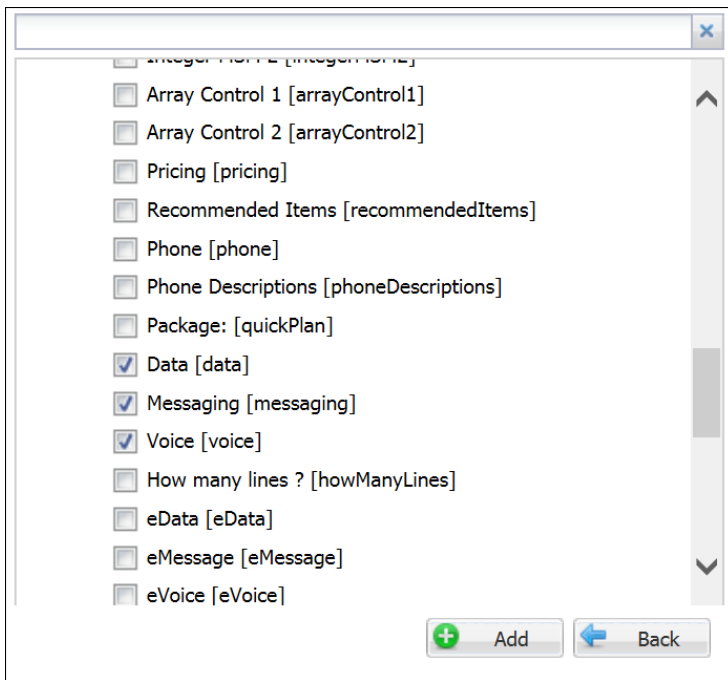
SET THE VALUE OF A SINGLE SELECT PICK LIST USING A RECOMMENDATION RULE ACTION

As in prior releases, Recommendation Rules help buyers configure products by offering suggested attribute values. For each Configuration where a model or part likely has certain attribute values, administrators can create a Recommendation Rule. For example: If a Meat Lovers' pizza has only pepperoni and sausage as toppings, administrators can create a recommendation rule allowing users to modify the toppings.

In CPQ Cloud 17D, administrators can use a Single Select Pick List attribute in a standard action in a Recommendation Rule. When recommendations trigger, they appear to buyers on the **Model Configuration** page.

Complete the following steps:

1. Navigate to the Admin Home page.
2. Under **Products**, click **Catalog Definition**.
The **Supported Products** page opens.
3. From the **Navigation** menu, select **Recommendations**.
4. Click **List**.
The **Recommendation: Rules List** page opens.
5. Click **Add**.
The **Recommendation: New Rule** page opens.
6. In the **Name** field, enter a name for the Recommendation Rule.
7. Click in the **Variable Name** field to auto-populate the field.
8. Select **Simple Condition** as the **Condition Type**.
9. Under **Action: (Values to Set)**, click **Add Attributes**.
The **Attributes** dialog opens.
10. Select the Single Select Pick List attributes to include as actions in the Recommendation Rule.



Single Select Pick List Attributes in List of Attributes

11. Click **Add**.
The Recommendation Rule displays.
12. Use the **Value to Set** text entry field to set a value for the Single Select Pick List attribute.
13. As with other Recommendation Rules, use the **Set Type** menu to auto-populate the recommended values in the attribute field.

Set Type	Description
None	The selected value for the action attribute in the rule is the recommended value for the attribute. It will show as a message and it can be modified by the user.
Set	The setting of a recommended value can be prevented by locking the attribute, in which case, only the recommended values message is shown. This can be modified by the user.
Forced Set	The rule will set the attribute value to the value chosen in the rule. This value is read-only and cannot be modified by the user.

Recommendation: Better

Name: **Status:** Active Edit Start/End Dates

Variable Name: Internal

Description: Inactive

Condition

Condition Type: Always True Simple Condition Advanced Condition

#	Attribute	Operator	Value Type	Values	Range Operator	Range Operator
1	Package: [quickPlan]	Equals	Static	Better [Better]		

[Add Row](#)

Row Grouping (Order of Operations):
1

Condition Summary
(Package: Equals "Better [Better]")

[AND All](#) [OR All](#) [Convert to Advanced Condition](#)

Action: (Values to Set)

Apply rule to: Configuration Selection Both

Action Type: Standard Table Lookup

[Add Attributes](#)

- Data [data]
- Messaging [messaging]
- Voice [voice]

Data

Values to Set
<input checked="" type="checkbox"/> 5GB

[Add](#) [Entry Manager](#) [Define BML Function](#)

Set Type:

Message to Display on User Side

Static Text: [Define BML Function](#)

[Printer Friendly Version](#) [Email a Copy](#) [Translations](#) [Apply](#) [Update and Back](#) [Back](#)

Sample Recommendation Rule with Single Select Pick List Attributes as Actions

NOTES:

- When using Static Text to set the value of a Single Select Pick List via a standard action in a Recommendation Rule, the value is validated in the data table upon performing a Save. If the value does not exist in the data table, an error displays at the top of the Recommendation page noting that the attribute and value are invalid. If the entry is invalid, administrators can insert a correct value to save the Recommendation Rule.
- If a Single Select Pick List has an invalid entry and administrators choose to set the entry via BML, they must first remove the Static Text entries before setting up the BML action for the attribute. Otherwise, administrators cannot save the Recommendation Rule unless they revert, remove the entries, and re-select the BML.

Shown below is an example of the Single Select Pick List attributes in Configuration. The attributes are used as actions in a Recommendation Rule and display under the Content heading.

The screenshot shows a configuration interface for 'Plain and Simple Wireless' with the following elements:

- Buttons at the top: Update, Start Over, Create Quotes, Add to Cart (Quotes), Add to Favorites.
- Section: **Plain and Simple Wireless** (Model Configuration).
- Section: **Phone**
 - How many lines?: 1
 - Phone: Phone 2 (with a red phone icon)
 - Phone Descriptions: 64 GB, 12MP R-Facing Camera, 8MP Wireless Charging, BT 5
- Section: **Package**
 - Package: Better
 - Content:** (highlighted in a red box)
 - Data: 5GB (with a dropdown arrow)
 - Messaging: 100 (with a dropdown arrow)
 - Voice: 500 min (with a dropdown arrow)
 - When going over...
 - \$10/GB
 - \$1/msg
 - \$0.5min
- Price Book: Base Price (with a dropdown arrow)

Single Select Pick List Attributes as Recommendation Rule Actions in Configuration

APPLY MESSAGE PROPERTIES TO SINGLE SELECT PICK LISTS IN CONFIGURATION

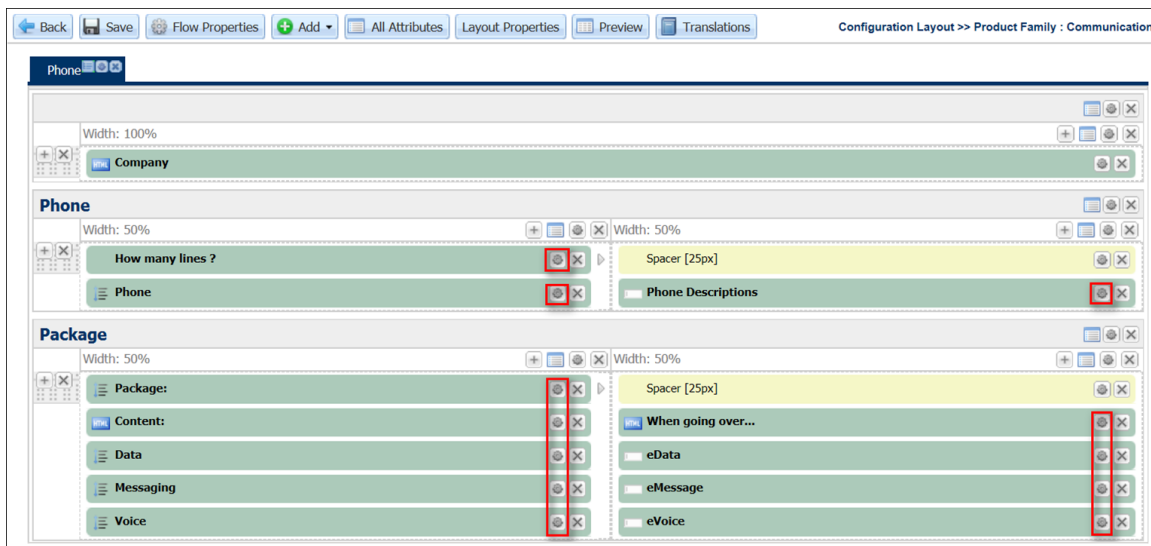
In CPQ Cloud 17D, the **Attribute Properties** dialog for Single Select Pick Lists contains message properties. Administrators can use these properties to specify how to display the messages that display when the Recommendation Rule's **Set Type** is set to "None" or "Set".

The following properties are available:

- **Show Recommendation Message:** When the **Set Type** is "None" and administrators select this option, the recommended value for the action attribute displays as a message to the user. When the **Set Type** is "Set," the setting of a recommended value is prevented by locking the attribute. The recommended values' message will display in Configuration.
- **Show Previous Value:** By selecting this option, the previous message displayed for the recommended value will display.
- **Message Placement:** Specify the location in which to place the recommendation message in Configuration (i.e. Below Attribute, Right of Value, Bottom of Group, Bottom of Page, or Top of Page).

Complete the following steps:

1. Navigate to the Admin Home page.
2. Under **Products**, click **Catalog Definition**.
The **Supported Products** page opens with **Product Families** displaying by default in the **Navigation** menu.
3. Click **List**.
The **Supported Product Families** page opens.
4. Locate the product family to which you want to apply message settings.
5. From the **Navigation** menu, select **Configuration Flows**.
6. Click **List**.
The **Configuration Flow: Rules List** page opens.
7. In the **Layout** column, click **Desktop**.
The Layout Editor opens with gear icons next to the Single Select Pick List attributes.



Layout Editor with Gear Icons Next to Single Select Pick List Attributes

- Click the gear icon next to a Single Select Pick List attribute.
The **Attribute Properties** dialog opens.

Attribute Properties: Phone (phone)

Layout Behavior Properties Data Type: Text Attribute Type: Single Select Pick List

Display Label

Label Phone

Separator

Alignment Left

Width 33 %

Field (Value)

Position Right of Label

Width Auto

Alignment Left

Help Icon

Messages

Show Recommendation Message

Show Previous Value

Message Placement Below Attribute

OK Cancel

Messages Section in Attribute Properties Dialog

- Select the message properties to apply to the Single Select Pick List attribute in Configuration.
- Click **OK**.

NOTE: After upgrading to CPQ Cloud 17D, Single Select Pick Lists by default have the **Show Recommendation Message** selected and the **Message Placement** option set to **Below Attribute**. These are the defaults for any attribute added to the layout. If users add a Single Select Pick List to a Recommendation Rule as an action, the messages display by default.

SET THE VALUE OF A SINGLE SELECT PICK LIST ATTRIBUTE USING A SOAP API

Administrators can use a SOAP API call to set the value of a Single Select Pick List attribute using a punch-in URL or a Recommendation Rule. When sending a SOAP request to set a value for a Single Select Pick List attribute, administrators must use a value in the request. The default value for <displayedValue> is false. Administrators can specify the <displayedValue> as true in the request to show the display value in the response.

Sample Text Single Select Pick List SOAP API request:

```
(displayedValue=true)
< bm:attribute bm:_variableName="sspl" type="textsspl">
<bm:value>red</bm:value>
< /bm:attribute>
< bm:attribute bm:_variableName="intsspl" type="textsspl">
<bm:value>1</bm:value>
< /bm:attribute>
< bm:attribute bm:_variableName="floatsspl" type="textsspl">
<bm:value>1.1</bm:value>
< /bm:attribute>
```

Sample Text Single Select Pick List SOAP API response:

```
...
<bm:value>red</bm:value>
<bm:displayedValue>red</bm:displayedValue>
...
...
< bm:value>1</bm:value>
<bm:displayedValue>1</bm:displayedValue>
...
...
< bm:value>1.1</bm:value>
<bm:displayedValue>1.1</bm:displayedValue>
...
```

NOTE: In prior releases, the SOAP response used the display value for Text Single Select Pick Lists as the value response. In CPQ Cloud 17D, the SOAP response displays the value of Single Select Pick Lists in the Value column. The default value for <displayedValue> is false. Administrators can specify the <displayedValue> as true in the request to show the display value in the response.

Sample Integer and Float Single Select Pick List SOAP API request:

```
(displayedValue=false)
Request:
< bm:attribute bm:_variableName="sspl" type="textsspl">
<bm:value>red</bm:value>
< /bm:attribute>
< bm:attribute bm:_variableName="intsspl" type="textsspl">
<bm:value>1</bm:value>
< /bm:attribute>
< bm:attribute bm:_variableName="floatsspl" type="textsspl">
<bm:value>1.1</bm:value>
< /bm:attribute>
```

Sample Integer and Float Single Select Pick List SOAP API response:

```
...
< bm:value>red</bm:value>
...
...
< bm:value>1</bm:value>
...
...
< bm:value>1.1</bm:value>
...
```

NOTE: If a SOAP API calls a Single Select Pick List entry that does not exist or is invalid, the Web Service call is still passed. However, the Single Select Pick List value is not populated and the following error message displays: The value for the attribute is not among the menu items.

SORT THE ORDER OF DISPLAY VALUES FOR DATA TABLE-BASED SINGLE SELECT PICK LISTS

When a Single Select Pick List uses a data table as its data source, administrators can apply a sort order to determine how the results of the data table query display to users in a Single Select Pick List.

In CPQ Cloud 17D, the **Menu Attribute Editor** for a Single Select Pick List attribute contains an **Order By** and an **Order By Direction** drop-down.

- **Order By:** Lists all of the data table columns referenced by the domain (i.e. the data source). To prevent performance impact, Oracle recommends choosing an indexed column.
- **Order By Direction:** Allows administrators to sort the display value in Ascending or Descending order.

The screenshot shows the 'Menu Attribute Editor: Color Selection By Price' interface. It is divided into several sections:

- General / Related Rules:** Includes 'Main Information' with fields for Name, Variable Name, Data Type, Image Menu, Display Type, Array Type, and Display Order. A description field and an 'Edit HTML' button are also present.
- Properties:** Includes 'Set Type', 'Auto Lock', 'Required', 'Hidden', 'Auto Update', 'Hide in Transaction', and 'Status'.
- Single Select Pick List:** This section is highlighted with a red box. It contains 'Domain', '*Variable', '*Display', 'Order By' (set to 'Price'), and 'Order By Direction' (set to 'Ascending').
- Filter:** A text input field for filtering results.
- Pick Maps:** Fields for 'Picker Attribute' and 'Model Attribute' with an 'Add' button.
- Buttons:** 'Delete', 'Translations', 'Apply', 'Update', 'Update and New', and 'Back'.

Menu Attribute Editor with Order By and Order By Direction Options

The screenshot shows the 'Model Configuration' page. At the top, there are buttons for 'Update', 'Start Over', 'Create Quotes', 'Add to Cart (Quotes)', 'Add to Favorites', and 'Create Oracle Quote to Order'. Below these is the 'Color Selections' section, which is expanded to show 'Show By' options:

- Color Selection By Price
- Color Selection By Popularity
- Color Selection By Color

A dropdown menu is open for 'Color Selection By Color', showing the following options: green, white, blue, red, and black. To the right of the dropdown is a square color selection area. At the bottom right, there is a 'Price Book' dropdown set to 'Base Price'.

Sort Order Shown On Model Configuration Page

NOTES:

- If a data table is not used as the data source, administrators cannot sort the display value.
- When administrators create a new Single Select Pick List, **Order By** is set to the Display value and "Ascending" is the default **Order By Direction**.

STEPS TO ENABLE

The Single Select Pick List enhancements are automatically available on CPQ Cloud 17D sites.

TIPS AND CONSIDERATIONS

The default sort order for Single Select Pick Lists matches the sort on Single Select Pick Lists created prior to Release 17D.

KEY RESOURCES

- [CPQ Cloud Administration Online Help](#)

ADDITIONAL CPQ CLOUD ENHANCEMENTS

The CPQ Cloud 17D introduces the following enhancements to improve performance and simplify CPQ Cloud integrations.

- Provide SuperUser access to restore and delete archived Commerce Transactions and enhance archival selection
- Add key words to `urldata` BML function to support REST API Patch method
- Provide email notifications for scheduled and manual FTP uploads to CPQ Cloud

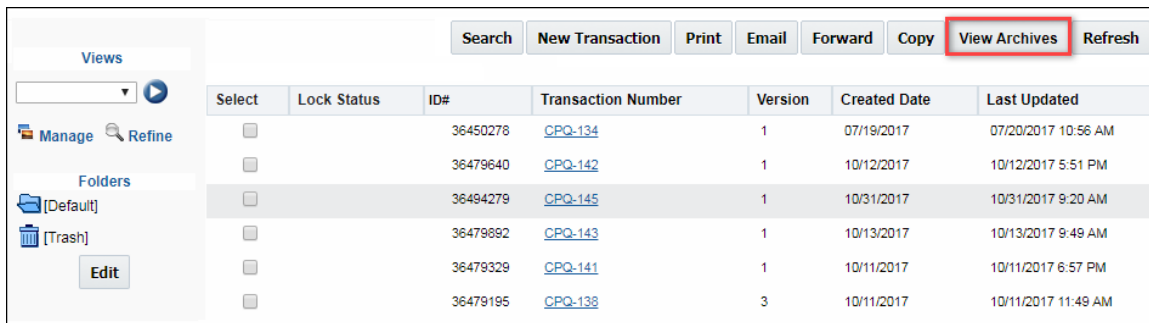
TRANSACTION ARCHIVE ENHANCEMENTS

The Archive Functionality allows an administrator with SuperUser access to restore or permanently delete archived Transactions and immediately view restored quotes from the Transaction Manager.

NOTE: If Transaction archiving is disabled on your site open a Service Request (SR) on [My Oracle Support](#) to enable Transaction archiving.

Perform the following steps to access and manage Transaction archives:

1. Navigate to the **Transaction Manager** of your site.
2. Select **View Archives**.



Select	Lock Status	ID#	Transaction Number	Version	Created Date	Last Updated
<input type="checkbox"/>		36450278	CPQ-134	1	07/19/2017	07/20/2017 10:56 AM
<input type="checkbox"/>		36479640	CPQ-142	1	10/12/2017	10/12/2017 5:51 PM
<input type="checkbox"/>		36494279	CPQ-145	1	10/31/2017	10/31/2017 9:20 AM
<input type="checkbox"/>		36479692	CPQ-143	1	10/13/2017	10/13/2017 9:49 AM
<input type="checkbox"/>		36479329	CPQ-141	1	10/11/2017	10/11/2017 6:57 PM
<input type="checkbox"/>		36479195	CPQ-138	3	10/11/2017	10/11/2017 11:49 AM

View Archives from Transaction Manager

A list of archived Transactions appears.

NOTE: The default setting for cleaning up archived Transactions is 30 days after the Transaction was archived. Open a ticket on [My Oracle Support](#) to change this setting,

Oracle Quote to Order

30-day archive of Quotes

Select	BS ID	Quote Information	Archived Date
Quote #460			
<input type="checkbox"/>	20196893	Super User	2017-11-03
		\$0.00	
Quote #461			
<input type="checkbox"/>	20197117	Super User	2017-11-03
		\$0.00	

Select All

1 - 2 of 2 | [Back to Top](#)

Delete **Restore**

Quote Archives Screen

- To permanently delete archived Transactions, select the appropriate Transaction(s) then click **Delete**.

NOTE: Use caution when deleting archived Transactions. Transactions deleted from the archive are immediately removed from the database and cannot be restored.

- To restore archived Transactions, select the appropriate Transaction(s) then click **Restore**.

ARCHIVE ALL RESULTS

SuperUsers can now archive all search results using **Archive All Results**. This action archives all search results at once rather than archiving only the Transactions visible on a single page.

Search New Transaction Archive **Archive All Results** Unlock Forward Copy Export Print Email

Search Results for Process : Quotes

Select	Quote #	ID#	BS ID
<input type="checkbox"/>	Quote #462	20203290	20203290
<input type="checkbox"/>	Quote #459	20196827	20196827
<input type="checkbox"/>	Quote #457	20188639	20188639
<input type="checkbox"/>	Quote #456	20188514	20188514
<input type="checkbox"/>	Quote #455	20154220	20154220
<input type="checkbox"/>	Quote #451	20112323	20112323
<input type="checkbox"/>	Quote #450	20106605	20106605
<input type="checkbox"/>	Quote #439	20104061	20104061
<input type="checkbox"/>	Quote #442	20104274	20104274
<input type="checkbox"/>	Quote #446	20104558	20104558

Select All Select Folder: [Default] **Move**

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Archive All Results Button

ADD PATCH SUPPORT TO THE URLDATA BML FUNCTION

In Release 17D, CPQ Cloud provides support for REST integrations that use `urldata` functions to invoke HTTP Patch operations. Administrators can now add Patch key words to the `urldata` BML function.

To invoke a PATCH request, refer to the following example:

```
headers=dict("string");  
response=urldata("http://<hostname>/<path>", "PATCH", headers, {jsonBody});
```

NOTE: Refer to the *URL Access* topic in CPQ Cloud Administration Online Help and the appropriate integration instructions for additional information.

FTP UPLOADS PROVIDE EMAIL STATUS NOTIFICATIONS

When an administrator uploads data to their CPQ Site using FTP, upon completion an e-mail notification is sent to the SuperUser of that site. The e-mail includes a success or failure status, as well as details regarding the upload. The FTP upload can be either scheduled or manual.

STEPS TO ENABLE

The additional CPQ Cloud enhancements are automatically available on CPQ Cloud 17D sites.

KEY RESOURCES

CPQ Cloud Administration Online Help

PRE-UPGRADE CONSIDERATIONS

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 17D

"Minor release" = A release update, e.g. Release 17D Update 1

RESOLVED KNOWN ISSUES

For information on bugs fixed in Release 17D, refer to the CPQ Cloud 17D 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 17D. 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 Admin 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 17D 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 62.x
- Mozilla Firefox 56.x
- Internet Explorer 11.x

NOTE: 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 MANAGED PACKAGE SUPPORT

CPQ Cloud no longer releases updates to the Salesforce Managed Packages prior to v7.0. With the release of 2017 R2, Oracle only officially supports Managed Package v7.x. Although Oracle expects Salesforce integrations that use a Managed Package prior to v7.0 to function, CPQ Cloud does not address new issues that arise in these versions.

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 17D. 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 17D or the Oracle CPQ Cloud Consulting team.

ADDITIONAL INFORMATION

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

DISCLAIMER

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



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Integrated Cloud Applications & Platform Services