Oracle CPQ Cloud

What's New in 2015 R1

August 2015

ORACLE

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OVERVIEW

This guide outlines the information you need to know about new or improved functionality in Oracle CPQ Cloud 2015 Release 1 (2015 R1). Each section includes a brief description of the feature, the steps you need to take to enable or begin using the feature, any tips or considerations that you should keep in mind, and the resources available to help you.

GIVE US FEEDBACK

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RELEASE FEATURE SUMMARY

Some of the new CPQ Cloud 2015 Release 1 features are automatically available to users after the upgrade and some require action from the user, the company administrator, or Oracle.

The table below offers a quick view of the actions required to enable each of the features.

Feature	Action Required to Enable Feature			
	Automatically Available	End User Action Required	Administrator Action Required	Oracle Service Request Required
End User Enhancements				
Desktop Performance Enhancements	✓		✓	
Selector Links on Mobile Home Page	✓		✓	
Easy Administration				
Document Designer	✓		✓	
Email Templates Enhancements	✓			
Migration Enhancements	✓			
Attribute Groups	✓		✓	
Tenant Automation System (TAS) Enhancements				✓
Single Sign-On (SSO) Enhancements	✓		✓	
Site Information on Host Company Page	✓			
Integration				
Integration Cloud Service (ICS)	✓		✓	✓
Interface Catalog	✓			
Oracle E-Business Suite (EBS) Integration			✓	
Oracle Commerce On Premise Integration			✓	
REST APIs For Transactional Objects	✓			
General Integration Enhancements	✓			
Security Enhancements				
Security Enhancements	✓			
Upgrade Considerations				
Pre-Upgrade Considerations			✓	
Post-Upgrade Considerations			✓	

END USER ENHANCEMENTS

Features in this category include:

- Desktop Performance Enhancements
- Selector Links on Mobile Home Page

DESKTOP PERFORMANCE ENHANCEMENTS

As part of a continuous effort to improve performance with each release, this release targets performance improvements in the Commerce module. These focused enhancements allow Oracle CPQ Cloud to scale to even larger line item sets and execute crucial Commerce actions more quickly.

These enhancements include:

- Desktop Transaction caching
- Optimized data request size
- New Line Item Grid pagination modes
- Adoption of Oracle Infrastructure Standards
- Other minor performance enhancements

DESKTOP TRANSACTION CACHING

When a desktop user opens a Transaction, its data will now be cached to reduce the need to access the database. As the user views and edits the Transaction, the data is accessed from the cache, not the database. When the Transaction is saved, the changes are applied to the database and are then accessible to other users.

Desktop Transaction caching also allows faster processing of AJAX calls. AJAX is used throughout the Commerce module, such as in AJAX Hiding/Constraint Rules, Auto-update Advanced Modification, and AJAX Formulas. Therefore, faster processing can have a broad impact.

Note: The Desktop application's auto-update behavior is the same whether the Desktop Transaction caching is on or off.

By default, Desktop Transaction caching is enabled for both new and existing customers. Work with your Customer Success Manager to discuss how this feature can be most effectively used for your specific implementation.

Note: Although we highly recommend using Desktop Transaction caching, this feature can be disabled by opening a ticket on [My Oracle Support].

OPTIMIZED DATA REQUEST SIZE

If Commerce attributes are not on the layout being viewed, or are hidden by a Participant Profile, they will now be removed from the generated HTML sent to the browser. This reduces the amount of content that has to be delivered from the server.

Note: If an attribute is affected by hiding rules, and not by the layout or the Participant Profile, the data will still be sent to the browser.

If you need access to attributes not on the layout, see the Reading Commerce Attributes not on the Layout section for more information.

Note: By default, this feature is enabled for both new and existing customers. Although we highly recommend using the Optimized Data Request Size feature, it can be disabled by opening a ticket on My Oracle Support.

If you have questions about this feature, contact your Customer Success Manager. On upgrade, they can assess the impact of this feature and assist in disabling it if necessary.

Note: This feature depends on Desktop Transaction caching functionality. Turning Desktop Transaction caching off disables this feature.

READING COMMERCE ATTRIBUTES NOT ON THE LAYOUT

If a Commerce attribute is not on the layout, but is not prohibited from view by the user's Participant Profile, you can still retrieve the current value of the attribute.

Call `Bm.getAttrVal("attrVarName")` from either the main document or the sub document to pull the latest value of an attribute by providing its variable name. For sub document attributes, the attribute value is from the current sub document, not all sub documents. Sub document attributes are not available on a main document page, and main document attributes are not available on a sub document page.

For example, you may need attribute values for attributes that it wouldn't make sense to have on the layout for the user to see.

To use this JavaScript function, the attribute cannot be on the layout and cannot be marked as **Hide** by the user's Participant Profile.

Note: This functionality depends on the Desktop Transaction caching and Optimized Data Request Size features. Turning either Desktop Transaction caching or Optimized Data Request Size functionality off will disable this JavaScript function.

NEW LINE ITEM GRID PAGINATION MODES

New Line Item Grid pagination modes have been introduced in the Commerce desktop layout, giving you more control over when data is sent to the browser and displayed to the user.

By enabling Grid Paging, the Line Item Grid will display the line items on a page by page basis when a Transaction is opened. The user can then page through the Line Item Grid to display the next page of line items.

In previous versions of CPQ Cloud, you could only choose whether or not to enable pagination for a Line Item Grid. Now you can also choose the way pages are retrieved.

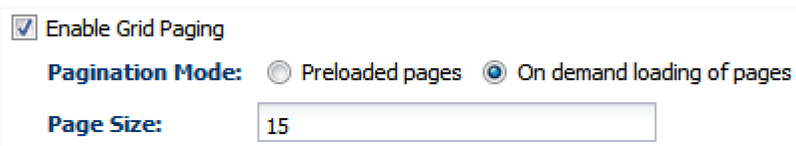
ACCESSING PAGINATION OPTIONS

To enable or modify pagination for a Line Item Grid:

1. Click **Admin** to go to the Admin Home Page.
2. Click **Process Definition** under the Commerce and Documents section.
3. Confirm that it says **Documents** in the **Navigation** column for the process you want to modify, and click **List**.
4. Select **Desktop Layout** in the **Navigation** column for the main Document and click **List.**
   The Layout Editor appears.
5. Click the **cog** icon in the Line Item Grid.
   The **Line Item Grid** dialog box opens.
6. Change the setting for **Enable Grid Paging** and click **Ok**.

PAGINATION MODES

You can choose from the following options:



- Disabled (no checkmark next to **Enable Grid Paging**)
  The Line Item Grid displays all of the line items upon opening the Transaction. This is the default pagination mode for new Line Item Grids.
- Enabled (checkmark next to **Enable Grid Paging**)
  - Preloaded pages

    All of the pages of line items are retrieved from the server when the Transaction is opened. This could mean a longer loading time initially, when opening the Transaction, but allows for faster display when paging through the line items.

    This setting is recommended if the load time is acceptable for Transactions with a typical number of line items. This is usually when a typical Transaction has fewer than 200 line items, but because the number of line items columns vary between implementations, your site may have different results.

  - On demand loading of pages

Only the first page of line items is retrieved from the server when the Transaction is opened. This allows for a shorter loading time initially, when opening the Transaction, but could mean a short delay when paging through the line items.

This setting is recommended for sites with more than 200 line items in a typical Transaction. However, because line items columns vary in size, depending on things like the number of Sub Document attributes, your site may have different results.

This setting can also be useful for sites where typical Transactions have fewer than 200 line items, if users would like a faster load time when a Transaction is opened or an action is completed.

Note: For this setting to take effect, Desktop Transaction caching must be enabled. Desktop Transaction caching is enabled by default.

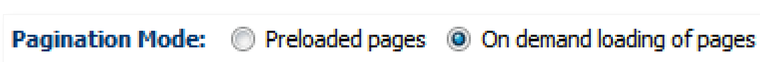
The appearance of the Line Item Grid will be the same for both **Preloaded pages** and **On demand loading of pages** pagination modes. The only difference is invisible to the user: how and when line item information is retrieved from the server.

As in previous releases, regardless of which pagination option you choose:

- No functionality (action, auto update, or rules) is impacted.
- The **Total** column shows the total sum across all line items.
- The maximum number of line items that will appear on a Mobile Commerce page is 20.

AFTER UPGRADING TO 2015 R1

- Layouts that had Disabled Line Item Grid pagination will still have **Disabled** pagination.
- Layouts that had Enabled Line Item Grid pagination will be converted to the **Preloaded pages** pagination mode.
- If Desktop Transaction caching is disabled:
    - The **Pagination Mode** section will not be visible in the **Line Item Grid** dialog box.

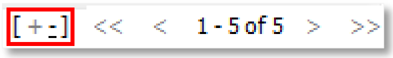


- If Grid Paging was previously **On demand loading of pages**, Grid Paging will be disabled. In all other cases, Grid Paging behavior will be unchanged.

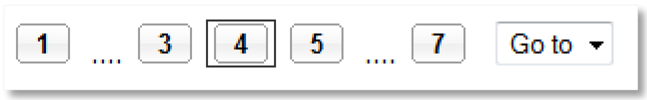
Important: If you open the **Line Item Grid** dialog box and click **Save** (whether any changes were made or not) then the pagination behavior would revert to **Preloaded pages**.

PAGE NAVIGATION ENHANCEMENTS

For all pagination modes, the **Page Navigation** buttons have changed. The increase/decrease page size ([+-]) links, shown below, (previously visible for the Preloaded pagination mode) are no longer available.



The following screen shot shows the new page navigation functionality. The look and feel of the new pagination functionality is similar to existing mobile functionality. Use the **Go to** drop-down to navigate directly to any page of line items.



CSS STYLES FOR PAGE NAVIGATION IN THE LINE ITEM GRID

New CSS styles are available to indicate pages with validation errors, within the list of line items. These styles can be modified, but by default they are not defined, to avoid changes to any customized button styles.

To customize the style:

1. Click **Admin** to go to the Admin Home Page.
2. Click **Stylesheet** under the Style and Templates section.
3. Download the **Alternate CSS**.
4. Add the following style classes to the CSS file, providing the appropriate style rules, and save it. The following sample of CSS rules can be used as a starting point for customizing the **Pagination** buttons to match your site's branding:

```
/* Style rules specific to pagination buttons. These can be added
to your site's CSS properties for your custom buttons if desired
*/
button.pagingbtn{ /* Paging button container */ }
span.pagination-button-left { /* Left side of button */ }
span.pagination-button-left span.pagination-button-middle { /*
Button text properties */ }
span.pagination-button-left span.pagination-button-right{ /*
right side of button */ }
/* Style rule to ensure pagination buttons are not hidden */
div.paging-tools span{
   visibility: visible;
   padding: 0px;
}
/* Style rule to set height and alignment for the “Go To” menu */
div.sel-menu select.selpaging{
   height: 22px;
  text-align: left;
}
```

```
/* Style rule to add black border around the current page button
*/
div.page-number ul.paging li button.pagingbtn.current{
border: 1px solid #333333;
}
/* Style rule adds red border for the current page button whose
line items contain at least 1 constraint/validation error */
div.page-number ul.paging li button.pagingbtn.current.invalid-
page{
  border: 1px solid #FF0000;
}
/* Style rule sets text to red for a non-current page button
whose line items contain at least 1 constraint/validation error
*/
div.page-number ul.paging li button.pagingbtn.invalid-page{
  color: #FF0000;
}
/* Style rule adds red border for the "Go To" menu to indicate
that there is a page whose line items contain at least 1
constraint/validation error */
div.sel-menu select.selpaging.invalid-page{
  border: 1px solid #FF0000;
}
```

5. Upload the new CSS file.

ADOPTION OF ORACLE INFRASTRUCTURE STANDARDS

Infrastructure changes have been made to facilitate additional performance enhancements in future releases. In the future, CPQ Cloud may also be deployed in any one of Oracle's world-wide Data Centers, as business requirements arise. For any deployment, a single CPQ application would be present in only one data center; the same instance would not have copies in each Data Center.

OTHER PERFORMANCE ENHANCEMENTS

Additional performance enhancements include:

- Performance logging during SAML Single Sign-On (SSO)
- Optimized processing of integration XML
- Optimized printing for Transactions with more line items

SSO PERFORMANCE TRACING

The duration of each step during a SAML SSO from an external application (such as Oracle Sales Cloud) into CPQ Cloud is now measured. This information can help troubleshoot the source of any delays.

If this is enabled, you can see this information in your log files.

For more information, or to enable this feature, open a ticket on My Oracle Support.

OPTIMIZED INTEGRATION PROCESSING

If there are multiple integrations per Commerce Action, the Transaction XML is now generated once and updated, instead of being regenerated entirely for each integration. If the same data is being pushed to multiple places, or is being reused for multiple commands, the XML is the same.

Generating the XML only once makes the Commerce Action more efficient.

Note: This only applies to Integration XSLs and not to Real-Time Integration.

OPTIMIZED PRINTING

When printing a large Transaction, the Print XML is now only generated once and updated as needed.

In previous versions, the Print XML was regenerated during printing when data was requested, even though that data already existed in the Print XML. For example, when another page was printed after the first page, the information that appeared on every page was requested again and the Print XML was regenerated.

Now, the XML recognizes that the data already exists and does not request it again.

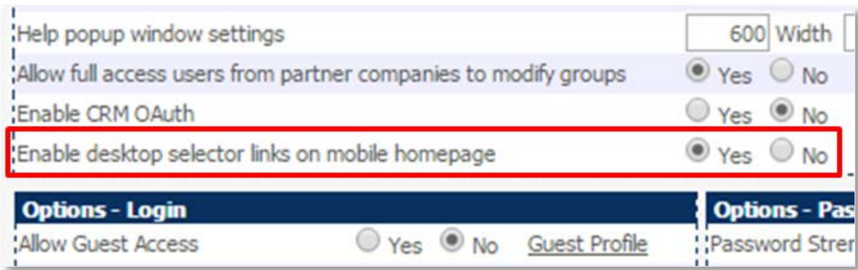
Note: This optimized printing depends on Desktop Transaction caching functionality. Turning Desktop Transaction caching off disables the optimization.

STEPS TO ENABLE

See each individual desktop performance enhancement section for more information on the steps needed to enable each feature.

SELECTOR LINKS ON MOBILE HOME PAGE

Selector links can now be accessed on the Mobile Home Page. Admins can determine whether or not Selector links will be visible on the Mobile Home Page through General Site Options. Selecting **Yes** for "Enable desktop selector links on mobile homepage" will expose Selector links on mobile, while selecting **No** will keep the links hidden. By default this setting is set to No.



General Site Options

STEPS TO ENABLE

No steps are needed to enable this feature.

TIPS AND CONSIDERATIONS

The recommended image proportions for a Mobile Selector punch-in image is 235px by 150px.

EASY ADMINISTRATION

Features include:

- Document Designer
- Email Templates Enhancements
- Migration Enhancements
- Attribute Groups
- Tenant Automation System (TAS) Enhancements
- Single Sign-On Enhancements

DOCUMENT DESIGNER

The Document Designer is a new tool for creating document templates. The Document Designer makes it easy to populate documents with current transaction data, and show or hide content based on product, transaction or user information. The Document Designer is a simple, powerful tool for creating proposals, contracts, statements of work, and other business documents.

The Document Designer editor's intuitive user interface and drag-and-drop functionality makes document design and maintenance fluid and efficient. Editing and formatting individual elements is straightforward. Support for multiple languages can be tailored to allow many admins to work simultaneously.

Features include:

- Visual drag and drop editor
- Section headers
- Dynamic section numbering based on Headers
- Dynamic auto-populated Table of Contents
- Standard background image/watermark support
- Conditional image embedding
- Standard support for multi-language templates
- PDF document merging (Antenna House/"Multi-Source Document Creation") without XSL snippets
- The Document Designer editor offers usability at two levels:
- Broad strokes: Drag and drop editor
    - Easy to lay out pages quickly
    - Easy to move large elements around
    - Easily discoverable (for when new admins need to come up to speed)
    - Out-of-box functionality with less XSL needed
- Fine detail: Properties Pane
    - Shows context-specific fine detail
    - Multi-select properties editing

Important:

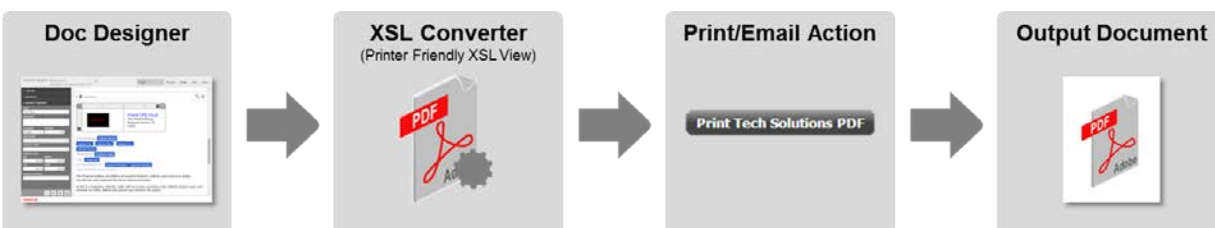
For environments that are using the default PDF driver instead of Antenna House, the following constraints exist:

- PDF Merge capability is not available. Embed Document Elements will not result in a change to the output when the PDF or File Attachment options are selected. Although these options will be available, they will not have any effect.

  If the Embed Document Element uses an RTE Template, the functionality works as expected.
- Image Elements may get clipped in output, even though no warning appeared in the Document Designer editor that the Image's dimensions exceeded the container size.
- The boundaries of a Section Element may not be respected when a Text Element is a very long string without spaces. Text without whitespaces will not overflow to the next line; it will be clipped based on the container size.
- The height of an Image Element is ignored when a % value is provided. Height is instead calculated using either the custom width or the original width, in that order of preference. The aspect ratio is preserved.
- Using the Keep Together property will cause clipping if the combined content of the bound Elements is longer than a page length—in this case, the excess content gets clipped. Keep Together can be used on Text and Table Elements.

DOCUMENT DESIGNER SETUP

Like the Document Engine, the Document Designer uses Printer Friendly XSL Views and Commerce Print or Email actions to complete the template-to-output process.



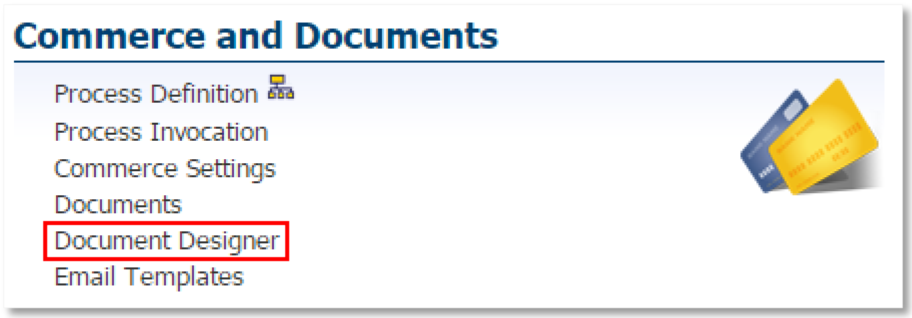
In a complete Document Designer workflow, when a Print or Email action is invoked on the user side, the Printer Friendly XSL View will convert the XSL that makes up the Document Designer template into the appropriate output type. Printer Friendly XSL Views can convert Document Designer templates into PDF, DOCX, and RTF files.

For step by step instructions on how to set up a complete Document Designer workflow, see CPQ Cloud Help.

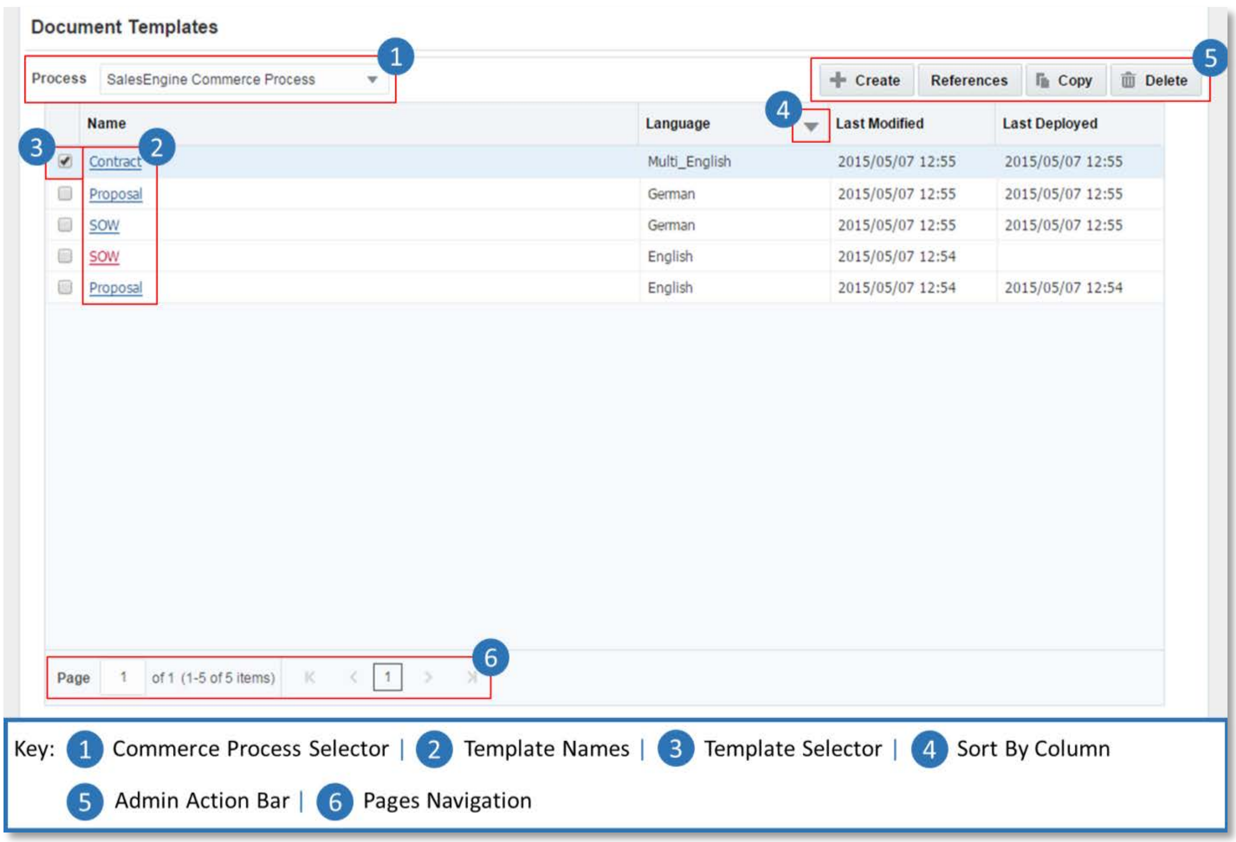
DOCUMENT TEMPLATES PAGE

Admins can manage all Document Designer templates from all Commerce Processes on the **Document Templates** page. Document Designer templates can be created, opened, copied, or deleted on the **Document Templates** page.

The **Document Templates** page can be accessed through the Document Designer link on the Admin Home Page.



USING THE DOCUMENT TEMPLATES PAGE



1. Only Document Designer templates within the Commerce Process that is selected in the **Commerce Process Selector** drop-down will appear in the list.

2. Click the name of a Document Designer template to open that template in the Document Designer editor. Names of deployed templates appear blue, while names of undeployed (either never deployed or modified since the last deployment) templates appear red.

3. Select the checkbox next to the template whose references you want to check, or select the checkbox for the templates you wish to copy or delete.

4 Hovering over a column name reveals a **Sort By** icon. Click the icon to sort the templates by the column data. Click the icon again to change the direction of the sort.

5 The Admin Action Bar contains four buttons:

1. **Create**: Click to create a new template.
2. **References**: Select a template's checkbox to activate the **References** button (the button will be disabled if no template is selected). Click to view the template's associated Printer Friendly XSL Views, Output Formats, Statuses, and Actions. The **References** button will be disabled if multiple templates are selected.
3. **Copy**: Select a template's checkbox to activate the **Copy** button (the button will be disabled if no template is selected). Click to create a duplicate of the last-saved version of the selected template (undeployed changes will still be copied). The **Copy** button will be disabled if multiple templates are selected.

   A Printer Friendly XSL View can only have one template name associated with it, but the template name can be shared across multiple templates that have different language settings.

   > **Important:** A duplicate template will not be linked to any Printer Friendly XSL Views that the original template was linked to, unless the name of the duplicate template is changed to match the original template. The duplicate template's name can only match the original template's name if a different language is selected for the duplicate template, and there is no other existing template with the same name and language.

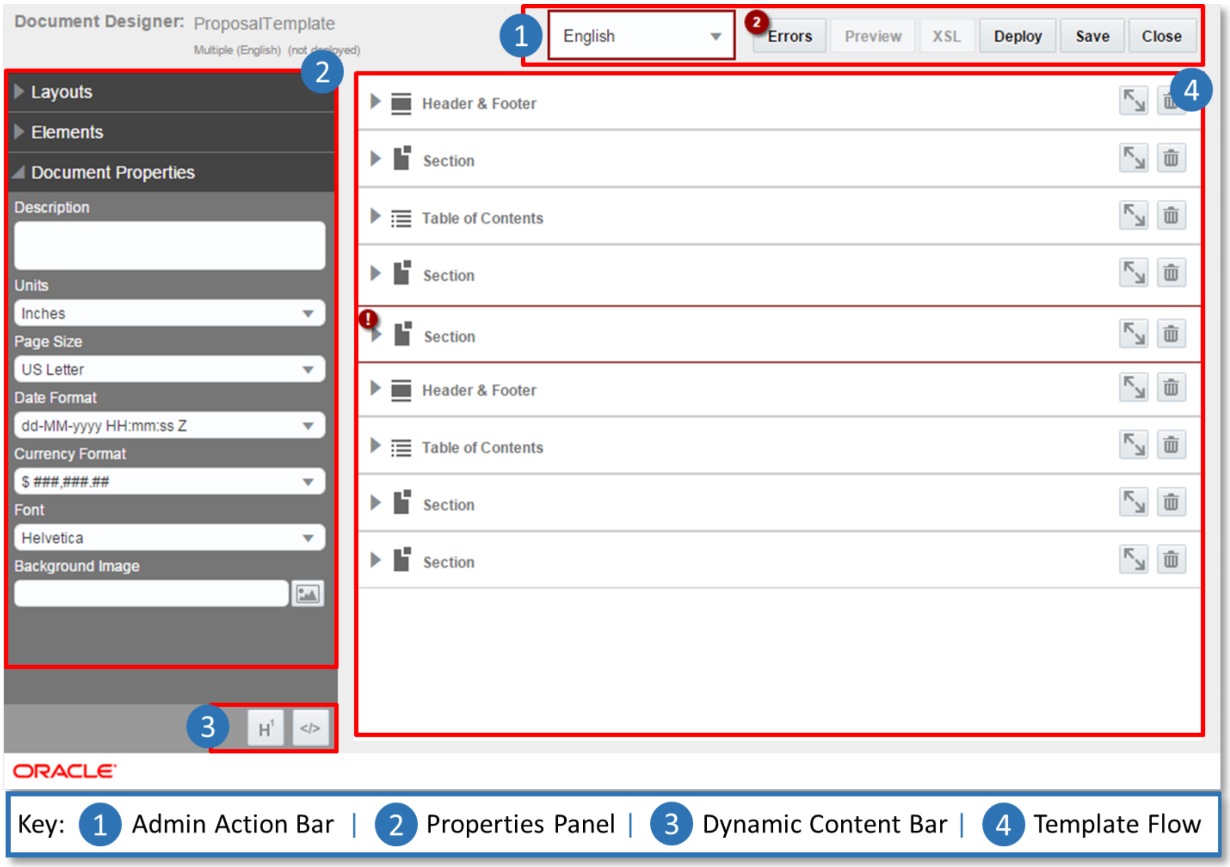
4. **Delete**: Select one or more checkboxes to activate the **Delete** button (the button will be disabled if no template is selected). Click to delete the selected template(s).

6 If multiple pages of templates are available, the Page Navigation options can be used to navigate between pages in the list.

DOCUMENT DESIGNER EDITOR

To edit a Document Designer template, click the template's name in the **Document Templates** page. The Document Designer editor opens.

DOCUMENT DESIGNER EDITOR INTERFACE



ADMIN ACTION BAR

The Admin Action Bar will always contain (at minimum) the following four buttons:

- Preview
- Deploy
- Save
- Close

If the template is a multi-language template, a **Language** drop-down will be present in the Admin Action Bar.

If there are inconsistencies between attribute values referenced in a template and attributes on the site, an **Errors** button will be present in the Admin Action Bar.

If the site's Superuser is modifying a template, an **XSL** button will be present in the Admin Action Bar, which will show the XSL that makes up the template. No other users that access the Document Designer editor, including FullAccess users with "Superuser privileges," will see the **XSL** button.

LANGUAGE

The **Language** drop-down determines the Language View of the Template Flow.

If the default language is selected, all administration tasks can be done, and content can be added in the default language.

If another language is selected, Text and Heading Elements can have translations added to them, but no other administration tasks can be done.

See the Languages and Translations section for more information.

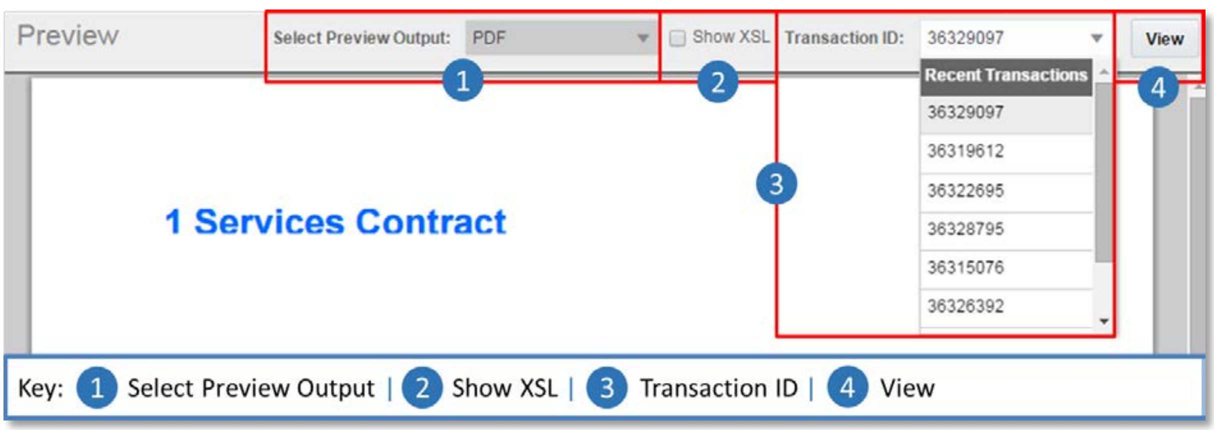
ERRORS

An icon over the **Errors** button will display how many attribute errors exist in the template. Clicking the Errors button opens the Errors window, which includes a description of each error and allows the admin to navigate to each error in the Template Flow.

When errors exist in the template, the Preview and XSL buttons cannot be invoked. See the Error section for more information.

PREVIEW

Clicking the **Preview** button opens the **Preview** page on a new tab in the browser, where the last-saved version of the template will be previewed as a PDF using data from the Transaction that was most recently opened by any user on the site. On the **Preview** page, the admin can choose to preview the template in a different output type or using data from a different Transaction.



1. **Select Preview Output**: The output type selected determines what file type is previewed. The template can be previewed as a PDF, DOCX, or RTF file.

2. **Show XSL**: If the site's Superuser accesses the **Preview** page, a **Show XSL** checkbox will be present in the Admin Action Bar. Regardless of what output type is selected, if **Show XSL** is selected, clicking **View** will reveal the XSL code that makes up the output instead of a PDF, DOCX, or RTF document.

3. **Transaction ID**: The template will be previewed using Transaction data from the Transaction ID specified. The admin can enter a Transaction ID or choose from one of the ten Transactions that were most recently opened (by all users on the site) in the drop-down.

4. **View**: Clicking **View** will preview the template using the output format and Transaction ID selected. If PDF is selected for the preview output type, a PDF preview will be loaded in the browser window and can be saved through the browser. If DOCX or RTF is selected for the

preview output type, the preview file will be downloaded to the browser.

XSL

The **XSL** button reveals the XSL code that makes up the template in a new window. This button is only available to the site's Superuser. The Superuser can only view the template's XSL, but not modify the code.

See the Custom XSL in the Document Designer section for more information on the relationship between the Document Designer and XSL.

DEPLOY

The **Deploy** button deploys all saved changes in the template to Commerce so that they are available to all users on the user-side of the application.

SAVE

The **Save** button saves all changes made to the template. This allows for unwanted changes to be undone, as an admin can close the template without saving in order to lose any unwanted changes that were made since the last save.

CLOSE

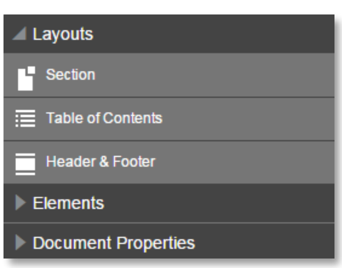
The **Close** button closes the Document Designer editor and returns the user to the **Document Templates** page. When the user clicks **Close**, a **Confirmation** pop-up will appear to warn that unsaved changes will be lost.

PROPERTIES PANEL

The **Properties** panel is used to add Layouts and Elements to the template, as well as to edit the properties of individual Layouts and Elements or the properties of the template as a whole. The **Properties** panel contains three panes; the **Layouts** pane, the **Elements** pane, and the **Properties** pane. Each pane can be expanded by clicking on the name of the pane. When a different pane is expanded, the previously expanded pane is collapsed.

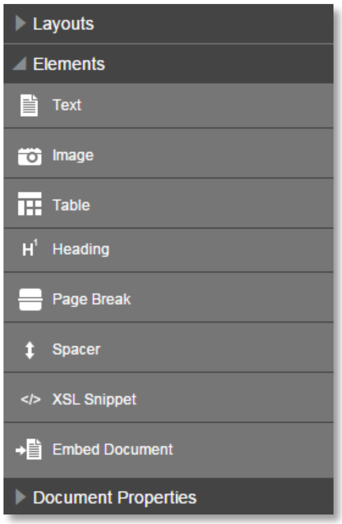
LAYOUTS PANE

The **Layouts** pane contains all Layouts that can be added to the Template Flow via drag and drop. See the Layouts section for more information.



ELEMENTS PANE

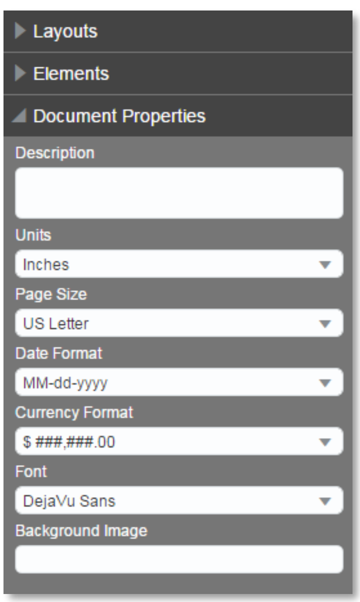
The **Elements** pane contains all Elements that can be added to the Template Flow via drag and drop. See the Elements section for more information.



PROPERTIES PANE

The **Properties** pane contains properties of the currently selected Layout or Element that can be modified. See each individual Layout or Element's section for more information on what properties are shown in the **Properties** Pane when each Layout/Element type is selected.

If more than one Layout or Element is selected, the **Properties** pane only shows the properties that all selected Layouts/Elements have in common. By selecting more than one item, you can edit the properties of each item at the same time. This ensures consistency in the property selections, and is more efficient than editing each item one at a time.



If no Layout or Element is selected, the **Properties** pane contains Document Properties that relate to the template as a whole. To reveal these Document Properties, click an empty space in the Admin Action Bar or in the Template Flow.

Document Property	Description
Description	An optional description of the template for reference (this description is not visible anywhere else in the system).
Units	The units used to determine margins and padding within the template. Inches, millimeters, centimeters, or pixels can be selected.
Page Size	The size of each page in the output.
Date Format	The format that determines how all date attributes appear in the output.
Currency Format	The format that determines how all currency attributes appear in the output.
Font	The default font that is selected in all Text and Heading Elements when they are created.
Background Image	A background image that will be applied to all pages within the template. For more information on Background Images, see the Background Images section.

DYNAMIC CONTENT BAR

The buttons available in the Dynamic Content Bar will vary based on what is selected. There are many potential buttons (click each link for more information):

- Heading Styles
- Global XSL Snippet
- Inline XSL Snippet
- Loop
- Condition
- Copy
- Paste
- Merge Cells
- Split Cell
- Clear Cell
- Clear Row
- Clear Column
- Delete

TEMPLATE FLOW

The Template Flow is the main editing area of the Document Designer editor. All Layouts and Elements must be dragged into the Template Flow to be added to the template.

ADDING LAYOUTS AND ELEMENTS TO THE TEMPLATE FLOW

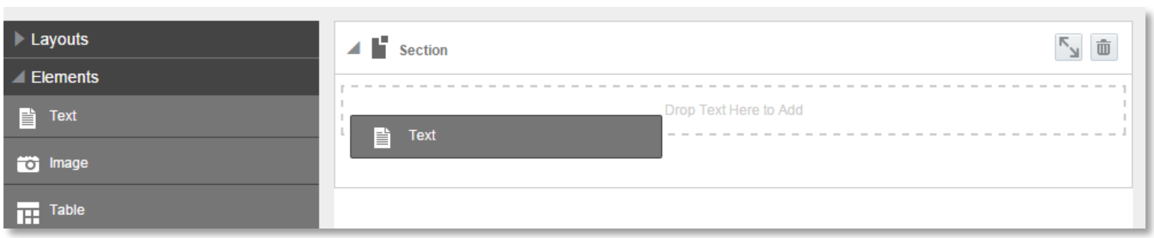
Layouts and Elements are added to the template via drag and drop.

To add a Layout to the Template Flow:

1. Click **Layouts** in the **Properties** panel to expand the **Layouts** pane.
2. Click and drag the Layout you wish to add to the template to the Template Flow.

To add an Element to a Layout in the Template Flow:

1. Click **Elements** in the **Properties** panel to expand the **Elements** pane.
2. Click and drag the Element you wish to add to the template into a Layout in the Template Flow.



MANAGING LAYOUTS IN THE TEMPLATE FLOW

Key: 1 Expand Layout | 2 Layout Full View | 3 Delete Layout

4 Move Layout

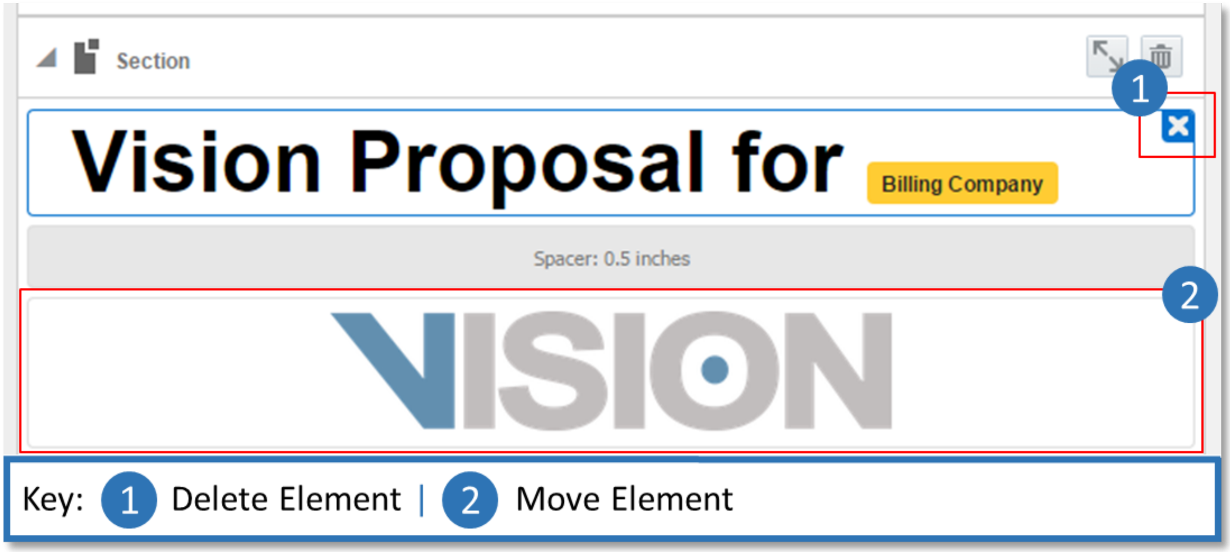
1. Click the **Expand** icon ( ) to expand a Layout so that Elements can be added to it, or to modify the Elements within the Layout. Once expanded, click the **Collapse** icon ( ) to collapse the Layout in the Template Flow.

2. Click the **Full View** icon ( ) to expand a Layout so that Elements can be added to it, or to modify the Elements within the Layout. All other Layouts will be hidden when Full View is invoked. Once expanded, click the **Inline View** icon ( ) to collapse the Layout and to reveal all other Layouts in the Template Flow.

3. Click the **Delete** icon to remove a Layout and all the Elements within the Layout from the Template Flow. A confirmation pop-up will appear to confirm that the Layout should be deleted.

4. Rearrange Layouts in the Template Flow by clicking and dragging Layouts to new locations in the Template Flow.

MANAGING ELEMENTS IN THE TEMPLATE FLOW



1. Hover over or select an Element to reveal the **Delete** (✖) icon**.** Click the **Delete** icon to remove the Element from the template. A confirmation pop-up will appear to confirm that the Element should be deleted.

2. Rearrange Elements in the Template Flow by clicking and dragging the Elements to new locations. Elements can be moved from one Layout to another Layout, or within a Layout.

> **Note:** To select multiple Layouts or Elements, select the first Layout/Element and then hold down the **Ctrl** key while selecting other Layouts/Elements. When more than one Layout/Element is selected, click the **Delete** button in the Dynamic Content Bar to delete all selected Layouts/Elements.

LAYOUTS

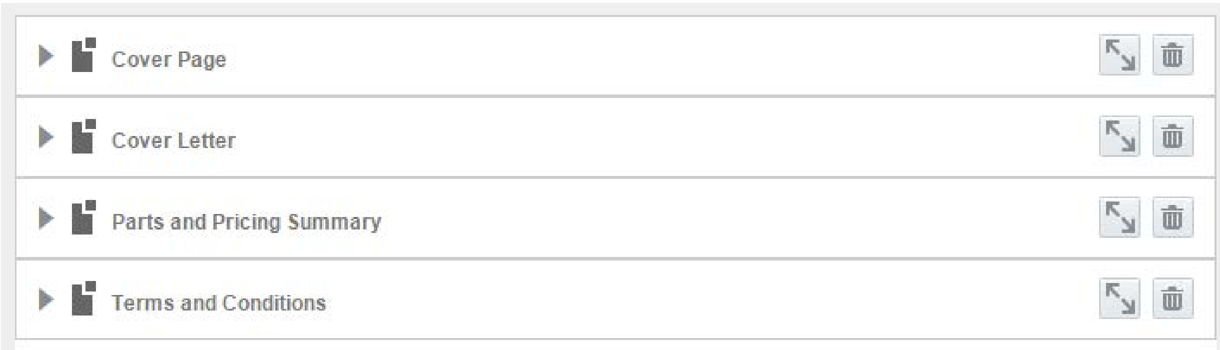
Layouts make up the structure of a Document Designer template. All Layouts must be added directly to the Template Flow. There are three Layout types that can be added to a template:

- Section
- Table of Contents
- Header & Footer

SECTION

Sections can hold all Element types and are used to hold and organize the main content of a Document Designer template.

While it would be possible to put all of a document's content into one Section, breaking out parts of the document into multiple Sections promotes organization and simpler administration, as well as giving admins additional options that can be defined per Section.



When a Section Layout is selected in the Template Flow, the following properties can be modified in the Properties pane:

Property	Description
Name	The name of the Section that will appear in the Template Flow.
Description	An optional description of the Section for reference (this description is not visible anywhere else in the system).
Orientation	Determines the orientation of all pages within the Section. If **Portrait** is selected, all pages will be oriented vertically. If **Landscape** is selected, all pages will be oriented horizontally.
Columns	The number of columns that will be used to organize content within the Section.
Date Format	The format that determines how all date attributes in the Section appear in the output.
Currency Format	The format that determines how all currency attributes in the Section appear in the output.
Margins	The space between Elements (when defined for **Top and Bottom**) and the space between Elements and the edge of the page (when defined for **Left or Right**), throughout the Section.
Background Image	A background image that will be applied to all pages within the Section. For more information on Background Images, see the Background Images section.

TABLE OF CONTENTS

The Table of Contents Layout is typically one of the first Layouts in the Template Flow. Each line in the Table of Contents is determined by the template's Heading Styles and the Heading Elements throughout the template.

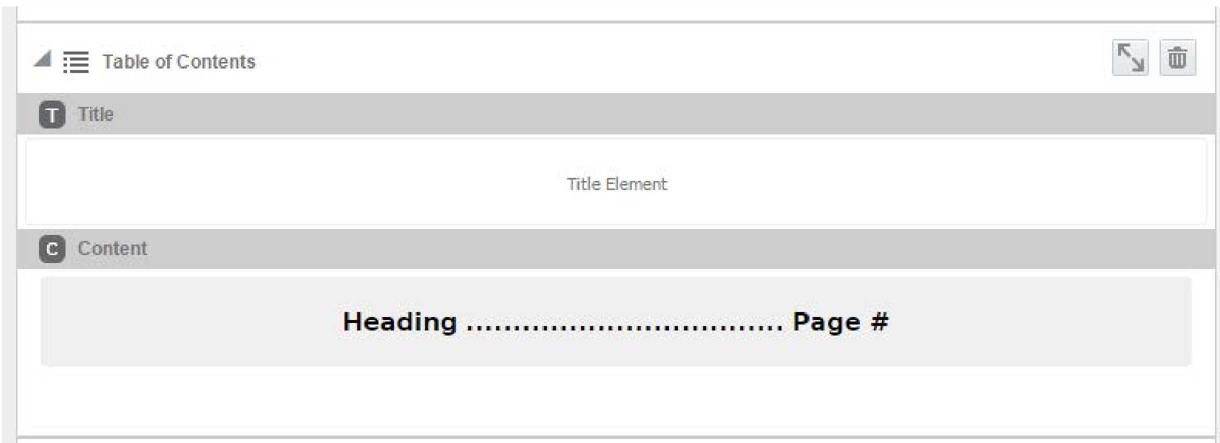
In a PDF or DOCX output, the reader can click each line in the Table of Contents to be taken to where the Header is in the document. For an RTF output, depending on what program the file is opened in, the Table of Contents may or may not function in this manner.

The Table of Contents will only reference Heading Elements whose Heading Styles are in the selected Heading Style Set and have **Add to Table of Contents?** set to **Yes**.

For more information on Heading Style Sets and Heading Styles, see the Heading Styles section. For more information on Heading Elements, see the Headings section.

TITLING AND STYLING A TABLE OF CONTENTS

There are two parts to the Table of Contents Layout: the Title, which is a Text element, and the Content.



The Title Text Element can be modified like any other Text Element. See the Text Element section for more information on modifying Text Elements.

The content of the Table of Contents is automatically generated, but the format of the content is set in the **Table of Contents** properties pane, which is revealed in the **Properties** panel when the Table of Contents is selected.

Important: A Table of Contents Layout in the Template Flow will not show what Heading Elements will be in the Table of Contents, what order the Heading Elements will be in, and what numbering will be for each Heading. Use the **Preview** page to view a generated version of the Table of Contents in the output.

When a Table of Contents Layout is selected in the Template Flow, the following properties can be modified in the Properties pane:

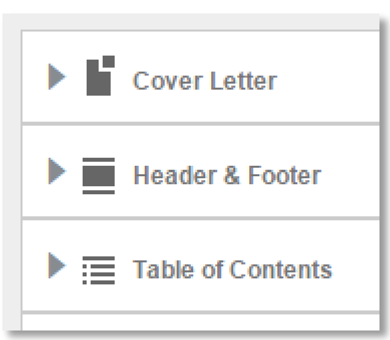
Property	Description

Property	Description
Heading Style Set	The Heading Style Set whose Heading Elements will be used to populate the Table of Contents.
Content Style	Pre-set formatting options that will affect the style of all lines in the Table of Contents.
Contents Font	The font of all lines in the Table of Contents.
Contents Size	The font size of all lines in the Table of Contents.
Contents Options	Formatting options that affect all lines in the Table of Contents. Options include **Font Color**, **Bold**, **Italics**, and **Clear Formatting**.
Margins	The space between each line in the Table of Contents (when defined for **Top and Bottom**) and the space between each line in the Table of Contents and margins of the page (when defined for **Left or Right**).

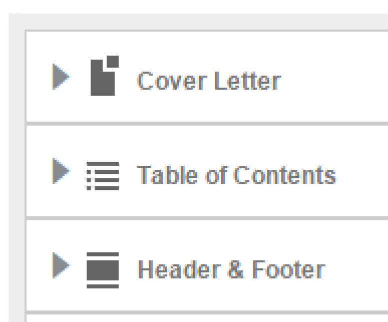
HEADER & FOOTER

The Header & Footer Layout applies a header and or footer to all Layouts below it in the Template Flow. Text, Image, Table, Spacer, and XSL Snippet Elements can be added to a Header & Footer Layout to create the header and/or footer content.

All Layouts that do not have a Header & Footer Element above them in the Template Flow will not have a header or footer applied to them. A Header & Footer will apply to all Layouts below it in the Template Flow until another Header & Footer Element is defined.



In this Template Flow, the Header & Footer will appear in the Table of Contents, but not in the Cover Letter.



In this Template Flow, the Header & Footer will NOT appear in the Table of Contents or the Cover Letter.

If there are Layouts that should not have Header and Footer content, the admin should create one or more empty Header & Footer Layouts to apply to these Layouts.

When a Header & Footer Layout is selected in the Template Flow, the following properties can be modified in the **Properties** pane:

Property	Description
Name	The name of the Header & Footer that will appear in the Template Flow.
Header Height	The height of the Header. The vertical space of the body content of all pages affected by the Header & Footer will inversely be affected by changes to the Header Height.
Footer Height	The height of the Footer. The vertical space of the body content of all pages affected by the Header & Footer will inversely be affected by changes to the Footer Height.
Margins	The space between Elements (when defined for **Top and Bottom**) and the space between Elements and the margins of the page (when defined for **Left or Right**), throughout the Header & Footer.

ELEMENTS

Elements hold the content of the document. Elements cannot be placed directly in the Template Flow, but must be placed either in a Section or a Header & Footer Layout. All Elements can be placed in a Section and some Elements can be placed in a Header & Footer. No Elements can be placed in a Table of Contents Layout because of the default Elements that are provided with it.

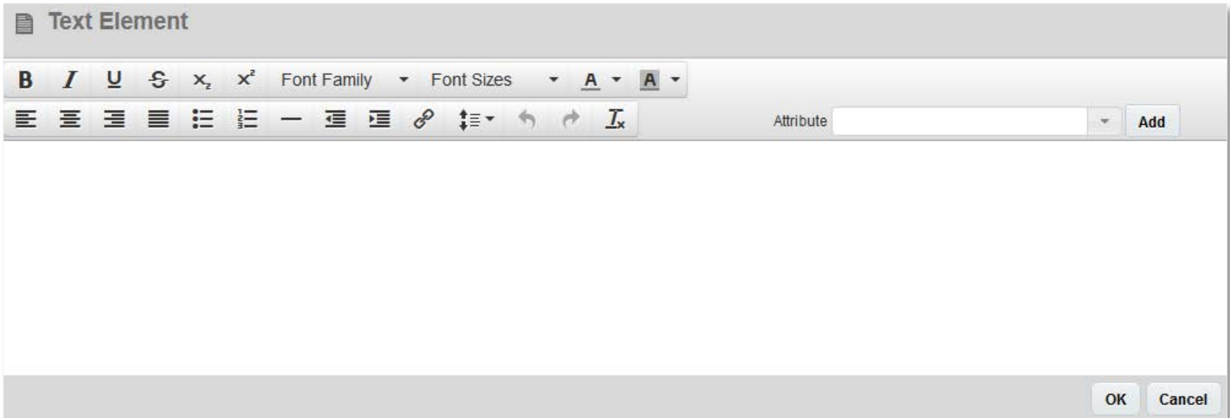
There are eight Elements types that can be added to the template:

- Text
- Image
- Table
- Heading
- Page Break
- Spacer
- XSL Snippet
- Embed Document

TEXT

Text Elements can hold both static text and dynamic attribute values. Text can be added to Sections, Table cells, and Headers and Footers.

After a Text Element has been dropped in the template, the **Text Element** editor window will appear.



Text can be added and formatted within the **Text Element** editor window. Clicking **OK** will save the contents of the Text Element. The Text Element editor window can be reopened by double-clicking on the Text Element within the Template Flow.

Attribute values can also be added to Text Elements. For more information on adding attribute values, see the Attribute Values section.

When a Text Element is selected in the Template Flow, the following properties can be modified in the **Properties** pane:

Property	Description
Font	The font of all text within the Text Element. If multiple fonts are used within the Text Element, an "*" will appear in the **Font** drop-down. Selecting a font will overwrite all font modifications that were made within the **Text Element** editor window.
Size	The size of all text within the Text Element. If multiple sizes are used within the Text Element, an "*" will appear in the **Size** drop-down. Selecting a size will overwrite all size modifications that were made within the **Text Element** editor window.
Options	Options include **Font Color**, **Bold**, **Italics**, and **Clear Formatting**. Changing any one of these options will affect all text within the Text Element.
Keep Together	When selected, if the Text Element is long enough so that it will be split between two pages, the Text Element will be moved to a new page so that all text content appears on the same page in the output.
Line Spacing	The line spacing between all lines in the Text Element. If multiple line spacing settings are used within the Text Element, an "*" will appear in the **Line**

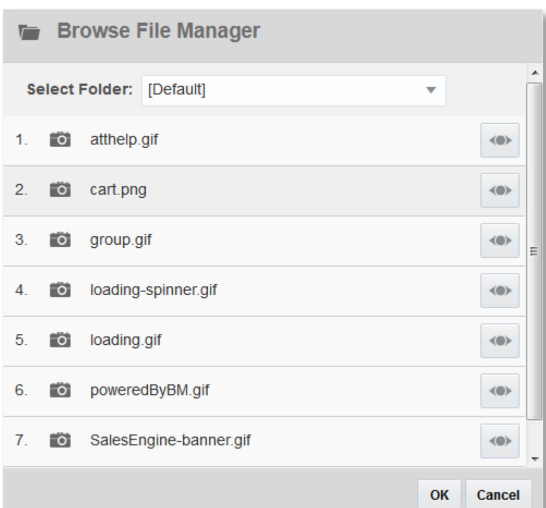
Property	Description
	spacing drop-down. Selecting a **Line spacing** setting will overwrite all line spacing modifications that were made within the **Text Element** editor window.
Padding	The space between the Text Element and other Elements (when defined for **Top and Bottom**) and between the Text Element and the margins of the page (when defined for **Left or Right**). If the Text is inside a Table cell, margins will determine the distance between the Element and the borders of the cell.

IMAGE

Image Elements can reference images stored in the File Manager, images stored in Commerce File Attachment attributes, or external images. Images can be added to Sections, Table cells, and Headers and Footers.

FILE MANAGER IMAGES

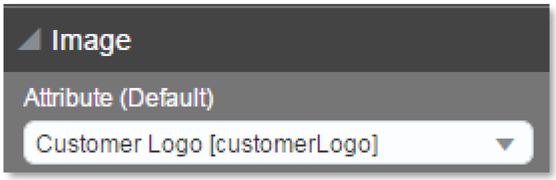
After an Image Element has been dropped in the template, the **Browse File Manager** window will appear.



Select a File Manager folder using the **Select Folder** drop-down to locate the correct image. Images can be viewed in a new window using the **Preview** ( ) button. To add a File Manager image to the Image Element, select the image from the list and then click **OK**.

FILE ATTACHMENT ATTRIBUTE IMAGES

To use an image that is stored in a File Attachment attribute, click **Cancel** when the **Browse File Manager** window appears. With the Image selected in the Template Flow, the **Image Properties** pane will show in the **Properties** panel. From the **Attribute (Default)** drop-down, select the File Attachment attribute for the Image Element to pull from.



EXTERNAL IMAGES

To use an external image, click **Cancel** when the **Browse File Manager** window appears. With the Image selected in the Template Flow, the **Image Properties** pane will show in the **Properties** panel. Enter the external image's full URL into the **Image URL** field.

MULTIPLE IMAGES

An Image Element linked to a File Attachment attribute can also have a File Manager image or an external image associated with it as a backup. The Image Element will always show the image in the File Attachment attribute if one is present, but if the File Attachment attribute is empty, the Image Element will show the associated File Manager image or external image.

If the file in the File Attachment attribute is not an image file (for example, a PDF), the associated File Manager image or external image will show in the output.

If there is no image present in a File Attachment attribute that is linked to an Image Element and no File Manager image is associated with the Image Element, nothing will show in the output where the Image Element would have been.

Note: Background images can be defined for an entire template or individual sections, but they are not added via an Image Element. See the Background Images section for information on adding background images.

IMAGE ELEMENT PROPERTIES

When an Image Element is selected in the Template Flow, the following properties can be modified in the Properties Pane:

Property	Description
Attribute (Default)	The File Attachment attribute where the image that will be displayed in the output is stored.
Image URL	The URL of the external image or the File Manager image that will be displayed in the output. If a File Manager image is selected, the "URL" will display with the syntax `FILEMANAGER#[folder]/[image.extension]` where `[folder]` is the name of the File Manager Folder and `[image.extension]` is the name of the image and its file extension. If the image is in the Default folder, the `[folder]` tag will not appear in the "URL."

Property	Description
	The **Browse File Manager** button () appears to the right of the **Image URL** field, and can be used to open the **Browse File Manager** window to select an image from the File Manager.
Height	When set to **Auto**, the height of the image will be the actual height of the image file. The height can also be set to a certain number of pixels (PX) or to a percentage (%) of the vertical margins of the page or the percentage of the height of a Table cell that the Image Element is within.
Width	When set to **Auto**, the width of the image will be the actual width of the image file. The width can also be set to a certain number of pixels (PX) or to a percentage (%) of the horizontal margins of the page or the percentage of the width of a Table cell that the Image Element is within.
Alignment Options	Where the image is aligned on the page. For example, **left-aligned**, **centered**, or **right-aligned**.
Margins	The space between the Image Element and other Elements (when defined for **Top and Bottom**) and between the Image Element and the margins of the page (when defined for **Left or Right**). If the Image is inside a Table cell, margins will determine the distance between the Element and the borders of the cell.

TABLE

Table Elements can be used to organize content and present it in a logical way to the reader of the document. Tables can be placed in Sections and Headers and Footers.

When a Table Element is added to the template, by default the Table will have one row and one column. Additional rows and columns can be added by clicking the **Add Row** or **Add Column** icon (), located within the bottommost row and rightmost column, respectively, or by modifying the **Row** and **Column** fields in the **Properties** pane. Both rows and columns can be rearranged within a table via drag and drop.

By default, each cell in a Table will contain a Text Element. That Text Element can be modified or removed from the cell, and additional Elements can be added to the cell. Text, Image, Heading, Spacer, and XSL Snippet Elements can all be added to Table cells. Tables cannot be nested.

TABLE PROPERTIES

When a Table is selected in the Template Flow, the following properties can be modified in the **Properties** pane:

Property	Description
Rows	The number of rows in the Table.
Columns	The number of columns in the Table.
Background Color	The background color of all cells within the Table.
Borders	The color and width (in pixels) of borders within the Table.
Use Header	When selected, the first row in the Table becomes a header row. If a Table spans multiple pages in the output, the header row will appear at the top of each new page. Cells within a header row cannot be merged with cells in other rows. When a header row is specified, if the row did not have a background color, the row will have a grey background applied to it in the Document Designer editor. This grey background will not show in the output, and the admin can assign the header row a background color.
Keep Together	If a Table Element would overflow onto a new page in the output, the Table will instead start on a new page in an attempt to keep the entire Table together on one page. If the Table Element is longer than a full page in the output, it will start on a new page when **Keep Together** is selected, but it will still overflow to another page due to its size.
Padding	The space between the borders of the cells within the Table and the Elements within the cells.

ROW PROPERTIES AND ACTIONS

When a row is selected in the Template Flow, the **Clear Row** button () will appear in the Dynamic Content Bar. Clicking the **Clear Row** button will clear all contents from all cells in the row.

A common use of Tables is to recreate the Line Item Grid or a portion of the Line Item Grid by creating a Loop on a row to loop over a set of attribute values. For more information on Loops, see the Loops section.

When a row is selected in the Template Flow, the following properties can be modified in the **Properties** pane:

Property	Description
Background Color	The background color of all cells within the row.

Property	Description
Borders	The color and width (in pixels) of the row's borders.
Padding	The space between the borders of the cells within the row and the Elements within the cells.

COLUMN PROPERTIES AND ACTIONS

When a column is selected in the Template Flow, the **Clear Column** button ( ) will appear in the Dynamic Content Bar. Clicking the **Clear Column** button will clear all contents from all cells in the column.

When a column is selected in the Template Flow, the following properties can be modified in the **Properties** pane:

Property	Description
Width	The width (in pixels) of the column.
Background Color	The background color of all cells within the column.
Borders	The color and width (in pixels) of the column's borders.
Padding	The space between the borders of the cells within the column and the Elements within the cells.

CELL PROPERTIES AND ACTIONS

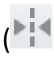
When a cell is selected in the Template Flow, the **Clear Cell** button ( ) will appear in the Dynamic Content Bar. Clicking the **Clear Cell** button will clear all contents from the cell.

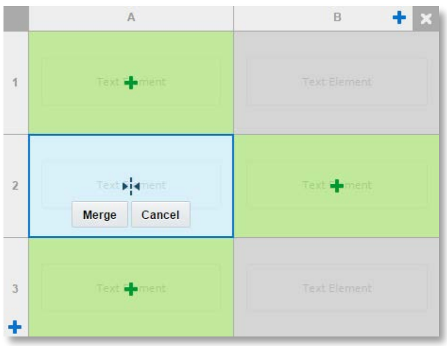
When a cell is selected in the Template Flow, the following properties can be modified in the **Properties** pane:

Property	Description
Background Color	The background color of the cell.
Borders	The color and width (in pixels) of the cell's borders.

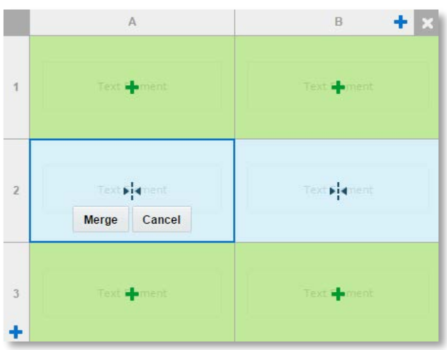
Property	Description
Padding	The space between the borders of the cell and the Elements within the cell.

MERGING CELLS

When a cell is selected in the Template Flow, the **Merge Cell** button () will appear in the Dynamic Content Bar. Clicking the **Merge Cell** button will bring up the Merge Cell overlay.



Click the cell(s) to merge with the selected cell. Cells that will be merged will be light-blue and have a merge cell icon on them.



Click **Merge** to merge the cells.

Important:

- When merging cells, only the upper-leftmost cell's content will be retained in the merged cell. All Elements in the other cells that are merged will be deleted.
- A row that contains a merged cell cannot have a Loop or a Condition applied to it.
- A column that contains a merged cell cannot have a Condition applied to it.
- Merged cells must form a rectangle. For example, two cells in row one cannot merge with one cell in row two.

SPLITTING MERGED CELLS

When a cell that has been merged is selected in the Template Flow, the **Split Cell** button ( ) will appear in the Dynamic Content Bar. Clicking the **Split Cell** button will split the selected cells that were previously merged.

HEADING

Heading Elements can be used to introduce new sections of content while creating an entry for the content area in the Table of Contents. Headings can only be added to Sections.

After a Heading Element has been dropped in the template, the **Heading Element** editor window will appear.

The name of the Heading can contain both static text and/or attribute values. For more information on adding attribute values, see the Attribute Values section. Clicking **Ok** will save the contents of the Heading Element. The **Heading Element** editor window can be reopened by double-clicking on the Heading Element within the Template Flow.

When a Heading Element is selected in the Template Flow, the following properties can be modified in the **Properties** pane:

Property	Description
Heading Style	All Heading Style Sets and Heading Styles within each Heading Style Set will appear in the drop-down. Selecting different Heading Styles will affect the formatting of the Heading and possibly the template's Table of Contents. For more information on Heading Style Sets and Heading Styles, see the Heading Styles section.
Reset Numbering	When selected, the number of the Heading will reset to 1 (or i, I, a, or A depending on the Number Style of the Heading style) regardless of what

Property	Description
	number Heading it is within the Template Flow. For more information of Heading Style numbering, see the Heading Styles section.

PAGE BREAK

Page Break Elements can be added to a Section to specify when Elements should be split between different pages in the output. Page Breaks can only be added to Sections.

When a Page Break is added to the Template, all Elements below it in the Template Flow will begin on a new page in the output. Page Break Elements do not have any properties that can be modified in the **Properties** panel.

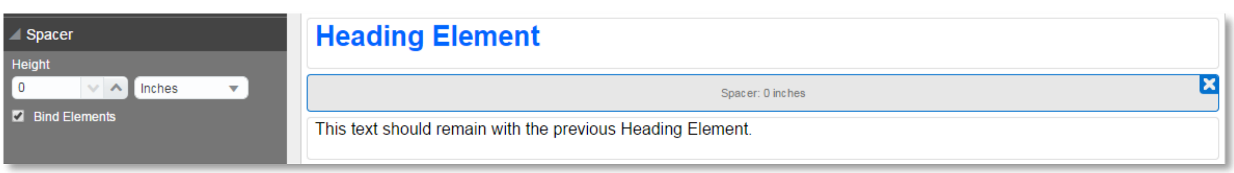
SPACER

Spacer Elements create blank space between Elements. Spacers can be added to Sections and Header & Footers. Spacer Elements have two properties that can be modified in the **Properties** pane when the Spacer is selected; **Height** and **Bind Elements**.

The **Height** of a Spacer determines how much blank space the Spacer will create in the output. **Height** can be specified in inches, millimeters, centimeters, and pixels.

When **Bind Elements** is selected, the Element directly above and the Element directly below the Spacer in the Template Flow will appear on the same page in the output when possible. Spacers can have their height set to zero if two Elements need to appear on the same page, but no extra space is needed between them.

In the following example, a Heading Element should appear on the same page as the Text Element below it. To ensure this, a Spacer Element is placed between the Heading and Text Elements, the **Height** of the Spacer is set to 0 inches, and **Bind Elements** is selected. In this scenario, the Heading and Text Elements will appear on the same page when possible. If the text is long enough that it must move to the next page, the header will move with it.



XSL SNIPPET

XSL Snippet Elements can be used to affect the output of the document by referencing XSL variables. XSL Snippets can be added to a Section, a Table cell, or a Header & Footer. For more information on XSL Snippets, see the Custom XSL in the Document Designer section.

EMBED DOCUMENT

Embed Document Elements serve two distinct purposes:

- To embed a PDF document from the File Manager, a File Attachment attribute, or a URL in the PDF output of a template
- To add the contents of a Rich Text attribute to the template.

Embed Document Elements can only be added to Sections.

EMBEDDING A PDF DOCUMENT

After an Embed Document Element has been dropped in the template, the **Browse File Manager** window will appear.

The admin can select a File Manager folder using the **Select Folder** drop-down to locate the correct PDF file. Only PDF files will be shown in the list, and each file can be viewed in a new window using the **Preview** ( ) button.

- To add a PDF that is in the File Manager to the Embed Document Element, select the PDF in the list and then click **Ok**.
- To embed a PDF file that is stored in a File Attachment attribute or is accessed via a URL, click **Cancel** when the **Browse File Manager** window appears. With the Embed Document Element selected in the Template Flow, the **Embed Document** pane will show in the **Properties** panel.
- To add a PDF from a URL, select the **PDF** radio button and paste the URL file location into the **PDF** field.
- To add a PDF that is stored in a File Attachment attribute, select the **File Attachment** radio button and then select the desired attribute from the drop-down.

If there is no file present in the File Attachment attribute that is linked to an Embed Document Element upon printing of the document, nothing will show in the output where the embedded document would have been.

Important: Only PDF documents can be embedded into a template, and embedded documents are only supported in PDF outputs. If a template that contains an embedded PDF is outputted in DOCX or RTF, the embedded PDF will not appear in the output.

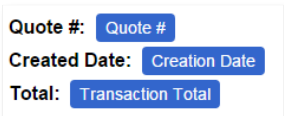
ADDING RICH TEXT ATTRIBUTE CONTENTS

The contents of Commerce Rich Text attributes can be added to the template through Embed Document Elements. The contents of a Rich Text attribute will not be given its own page(s) in the output, as an embedded PDF would, but will rather appear within the flow of the document amongst the other Elements around the Embed Document Element.

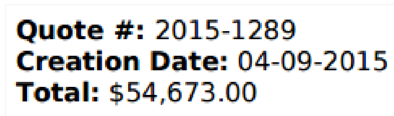
With the Embed Document Element selected, select the **Rich Text** radio button in the **Properties** pane and then select the desired Rich Text attribute from the drop-down in order to have the Embed Document Element reference the contents of a Rich Text attribute.

ATTRIBUTE VALUES

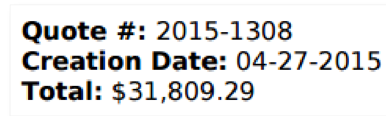
Attribute values that dynamically fill a template with current Transaction, user, and product data are what makes the Document Designer more than just a static template in a word processor. Adding current data to the template—while the output is being created—is a big part of what makes the Document Designer so useful.



Text Element in the Document Designer Template



PDF Output for Transaction A



PDF Output for Transaction B

Attribute values can be added to Text and Heading Elements. There are five types of attributes that can be added in the Document Designer:

- Template (Page Number and Total Page Number)
- Main Document (Transaction/Quote-level attributes)
- Sub Document (Transaction Line/Line-level attributes)
- User (Current user attributes)
- Configuration (Configuration attribute values)

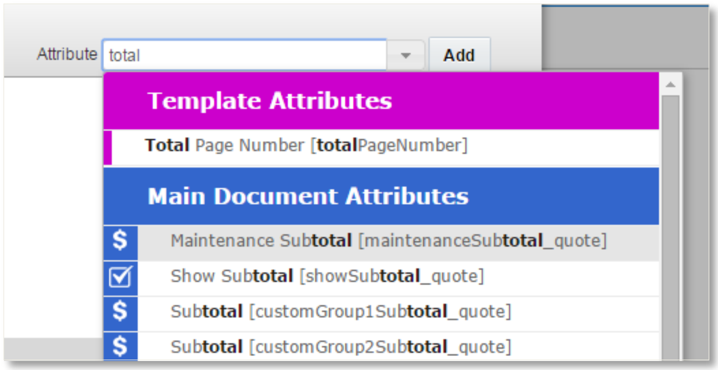
Template, Main Document, and User attributes are always available to be added within Text or Heading Elements. Sub Document and Configuration attributes can only be added to Text or Heading Elements that have a Loop applied to them, or are within an Element, Layout, or Table row that has a Loop applied to it. For more information on Loops, see the Loops section.

Important: Configuration attributes are only available to be added when the Text or Heading Element has, or is inside of an Element or Layout that has, a Loop that loops over All Line Items or Model Line Items.

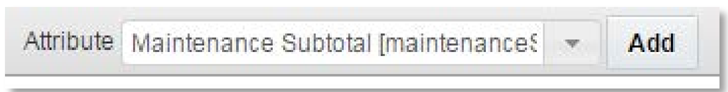
ADDING ATTRIBUTE VALUES

To add attribute values to a Text or Heading Element:

1. Double-click the Text/Heading attribute in the Template Flow to open the **Text Editor** dialog box.
2. Begin typing the name of the attribute whose value you want to add into the **Attribute** field. As you type, attributes that are similar in name to what you are typing will be suggested in a drop-down.



3. When you see the attribute you want to add, click the attribute within the drop-down list to select it.
   The attribute name and variable name now appear in the **Attribute** field.



4. Click **Add** to add the attribute value to the Element.
5. Click **Ok** to save the Element.

LOOPS

Loops are used in the Document Designer to dynamically expand a section of content by iterating over a set of data. Loops can be added to the following components:

- Sections
- Text Elements
- Table rows
- XSL Snippet Elements

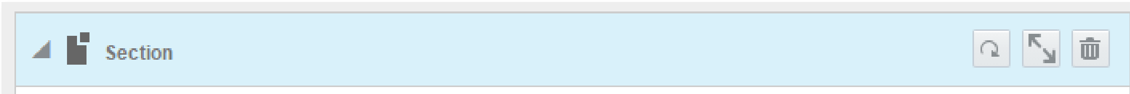
If a Loop is applied to a Section and configured to loop over Model Line Items, then a new Section will be created in the output for each Model Line Item that is present on the Transaction. Attribute values in each Section in the output will correspond to a different Model Line Item on the Transaction, effectively creating a new page or pages in the output for each Model on the Transaction.

CREATING A LOOP

To add a Loop to a Section, Text Element, Table row, or XSL Snippet Elements:

1. Select the component that the Loop will be added to.
2. Click the **Loop** button ( ) in the Dynamic Content Bar.
3. Select a set of data to loop over from the **Loop On** drop-down.
4. Optionally select an attribute to sort by from the **Sort By** drop-down.
5. Optionally select a sort type from the **Sort Type** drop-down.
6. Optionally add a Filter to the Loop by clicking **Yes** for **Filter**. For more information on Filters, see the Filters section.
7. Click **Ok** to save the Loop.

A **Loop** icon is added to the component in the Template Flow.



Click the **Loop** icon on the component, or the **Loop** button in the Dynamic Content Bar when the component is selected, to modify or delete the Loop.

Property	Options Available	Required	Description
Loop On	• All Line Items • Model Line Items • Part Line Items	Yes	The set of Transaction data that will be looped over. Selecting **All Line Items** means that both Model Line Items and Part Line Items will be looped over.
Sort By	All Sub Document attributes are available to sort by.	No	The Sub Document attribute that determines the order in which looped over data will be displayed in the output. If no attribute is selected, looped over data will appear in the same order as the line items appear on the Transaction.
Sort Type	• Ascending • Descending	No	Determines if the Sub Document attribute being used to sort by will be sorted from lowest value to highest value (ascending) or highest value to lowest value (descending). If the Sub Document attribute is a Text attribute, ascending will be alphabetical and descending will be reverse-alphabetical.
Filter	• Yes • No	NA	Determines if data will be filtered out and not used in the Loop based on a set of conditions. For more information on Filters, see the Filters section.

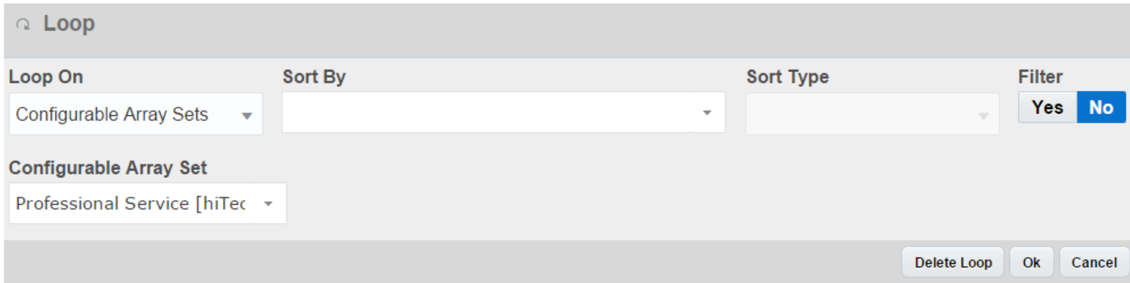
LOOPING OVER A CONFIGURATION ARRAY SET

A Loop must be nested within another Loop in order to loop over each line in a Configuration Array Set. The “outer” Loop must exist on a Section or a Table row, and it must loop over either All Line Items or Model Line Items.

The nested Loop can be created on a Table row, a Text Element, or an XSL Snippet Element. To configure the nested Loop to loop over a Configuration Array Set:

1. Open the Loop.
2. Select **Configurable Array Sets** from the **Loop On** drop-down.
   The **Configurable Array Set** field appears.

3. Select the desired array set from the **Configurable Array Set** drop-down.



4. Click **Ok** to save the Loop.

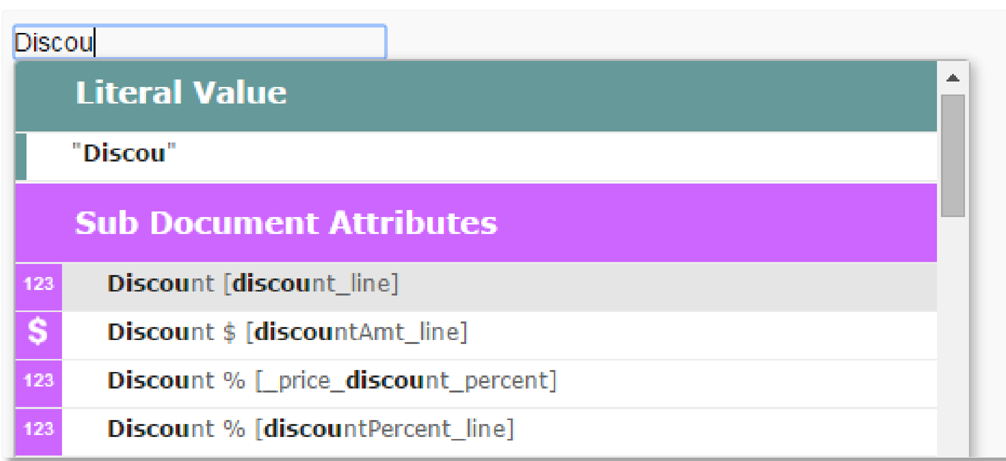
FILTERS

In CPQ Cloud, filtering removes data from the output so that what appears meets criteria that you define. Filtering in a loop enables you to restrict the results returned by a certain criteria.

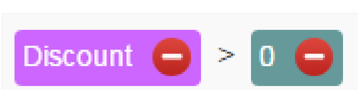
For example, you might want to filter a Table row that has a Loop applied to it so that only discounted parts are shown in the output. Without a Filter, the Loop on the table row will repeat the row for every part on the Transaction. A Filter can be added to the Loop to determine which parts on the Transaction should be looped over.

ADDING A FILTER TO A LOOP

1. Open the Loop.
2. For **Filter**, click **Yes**.
   The **Filter** pane appears in the **Loop** window.
3. Begin typing Filter conditions. As you type, a combination of literal values, operators, Sub Document Attributes, Main Document Attributes, and Configuration Attributes will be suggested. When the desired component is suggested in the list, click on it to add it to the Filter.



4. Continuing adding components to the Filter until the condition is logically complete.



5. In this example, a line item will only be looped over if its value for the Sub Document Discount attribute is greater than zero.
6. Click **Ok** to save the Filter and the Loop.

> **Important:** Configuration attributes cannot be used in a Filter if the Loop is set to loop over Part Line Items.

CONDITIONS

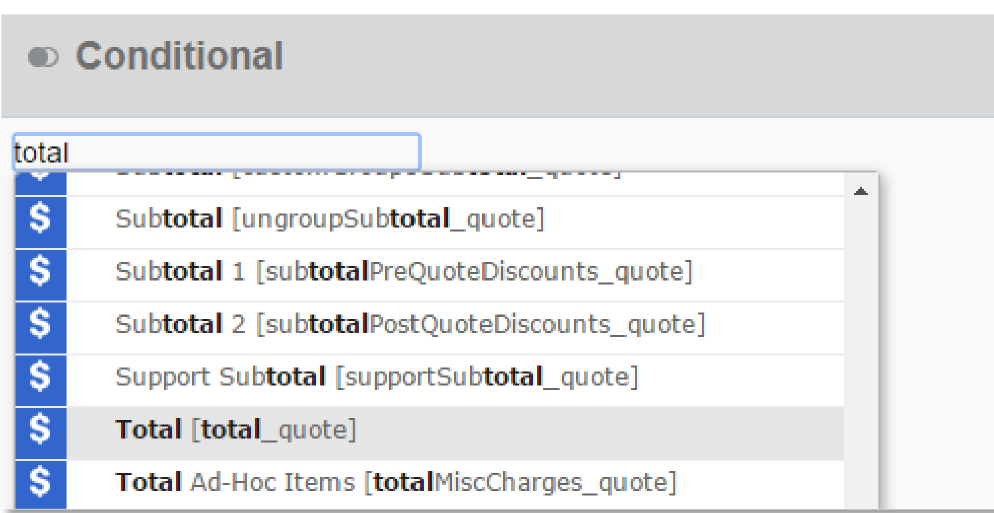
Conditions can be placed on Layouts and Elements so that the content will only appear in the output if a logic statement evaluates to true. Conditions can be placed on the following components:

- Sections
- Text Elements
- Image Elements
- Table Elements
- Table rows
- Table columns
- XSL Snippet Elements
- Embed Document Elements

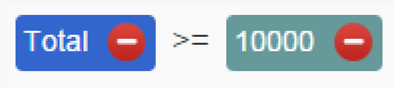
ADDING A CONDITION

To add a Condition to an applicable component:

1. Select the component that the Condition will be added to.
2. Click the **Condition** button () in the Dynamic Content Bar.
   The **Condition** window appears.
3. Begin typing the Condition. As you type, a combination of literal values, operators, User Attributes, and Main Document Attributes will be suggested. When the desired component is suggested in the list, click it to add it to the Condition.

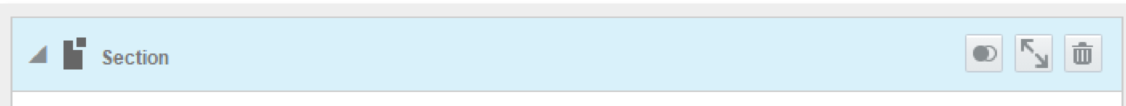


4. Continuing adding components to the Condition until the expression is logically complete.



In this example, the component that has the Condition applied to it will only show in the output if the value of the Main Document Total attribute is greater than or equal to $10,000.

5. Click **Ok** to save the Condition.
A **Condition** icon is added to the component in the Template Flow.



6. Click the **Condition** icon on the component, or the **Condition** button in the Dynamic Content Bar when the component is selected, to modify or delete the Condition.

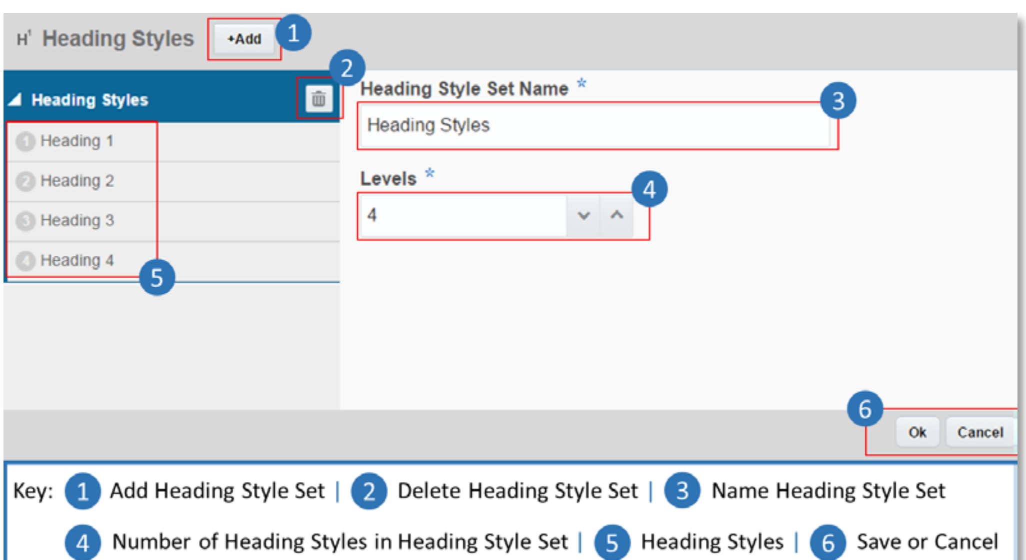
Important: Sub Document Attributes can be used in a Condition if the Condition is on an Element that is within a Loop.

HEADING STYLES

Heading Styles and Heading Style Sets are used to format Heading Elements and determine which Heading Elements will appear in the Table of Contents. To access the **Heading Styles** editor window, where Heading Styles and Heading Style Sets can be created, deleted, and modified:

1. Open the **Document Properties** pane (by clicking a blank space in the Admin Action Bar or the Template Flow so that no Layout or Element is selected).
2. Click the **Heading Styles** button ( ) in the Dynamic Content Bar.

HEADING STYLES EDITOR WINDOW



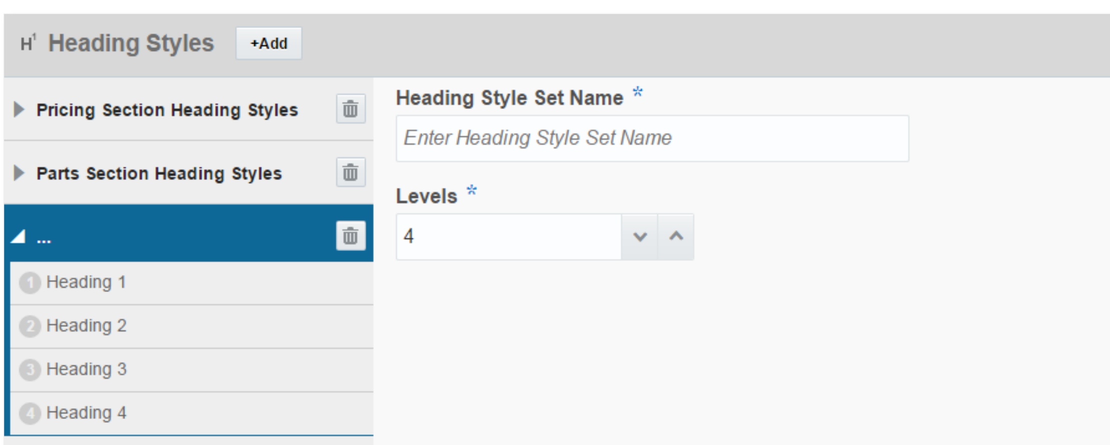
1. Click **+Add** to add a new Heading Style Set.
2. Click the **Delete** icon to delete the Heading Style Set.
3. Enter a name for the Heading Style Set in the **Heading Style Set Name** field.
4. Use the **Levels** field to add or remove Heading Styles from the selected Heading Style Set. The value of the **Levels** field determines how many Heading Styles exist for the selected Heading Style Set.
5. Click a **Heading Style** to edit its name, font, font size, font color, formatting, alignment number style, number placement, and whether or not the Heading Elements associated with the Heading Style will be included in the Table of Contents.
6. Click **Ok** to save changes to the Heading Style Sets and Heading Styles. Click **Cancel** to close the window and lose all changes.

HEADING STYLE SETS

Heading Styles are organized within Heading Style Sets. At least one Heading Style Set must be present within the template. A Table of Contents Layout will only reference Heading Elements whose Heading Styles are within the Heading Style Set that is linked to the Table of Contents (set within the **Table of Contents** properties pane). This allows for Table of Contents Layouts in different parts of the template to only reference the Heading Elements within that part of the template, and not all Heading Elements in the template.

To create a Heading Style Set:

1. Click a blank space in the Template Flow so that no Layout or Element is selected.
2. Click the **Heading Styles** button ( ) in the Dynamic Content Bar.
3. Click the **+Add** button.
   A new Heading Style Set appears in the left panel.



4. Enter a name for the **Heading Style Set Name**.
5. Set a number for **Levels**. This determines how many Heading Styles are in the Heading Style Set. By default, Heading Style Sets contain four Heading Styles. Heading Style Sets can contain a maximum of ten Heading Styles.

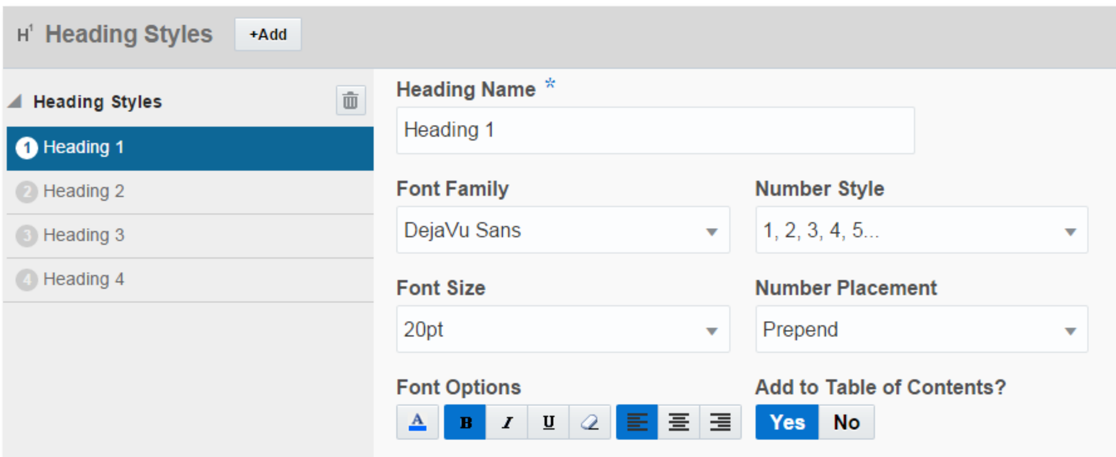
6. Click **Ok** to save all Heading Styles changes, and therefore the new Heading Style Set.

HEADING STYLES

Each Heading Style can be formatted individually and contains options relating to numbering and placement in the Table of Contents.

To open a Heading Style for modification:

1. Click a blank space in the Template Flow so that no Layout or Element is selected.
2. Click the **Heading Styles** button ( ) in the Dynamic Content Bar.
3. Click **Expand** icon ( ) for the Heading Style Set that the Heading Style is within.
4. Click the Heading Style's name in the left panel to open the **Heading Styles** dialog box.



Property	Description
Heading Name	The name of the Heading Style.
Font Family	The font that all Heading Elements that reference this Heading Style will have in the output.
Font Size	The font size that all Heading Elements that reference this Heading Style will have in the output.
Font Options	The additional formatting options that all Heading Elements that reference this Heading Style will have in the output.
Number Style	The numbering style that all Heading Elements that reference this Heading Style will have in the output if **Number Placement** is not set to **None**.
Number	Where numbers will be placed in regards to all Heading Elements that reference

Property	Description
Placement	this Heading Style. **Prepend** will place numbering before all Heading Elements. **Append** will place numbering after all Heading Styles. If **None** is selected, Heading Styles will not be numbered.
Add to Table of Contents	Determines whether or not Heading Elements that reference this Heading Style will appear in the Table of Contents.

BACKGROUND IMAGES

Background Images can be applied to the template as a whole or to individual Sections. The Background Images of Sections take precedence over a Background image applied to the Document Designer template as a whole. A template's Background Image is only shown in Sections that do not have a Background Image applied, and in Table of Contents Layouts.

Background Images can be File Manager images, or external images that can be referenced with a URL.

Important: Regardless whether it was defined for the template or for an individual section, a Background Image will not appear on the pages of the output produced by an external PDF being added to the template through an Embed Document Element.

To add a Background Image to the entire Document Designer template:

1. Open the **Document Properties** pane (by clicking a blank space in the Admin Action Bar or the Template Flow so that no Layout or Element is selected).
2. To add a Background Image from a URL, paste the URL into the **Background Image** field in the **Document Properties** pane.
3. To add a Background Image from the File Manager:

    a. Click the **Background Image** button () next to the **Background Image** field in the **Document Properties** pane.
    b. The **Browse File Manager** window appears.
    c. Select a File Manager folder from the **Select Folder** drop-down.
    d. Select the desired image from the list.
    e. Click **Ok**.

To add a Background Image to a Section:

1. Click the Section that the Background Image should be applied to in the Template Flow.
2. To add a Background Image from a URL, paste the URL into the **Background Image** field in the **Document Properties** pane.
3. To add a Background Image from the File Manager:

a. Click the **Background Image** button ( ) next to the **Background Image** field in the **Document Properties** pane.
b. The **Browse File Manager** window appears.
c. Select a File Manager folder from the **Select Folder** drop-down.
d. Select the desired image from the list.
e. Click **Ok**.

CUSTOM XSL IN THE DOCUMENT DESIGNER

The Document Designer gives admins the option of defining their own custom XSL in order to implement advanced use cases. Using XSL Snippets allows admins access to all data that is stored in a Transaction's Document XML for use in the Document Designer.

There are two types of XSL Snippets in the Document Designer that admins can add custom XSL code to:

- Global XSL Snippet
- Inline XSL Snippets

Warning: Although it is possible to edit and create XSL, it is not recommended unless you have significant experience in using XSL. There is no guarantee that any XSL code will be compatible with future versions of CPQ Cloud.

GLOBAL XSL SNIPPET

The Global XSL Snippet can be used to create XSL variables that can be referenced in inline XSL Snippets throughout the Document Designer template.

To add XSL to the Global XSL Snippet:

1. Open the **Document Properties** pane (by clicking a blank space in the Admin Action Bar or the Template Flow so that no Layout or Element is selected).
2. In the Dynamic Tool Bar below the **Document Properties** pane, click the **Global XSL** button (</>). The **Global XSL Snippet** editor window appears.
3. Enter XSL code as needed.
4. Optionally click the **Validate** button to check to see if the syntax of the XSL you entered is valid.

    - If the syntax is valid, a success message will appear. Click **Ok** to close the message.
    - If the syntax is invalid, an error message will appear. Click **Ok** to close the message, and correct the syntax as needed. You will not be able to save the Global XSL Snippet until the syntax is valid.

5. Click **Ok** to save the Global XSL Snippet.

INLINE XSL SNIPPETS

Inline XSL Snippets can be used to affect the output of the document by referencing XSL variables. XSL variables can be both declared and referenced within an XSL Snippet, or the inline XSL Snippet can reference XSL variables that are already present in the Global XSL Snippet. Inline XSL Snippets can be added to a Section, a Table cell, or a Header and Footer.

To add an XSL Snippet to the template:

1. Click **Elements** in the **Properties** panel to expand the available elements.
2. Click and drag XSL Snippet into a Section, a Table cell, or a Header and Footer in the Template Flow. The **Script** editor window appears.
3. Optionally enter a **Name** and **Description** for the XSL Snippet for reference.
4. Enter XSL code as needed.
5. Optionally click the **Validate** button to check to see if the syntax of the XSL you entered is valid.
    - If the syntax is valid, a success message will appear. Click **Ok** to close the message.
    - If the syntax is invalid, an error message will appear. Click **Ok** to close the message, and correct the syntax as needed. You will not be able to save the inline XSL Snippet until the syntax is valid.
6. Click **Ok** to save the inline XSL Snippet.

COPY AND PASTE

Within a template, Layouts and Elements can be copied and pasted to different places within the Template Flow. All properties between the copied and pasted Layout/Element will be identical until otherwise modified. When a Layout that contains Elements is copied and pasted, all Elements within the Layout will be duplicated and will appear in the duplicated Layout.

Multiple Layouts or multiple Elements can be copied and pasted at once.

To copy and paste one or more Layout(s) or one or more Element(s):

1. Select one or more Layout(s) or one or more Element(s) in the Template Flow.
2. To select more than one item, click on the first item and press the **Ctrl** key while clicking the other item.
3. Click the **Copy** button ( ) in the Dynamic Content Bar.
4. If an Element was copied, select a Section or a Header & Footer in the Template flow to paste the Element to. If a Layout was copied, select a blank place in the Template Flow so that no Layouts or Elements are selected.
5. Click the Paste button ( ) in the Dynamic Content Bar.

Important:

- Pasted Layouts or Elements will always be placed at the bottom of the Template Flow or the Section to which they are pasted. Once they are pasted, they can be moved within the Template Flow or Section.

- A Layout and an Element that is within a different Layout cannot be copied and pasted at the same time.

FONTS

The following fonts can be used in Text and Heading Elements:

- Times New Roman
- Helvetica
- MS Gothic
- Arial Unicode MS
- DejaVu Sans
- Verdana
- MingLiU
- PMingLiU
- OCRB LT

LANGUAGES AND TRANSLATIONS

The Document Designer supports additional language translations in two ways:

- Separate Document Designer templates, with one for each language
- One Document Designer template, with translations for each language within the template

In the example below, there are three separate Proposal templates—one for each translation. However, the Contract template is multilingual and contains translations for all necessary languages within the single template.

- ProposalTemplate + English
- ProposalTemplate + German
- ProposalTemplate + Japanese
- ContractTemplate + Multilingual (English is the default language)—This one template contains a hybrid of translations.

Whether multiple templates should be used for translations or if a single template should be used for translations must be decided on a customer-by-customer, template-by-template basis.

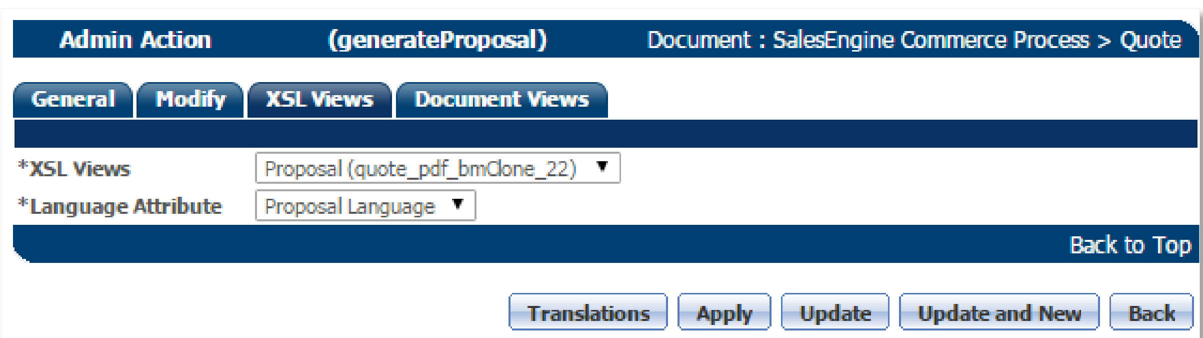
	Multiple Templates	One Template
Advantages	Each Translation template can be worked on simultaneously by multiple admins, and it is easier to make individual language templates different from each other if desired.	All layout, design, property, etc. changes only need to be done once.

	Multiple Templates	One Template
Considerations	All layout, design, property, etc. changes must be done for each template file.	Only one language can be translated at a time, and much more administration work is required if outputs for each language need to be different in other ways besides their translations.

LANGUAGE ATTRIBUTE

A new Commerce attribute type, Language, can be created at the Quote/Transaction-level and placed on the Commerce layout. When linked to a Print or Email action, the value of the Language attribute specifies what language the Document Designer template that is linked to the action should be outputted in upon printing.

A Language Attribute menu now exists on the **XSL Views** tab of Print and Email actions in order to associate a Language attribute with the action.



MULTIPLE TEMPLATES FOR TRANSLATIONS

When creating multiple templates to handle translations, all templates should be given the same name, but a different language should be chosen for each template upon creation. When all templates are given the same name, only one name must be associated with the Printer Friendly XSL View, so only one XSL View and one Print/Email action must be created and maintained to support multiple templates.

When the Print/Email action is invoked, the system will output the template whose name is associated with the Printer Friendly XSL View and whose language setting matches the value of the Language attribute that is associated with the Print/Email action.

Important:

- If Document Designer templates have the same name, they cannot have the same language setting.
- If multiple templates are being used for Translations, and if there is no template that matches the value of the Language attribute, and there is not a multi-lingual template defined, an error will be shown when the user attempts to output the template.

MULTI-LANGUAGE TEMPLATE FOR TRANSLATIONS

When creating a multi-language template to handle translations, **Multiple** should be selected for Language and a default language must be chosen.

When the Print/Email action is invoked, the output of the template will show all translated Elements whose translation language matches the value of the Language attribute that is associated with the Print/Email action.

For example, if the value of the Language attribute is German, all Text and Heading Elements that have German translations associated with them will appear in German in the output. If a Text or Heading Element does not have a translation associated with it, it will appear in the default language in the output unless it is hidden with a Condition that uses the value of the Language attribute to determine if the Element should be shown or hidden.

If no Language attribute is associated with the Print/Email action, if the Language attribute has no value, if the value of the Language attribute does not match a language that exists in the template, or if the template has no translations associated with its Text or Heading Elements, the template will output in its default language.

ADDING TRANSLATIONS

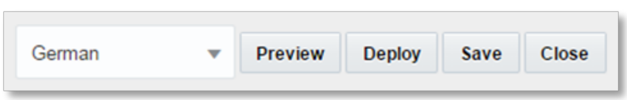
Text and Heading Elements within multi-language templates can have translations added to them so that the translated content appears in the output when the value of the Language attribute corresponds to the language of the translations.

ACCESSING THE ELEMENT TRANSLATION WINDOW

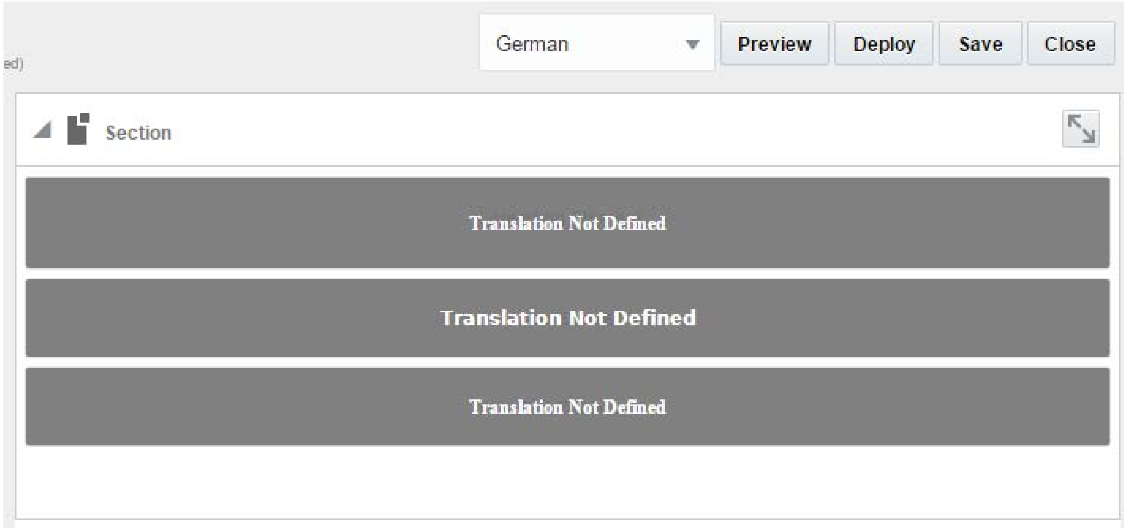
The Translation window for a Text or Heading Element can be accessed in two ways.

Changing to the Translation view of the Template Flow and then opening the Element:

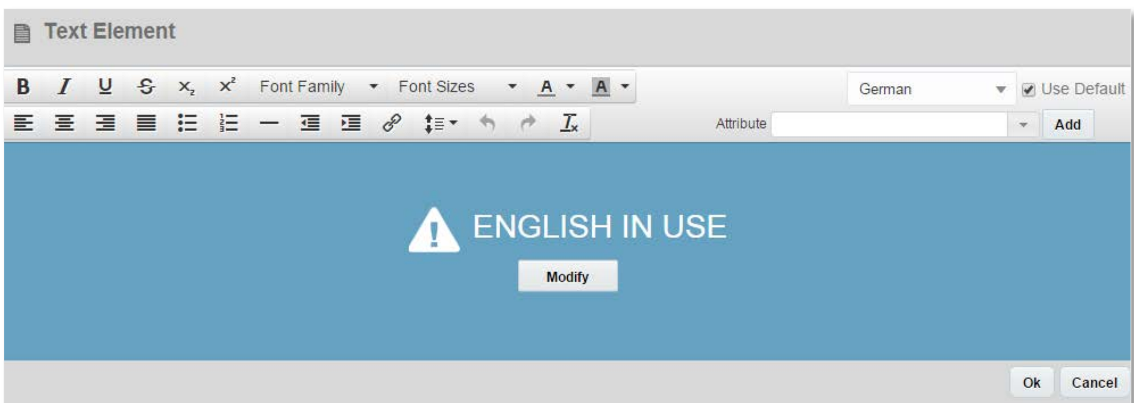
1. Select the language that translation content will be entered for in the **Language** drop-down in the Admin Action Bar.

   The **Translation** view of the Template Flow appears.



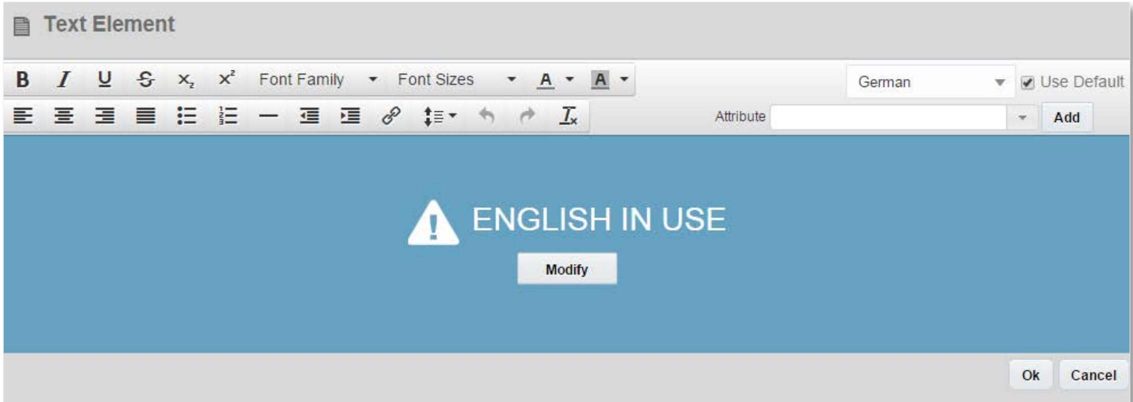
2. Double-click a Text or Heading Element to add translation content or to modify existing translation content.
   The **Text/Heading** dialog box appears.



3. Click **Modify**.
4. Enter translated content as needed.
5. Click **Ok** to save the translation.

Opening the Element and then changing to the Translation view within the editor window:

1. Double-click a Text or Heading Element to add translation content to or to modify existing translation content.
   The **Text/Heading** dialog box appears.
2. Select the language that translation content will be entered for in the **Language** drop-down.



3. Click **Modify**.
4. Enter translated content as needed.
5. Click **Ok** to save the translation.

TRANSLATIONS AND LANGUAGES NOTES

- When a single-language template and a multi-language template have the same name, and the value of the Language attribute, associated with the Print action, matches the language of the single-language template, the single-language template will be used.
- When a single-language template and a multi-language template have the same name, but the Print/Email action does not have a Language attribute associated with it, and when the language preference of the user matches that language of the single-language template, the single-language template will be used.
- Use Default: Within the dialog box of Text and Heading Elements there is a **Use Default** option. Selecting this checkbox and then saving the Element will clear any translation content from the dialog box. If the template is printed and the dialog box for the selected language has **Use Default** selected, the Element will appear in the output in the template's default language.
- When you are in the **Translation** view of the Template Flow, you cannot add, move, or delete Layouts and Elements. Similarly, you cannot change Layout and Element properties. Only Translations can be added or deleted within the **Translation** view, but no other modifications can be made to the template until the **Default Language** view is restored.

ERROR NOTIFICATIONS

The Document Designer will alert the admin of inconsistencies between attribute values referenced in a template and attributes on the site through errors. Attribute inconsistencies can be created when a template is migrated to a new site or when attributes are deleted from a site. Errors can exist within text, Conditions, Loops (when a Configuration Array Set is selected), and Loop Filters.

The Document Designer will check for errors when the admin attempts to deploy or save the template.

Important: If an admin attempts to deploy a template and errors are found, the template will not be deployed. Templates that have errors present can still be saved.

If errors are present upon an attempted deploy or save, an Errors window will appear.

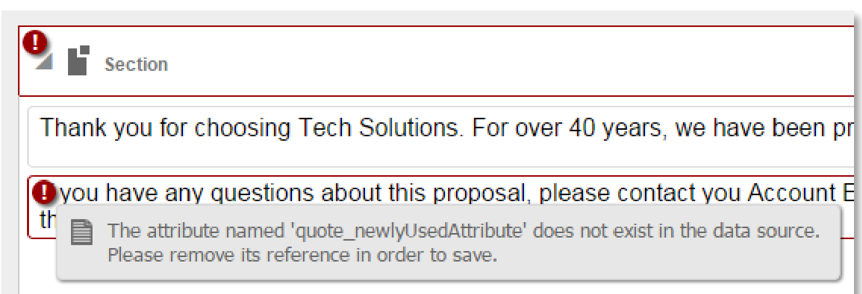
Errors Window

The Errors window describes why an error exists and allows the admin to navigate to the Element that contains the error. Clicking **Ok** will close the Errors window. Clicking **Resolve** for a specific error will close the Errors window and select the Element that contains the error in the Template Flow.

Important: Clicking the **Resolve** button will not make any changes within the system—the error must be resolved manually by the admin in the template or within the application.

ERROR ICONS

Sections, Header & Footers, Tables of Contents, Text Elements, Heading Elements, and Table Elements that contain an attribute inconsistency will have an error icon applied to them in the Template Flow. Hovering over the error icon will reveal the error description. Clicking the **error** icon will open the Errors window.

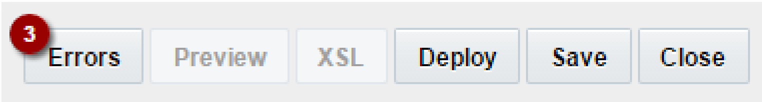


An error icon will be removed from the Template Flow if the error is resolved and the admin attempts to deploy the template. The template will check for errors upon each attempted deployment, so errors that have been resolved will be removed from the Errors window and the Template Flow, even if the deployment is not successful due to remaining errors in the template.

Note: Layouts and Elements that contain errors cannot be copied.

ERRORS BUTTON

When errors are present in a template, an Errors button will be present in the Admin Action Bar. Clicking **Errors** will open the Errors window.



Important: The **Preview** and **XSL** buttons cannot be invoked when a template contains errors.

ERRORS AND TRANSLATIONS

If a multi-language template contains errors, the **Language** drop-down in the Template Flow will be highlighted in red, and the **Language** drop-down in Text and Heading Elements that contain an error will be highlighted in red. Within the **Language** drop-down, translations that contain errors are highlighted in red.

DOCUSIGN ESIGNATURE INTEGRATION

The Document Designer supports CPQ Cloud's native integration with DocuSign through eSignature. DocuSign integration further streamlines sales processes by enabling CPQ Cloud sales users to send out Document Designer outputs for electronic signature and to receive the official, electronically-signed documents all from within a CPQ Cloud Transaction.

ADDING SIGNER TAGS TO A DOCUMENT DESIGNER TEMPLATE

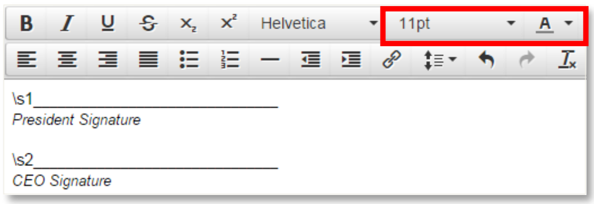
Signer tags must be added to Document Designer templates to tell DocuSign where electronic signatures must be placed within the output documents.

Signer tags can be placed within Text Elements, and must be created using the syntax `\s[#]` where `[#]` is the number of the signer, which is determined by the order of the recipients of the document. For example:

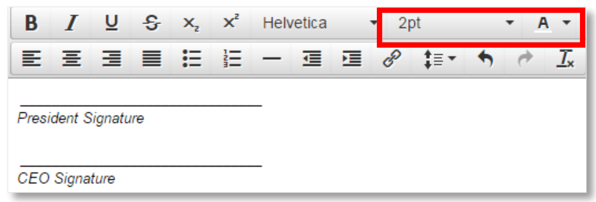
- `\s1` denotes where the first signer (recipient) must sign.

- `\s2` denotes where the second signer (recipient) must sign.
- `\s3` denotes where the third signer (recipient) must sign.
- And so on...

Signer tags will be visible to readers in the output document. Signer tags can be minimized, however, by setting the tag's font size to **2 pt** and its text color to **No color** or to the background color.



eSignature signer tags before being hidden



Hidden eSignature signer tags

For more information on DocuSign, see the "DocuSign eSignature Integration" topic in Online Help.

TRANSITIONING FROM THE DOCUMENT ENGINE

It is not possible to migrate document templates created in the Document Engine to the new Document Designer. When existing customers transition to the Document Designer, existing document templates must be manually recreated.

Note: You can continue to edit Document Engine templates. Additionally, you can use both Document Engine and Document Designer templates in the same Commerce Process.

WHEN TO TRANSITION

You should consider transitioning to the Document Designer when:

- You are creating new templates
- You need enhanced multi-language functionality
- A Document Engine template requires a significant change
- You have custom XSL to handle array set loops or PDF merging

By switching to the Document Designer, admins will enjoy reduced template maintenance, and will not have to use HTML debugging tools.

STEPS TO ENABLE

The Document Designer is automatically enabled on all 2015 R1 sites.

Note: The Document Engine will continue to be supported for existing customers. New customers starting on 2015 R1 or later will only have access to the Document Designer. Enhancement requests and bugs in the Document Engine will not be prioritized.

TIPS AND CONSIDERATIONS

- Existing Document Engine templates can only be edited in the Document Engine editor. To use the Document Designer, you must create new templates. Document Engine templates cannot be opened or used in the Document Designer.
- The Document Designer processes information based on the deployed version of the Commerce Process or Configuration. As such, if an attribute is created and then used in a Condition or Loop Filter, be sure to deploy Commerce after creating attributes that will be used in Conditions or Loop Filters. Otherwise, the Condition/Loop Filter will not function correctly when the template is previewed or printed, even if the template was deployed: the Conditions will always evaluate to false, and the Loops will not print any data.
- The Document Designer processes information based on the deployed version of the Commerce Process or Configuration. As such, if an attribute is created and then used in a Text or Heading Element, be sure to deploy Commerce after creating attributes that will be used in Text or Heading Elements. Otherwise, the attribute value placeholder will be empty when the template is previewed or printed, even if the template was deployed.
- When previewing a template as a DOC or RTF output, the values of the Page Number and Total Pages Number template attributes may show as zero. Nevertheless, the attributes will still show the correct values on the final printed output. To see the correct value for page number, open the DOC or RTF document in edit mode and refresh the document.
- Text within a Text Element that is formatted with numbers or bullets can only be left-aligned. If an admin attempts to make text that is formatted with numbers or bullets center- or right-aligned, the text will remain left-aligned in the text editor as well as on the final printed output.
- Heading Style Set and Heading Style names, even if they are never changed by the admin, are considered user-generated content and will not be translated. Default Heading Style Set and Heading Style names will be generated based on the language preference of the site's Superuser when the Heading Style Set or Heading Style is created.
- Options available in the **Languages** drop-down menu are populated from the list of supported languages on the **Host Company Admin** page; this list is in turn taken from the list of the site's supported languages, set by CPQ Cloud Ops. If a language is added or removed from the site's supported languages, admins must update the **Host Company Admin** page for the **Language** drop-down menu to reflect the change. To add or remove a language from a site's internal list of supported languages, open a ticket on My Oracle Support.
- If support for a language is removed from the **Host Company Admin** page, Document Designer templates using that language as their default language will lose any content in that language and may behave unexpectedly. Additionally, removing support for the default language of a multi-language template may cause errors when the template is printed on the user side. Before removing support for a language, it is recommended to remove translations and templates that use the language.
- Background images are not supported for DOCX or RTF outputs.

- When a template’s width is set to 23 inches or greater, the template’s output cannot be viewed in DOCX format. Upon attempting to open the output, Microsoft Word will open, but no document will be loaded.
- When printing a PDF document on paper from the Document Designer preview within Firefox, admins may see font substitution. To see the correct fonts, download the PDF and print it using Adobe Reader.

Note: Microsoft and Microsoft Word are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.

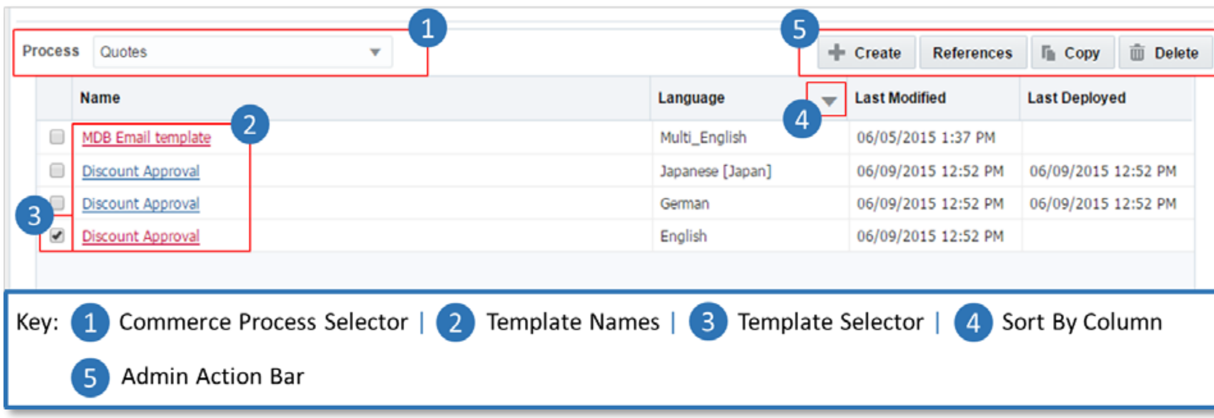
EMAIL TEMPLATES ENHANCEMENTS

The look and feel of the **Email Templates** page and the Email Templates Editor has been upgraded to mirror the administration experience of the Document Designer. In accordance with robust nature of the Document Designer, additional functionality has been added to the Email Template editor and additional Element properties can by modified by admins.

The cohesiveness between the Email Template editor and the Document Designer editor allows for admins to master both tools simultaneously.

EMAIL TEMPLATES PAGE

The **Email Templates** page has been modified to mirror the Document Templates page and to enable simpler administration of Email Templates at the list level.



1. Only Email Templates within the Commerce Process that is selected in the **Commerce Process Selector** drop-down will appear in the list.

2. Click the name of an Email Template to open that template in the Email Template editor. Names of deployed templates appear blue, while names of undeployed (either never deployed or modified since the last deployment) templates appear red.

3. Select the Template Selector checkbox for a template to be able to copy the template, delete the template, or check its references.

4. Hovering over a column name will reveal a “sort by” icon. Click the icon to sort the templates by the column data. Click the icon again to change the direction of the sort.

5. The Admin Action Bar contains four buttons:
    1. **Create**: Click to create a new template.
    2. **References**: Select a template’s checkbox to activate the **References** button (the button will be disabled if no template is selected). Click to view the template’s associated Approvers and Steps. The **References** button will be disabled if multiple templates are selected. See the Using References section for more information.
    3. **Copy**: Select a template’s checkbox to activate the Copy button (the button will be disabled if no template is selected). Click to create a duplicate of the last-saved version of the selected template (undeployed changes will still be copied). The admin will have the

option of changing the template's name or language (at least one of these options must be changed, since templates cannot have the same name and language setting). The Copy button will be disabled if multiple templates are selected.

4. **Delete**: Select one or more templates' checkbox(es) to activate the Delete button (the button will be disabled if no template is selected). Click to delete the selected template(s).

USING REFERENCES

The **References** window for Email Templates has two buttons:

- Approvers

  Click **Approvers** to show the following columns: Location, Action, Reason, and Approver. Click the entry in the **Approver** column to move to the **Approval Sequence** page for that Email Template. For more information on approvals, see the "Approval Sequences Overview" topic in Online Help.

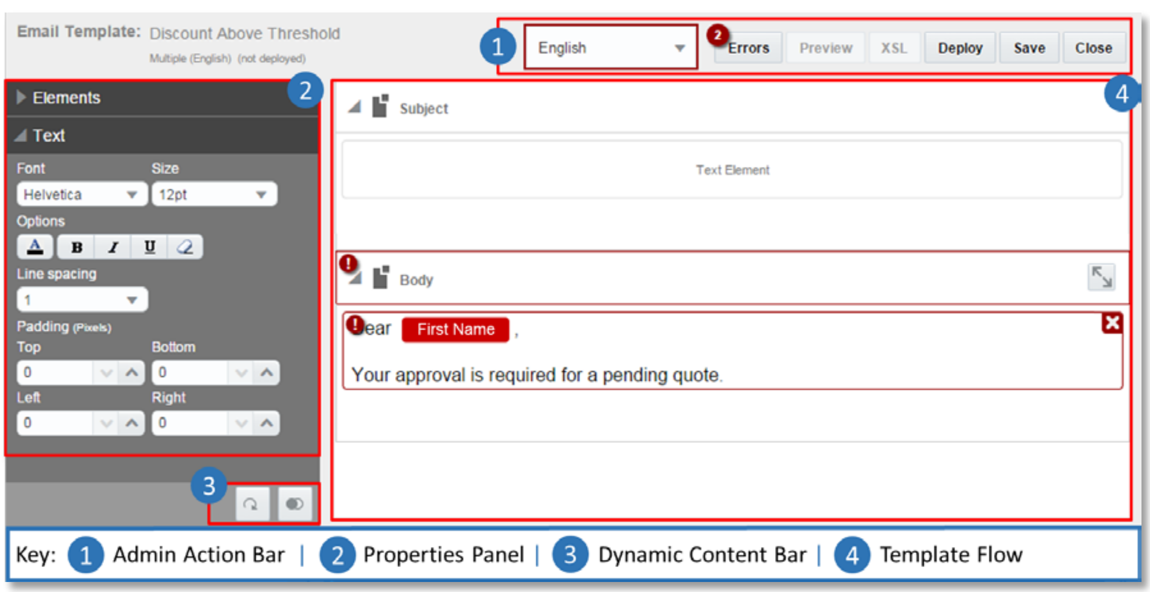
- Steps

  Click **Steps** to show the following columns: Location, Step, Participant Profile, Action, and Transition Rule. Click the entry in the **Transition Rule** column to go to the **Notification Rule** page for that Step. For more information on Transition Rule Notifications, see the "Notifications" topic in Online Help.

Click **OK** to exit the **References** window and return to the **Email Templates** page.

EMAIL TEMPLATE EDITOR

The Email Template editor features a new look and feel.



ADMIN ACTION BAR

The Admin Action Bar will always contain (at minimum) the following four buttons:

- Preview
- Deploy
- Save
- Close (previously named "Back")

If the template is a multi-language template, a **Language** drop-down will be present in the Admin Action Bar.

If there are inconsistencies between attribute values referenced in a template and attributes on the site, an **Errors** button will be present in the Admin Action Bar.

If the site's Superuser is modifying a template, an **XSL** button will be present in the Admin Action Bar. No other users that access the Email Template editor, including FullAccess users with "Superuser privileges," will see the **XSL** button.

LANGUAGE

The **Language** drop-down determines the Language View of the Template Flow. If the default language is selected, all administration tasks can be done, and content can be added in the default language. If another language is selected, Text Elements can have translations added to them, but no other administration tasks can be done.

See the Languages and Translations section for more information.

ERRORS

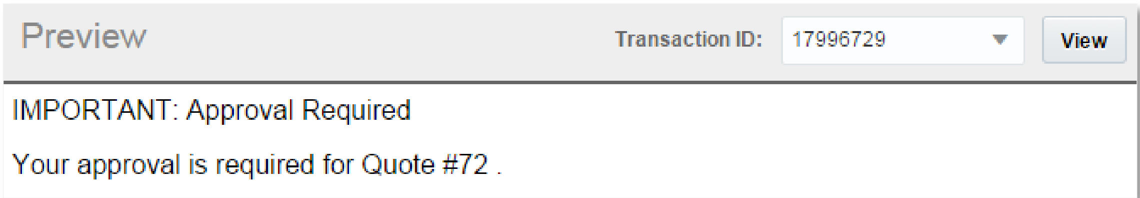
An icon over the **Errors** button will display how many attribute errors exist in the template. Clicking the Errors button opens the Errors window, which includes a description of each error and allows the admin to navigate to each error in the Template Flow.

When errors exist in the template, the Preview and XSL buttons cannot be invoked. See the Error section for more information.

PREVIEW

Clicking the **Preview** button opens the **Preview** page in a new tab in the browser, where the last-saved version of the template will be previewed in HTML using data from the Transaction that was most recently opened by any user on the site. On the **Preview** page the admin can choose to preview the template using data from a different Transaction. To preview the output of a template:

1. Click **Save** to save all changes to the template. Only saved changes will appear in the preview.
2. Click **Preview** on the Admin Action Bar.
   The **Preview** page opens. The template will automatically be previewed in HTML using data from the Transaction that was most recently opened by any user on the site. The Subject of the email is the first line of the preview. All subsequent lines hold the email's body.

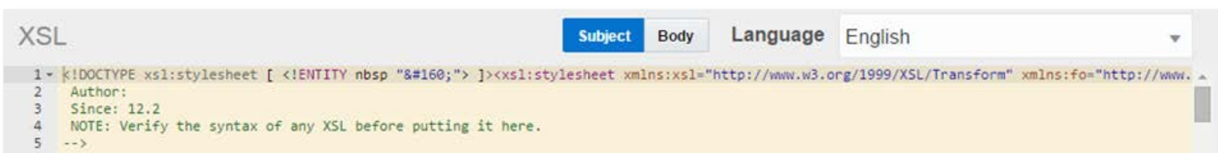


3. To preview using data from a different Transaction:

    a. Select a Transaction ID from the **Transaction ID** drop-down, or enter a Transaction ID into the field. The ten Transactions that were most recently opened (by any users on the site) can be selected in the drop-down.
    b. Click **View**.

XSL

The **XSL** button reveals the XSL code that makes up the template in a new window. This button is only available to the site's Superuser. The Superuser can only view the template's XSL, not modify the code.



Two buttons in the Admin Action Bar, **Subject** and **Body**, control what XSL is shown. When the XSL page is first opened, the XSL for the Subject of the email is shown. The admin can click the **Body** button to view the XSL for the body of the email. When the **Body** button is selected, clicking the **Subject** button will reveal the XSL for the Subject of the email, and vice versa.

If the template is a multi-language template, a **Language** drop-down will also be present in the Admin Action Bar. The admin can use the **Language** drop-down to view the XSL for each translated template. A language will only appear in the drop-down if at least one Text Element in the template has that a translation defined for the language.

DEPLOY

An Email Template can now be deployed from within the Email Template editor. The **Deploy** button deploys all saved changes in the template to Commerce so that they take effect the next time an email is sent on the user-side of the application.

SAVE

The **Save** button saves all changes made to the template. This allows for unwanted changes to be undone, as an admin can close the template without saving in order to lose any unwanted changes that were made since the last save.

Important: Changes to an Email Template are no longer saved automatically by the system.

CLOSE

The Back button is now named **Close**. The **Close** button closes the Email Template editor and returns the user to the **Email Templates** page. When the user clicks **Close**, a confirmation pop-up appears to warn that unsaved changes will be lost.

DYNAMIC CONTENT BAR

The appearance of the **Loop** and **Condition** buttons has changed.

Name	Button
Loop	
Condition	

TEXT ELEMENT ENHANCEMENTS

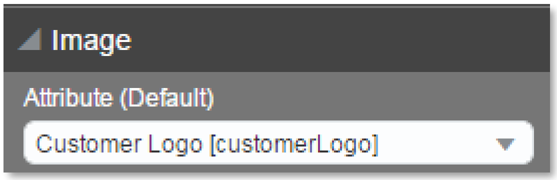
Text Elements now have Line Spacing and Padding properties that can be modified in the Properties Pane when the Text Element is selected in the Template Flow.

Property	Description
Line Spacing	The line spacing between all lines in the Text Element. If multiple line spacing settings are used within the Text Element, an "*" will appear in the **Line spacing** drop-down. Selecting a **Line spacing** setting will overwrite all line spacing modifications that were made within the Text Element editor window.
Padding	The space between the Text Element and other Elements (when defined for **Top and Bottom**) and between the Text Element and the margins of the page (when defined for **Left or Right**). If the Text is inside a Table cell, margins will determine the distance between the Element and the borders of the cell.

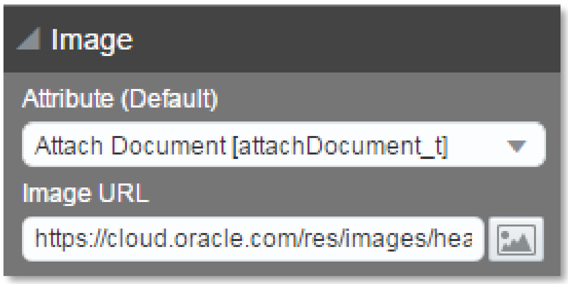
Additionally, Loops can now be added to Text Elements.

IMAGE ELEMENT ENHANCEMENTS

Image Elements can now reference images stored in Commerce File Attachment attributes. A File Attachment attribute can be associated with the Image Element through the Attribute (Default) drop-down in the Properties Pane when the Image Element is selected in the Template Flow.



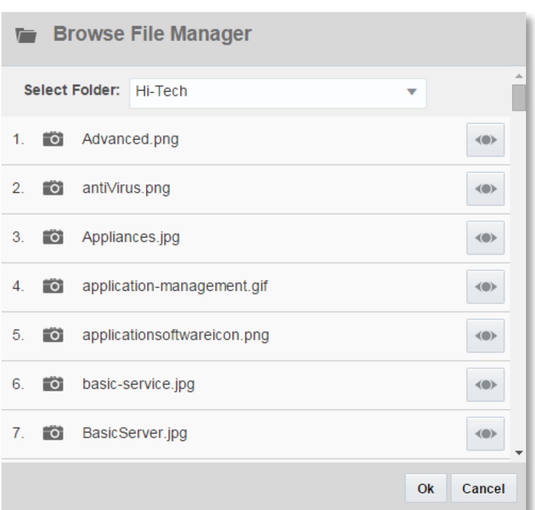
If a valid image file is present in the File Attachment attribute at the time of email creation, the output email will always show the image from the File Attachment attribute. If an image file is not present in the File Attachment attribute, the email will show an image from the File Manager or an external image, if either image is referenced in the **Image URL** field in the **Properties** pane.



The **Image URL** field is equivalent to the **Source** field in previous versions. An external image can be referenced by pasting its URL into the **Image URL** field. A File Manager image can be can be referenced by pasting its full URL into the **Image URL** field, or by selecting the image in the **Browse File Manager** window.

BROWSE FILE MANAGER WINDOW

An image can now be referenced from the File Manager without the admin having to retrieve its full URL. Instead, the admin can select the image via the **Browse File Manager** button ( ) next to the **Image URL** field in the **Properties** pane. Clicking **Browse File Manager** reveals the **Browse File Manager** window.



The admin can select a File Manager folder using the **Select Folder** drop-down to locate the correct image. Images can be viewed in a new window using the **Preview** ( ) button. Selecting a File Manager image in the list and clicking **Ok** will add a File Manager image to the Image Element.

Now, when an Image Element is added to the Template Flow, the **Browse File Manager** window automatically opens. The admin can click **Cancel** if he or she does not wish to associate a File Manager image with the Image Element, and the Image Element will be created empty, and a File Attachment attribute and/or an external image can be associated with the Image Element via the **Properties** pane.

NEW IMAGE ELEMENT PROPERTIES

Image Elements now have additional properties that can be modified in the Properties Pane when the Image Element is selected in the Template Flow.

Property	Description
Attribute (Default)	The File Attachment attribute where the image that will be displayed in the output is stored.
Image URL (formerly named "Source")	The URL of the external image or the File Manager image that will be displayed in the output. If a File Manager image is selected, the "URL" will display with the syntax `FILEMANAGER#[folder]/[image.extension]` where `[folder]` is the name of the File Manager Folder and `[image.extension]` is the name of the image and its file extension. If the image is in the Default folder, the `[folder]` tag will not appear in the "URL." The **Browse File Manager** button () appears to the right of the **Image URL** field, and can be used to open the **Browse File Manager** window to select an image from the File Manager.
Alignment Options	Where the image is aligned on the page. For example, **left-aligned**, **centered**, or **right-aligned**.
Margins	The space between the Image Element and other Elements (when defined for **Top and Bottom**) and between the Image Element and the margins of the page (when defined for **Left or Right**). If the Image is inside a Table cell, margins will determine the distance between the Element and the borders of the cell.

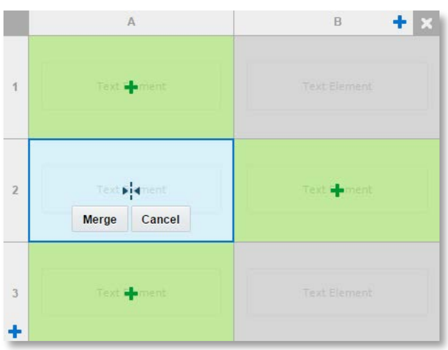
TABLE ELEMENT ENHANCEMENTS

Table Elements, Table rows, Table columns, and Table cells now have a Padding property that can be modified in the **Properties** pane when the Table Element/Table component is selected in the Template Flow.

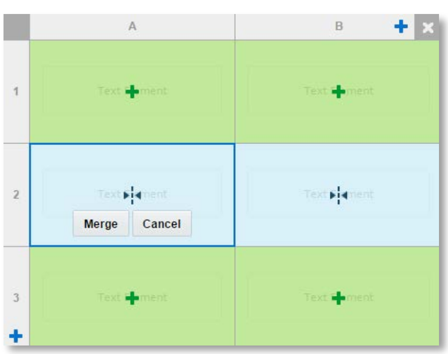
Property	Description
Padding (Table)	The space between the borders of the cells within the Table and the Elements within the cells.
Padding (row)	The space between the borders of the cells within the row and the Elements within the cells.
Padding (column)	The space between the borders of the cells within the column and the Elements within the cells.
Padding (cell)	The space between the borders of the cell and the Elements within the cell.

SPLITTING AND MERGING CELLS

Table cells can now be merged. Once table cells have been merged, they can be split. When a cell is selected in the Template Flow, the **Merge Cell** button ( ) will appear in the Dynamic Content Bar. Clicking **Merge Cell** brings up the Merge Cell overlay.



The admin can click the cell(s) to merge with the selected cell. Cells that will be merged will be light-blue and have a merge cell icon on them.



Clicking **Merge** will merge the cells.

Important:

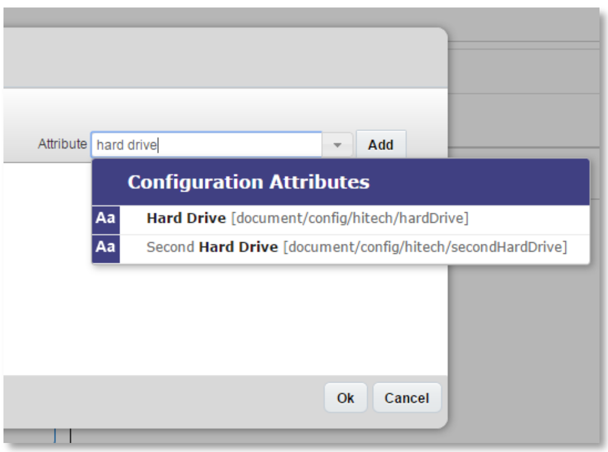
- When merging cells, only the upper-leftmost cell's content will be retained in the merged cell. All Elements in the other cells that are merged will be deleted.
- A row that contains a merged cell cannot have a Loop or a Condition applied to it.
- A column that contains a merged cell cannot have a Condition applied to it.
- Merged cells must form a rectangle. For example, two cells in row one cannot merge with one cell in row two.

SPLITTING MERGED CELLS

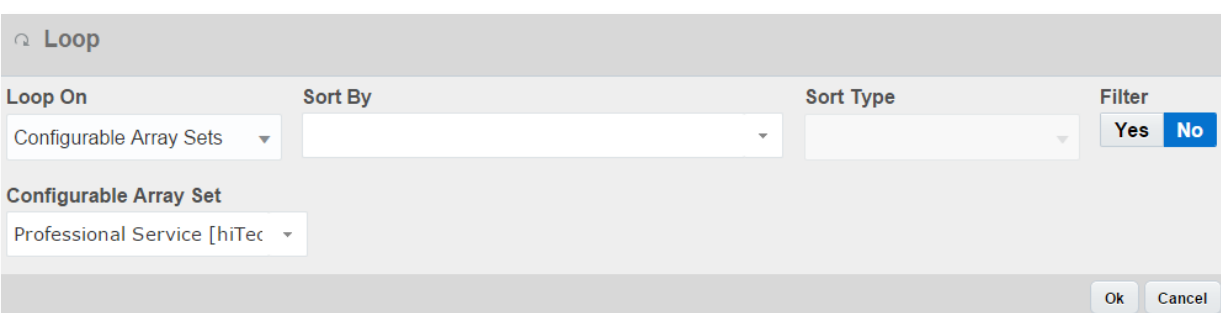
When a cell that has been merged is selected in the Template Flow, the **Split Cell** button ( ) will appear in the Dynamic Content Bar. Clicking **Split Cell** splits the selected cells that were previously merged.

LOOP ENHANCEMENTS

Configuration attribute values can now be added to Text Elements that have a Loop over All Line Items or Model Line Items, or are within a Table row that has a Loop over All Line Items or Model Line Items.



Additionally, nested Loops can loop over a Configuration Array Set. The "outer" Loop must be on a Table row and must loop over All Line Items or Model Line Items, and the nested Loop must be on a Text Element. Within the nested Loop, selecting **Configurable Array Sets** for Loop On reveals the Configurable Array Set drop-down, where the admin can choose which array will be looped over.



Note: If a Loop meets the criteria to be able to have Configuration attribute values within the Loop, Configuration attributes can also be used in the Loop's Filter.

COPY AND PASTE

Elements in the Body of a template can now be copied and pasted. All properties between the copied and pasted Elements will be identical until otherwise modified. Multiple Layouts or multiple Elements can be copied and pasted at once.

When an Element is selected, clicking the **Copy** button ( ) in the Dynamic Content Bar will copy the Element. When an Element has been copied, and no Element is selected in the Template Flow, a **Paste** button will appear in the Dynamic Content Bar. Clicking the **Paste** button ( ) will paste the Element to the bottom of the Body.

Important:

- The Subject Text Element cannot be copied.
- Nothing can be pasted to the Subject.
- Pasted Elements will always be placed at the bottom of the Body.

DATE AND CURRENCY FORMAT TEMPLATE PROPERTIES

There are two new Template Properties:

- Date Format
- Currency Format

Admins can use the Date Format and Currency Format properties to set the format of all Date attribute values and Currency attribute values in the output, respectively.

EXPAND BODY

A new **Full View** button ( ) on the Body in the Template Flow allows admins to view only the Email Template's body in the Template Flow. When the Body is expanded, clicking **Inline View** reveals the Subject in the Template Flow.

FONTS

The following fonts can be used in Text Elements:

- Times New Roman
- Helvetica
- MS Gothic
- Arial Unicode MS
- DejaVu Sans
- Verdana

- MingLiU
- PMingLiU
- OCRB LT

LANGUAGES AND TRANSLATIONS

Single-language Email Templates can now be created. This allows for translations to be handled in one of two ways:

- Separate Email Templates, with one for each language
- One Email Template, with translations for each language within the template

In the example below, there are three separate Discount Approval templates—one for each translation. However, the Overnight Delivery template is multilingual and contains translations for all necessary languages within the single template.

- DiscountApprovalTemplate + English
- DiscountApprovalTemplate + German
- DiscountApprovalTemplate + Japanese
- OvernightDeliveryTemplate + Multilingual (English is the default language)—This one template contains a hybrid of translations.

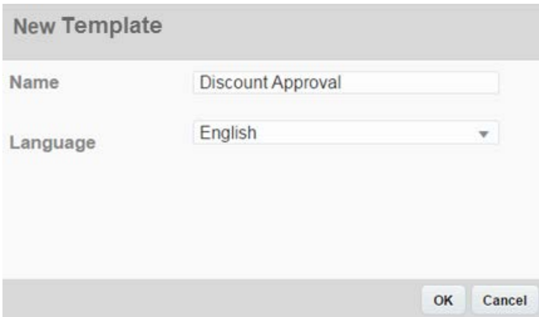
Whether multiple templates should be used for translations or if a single template should be used for translations must be decided on a customer-by-customer, template-by-template basis.

	Multiple Templates	**One Template**
Advantages	Each Translation template can be worked on simultaneously by multiple admins, and it is easier to make individual language templates different from each other if desired.	All layout, design, property, etc. changes only need to be done once.
Considerations	All layout, design, property, etc. changes must be done for each template file.	Only one language can be translated at a time, and much more administration work is required if outputs for each language need to be different in other ways besides their translations.

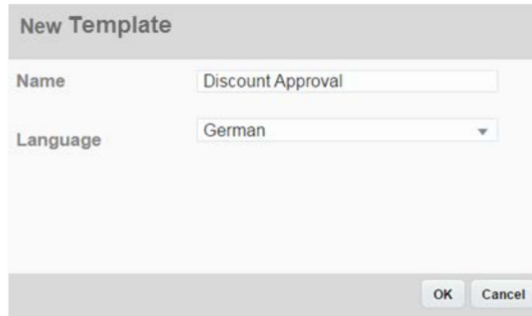
CREATING MULTIPLE TEMPLATES FOR TRANSLATIONS

When creating multiple templates to handle translations, all templates should be given the same name, but a different language should be chosen for each template.

When all templates are given the same name, and that name is associated with an Approval Reason or Transition Rule Notification, the system will choose which template to use when creating the email based on the user who is getting the email's language preference, as expected.



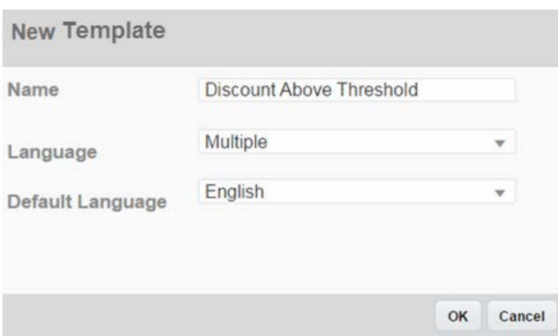
This template will be used if the template associated with the Approval Reason or Transition Rule Notification is Discount Approval, and if the language preference of the user getting the email is English.



This template will be used if the template associated with the Approval Reason or Transition Rule Notification is Discount Approval, and if the language preference of the user getting the email is German.

CREATING A MULTI-LANGUAGE TEMPLATE

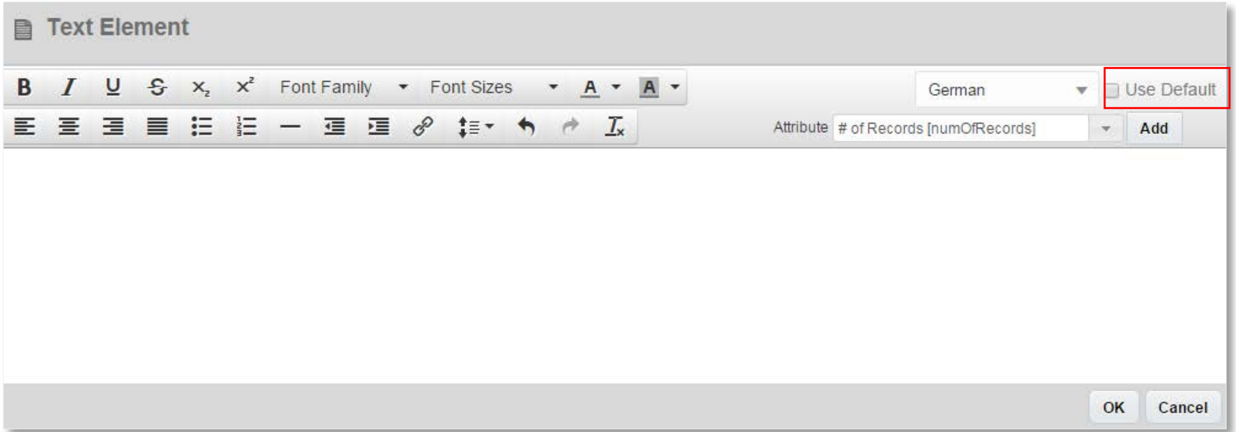
To create a multi-language Email Template, Multiple should be selected for Language when the template is created. Multi-language templates handle translations in the same way that legacy Email Templates did.



This template will be used if the template associated with the Approval Reason or Transition Rule Notification is Discount Above Threshold, and if there is no single-language template named Discount Above Threshold whose default language setting matches the language preference of the user getting the email.

USE DEFAULT

Within a Text Element's translation, the *Use {Base Language}* option, where *{Base Language}* is the base language of the site (for example, *Use English*), is now called *Use Default*.



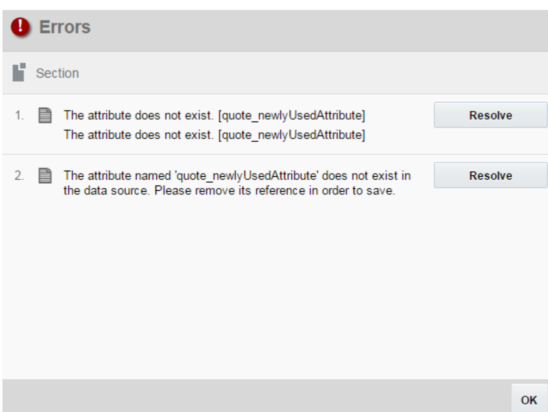
ERROR NOTIFICATIONS

Email Templates will alert the admin of inconsistencies between attribute values referenced in a template and attributes on the site through errors. Attribute inconsistencies can be created when a template is migrated to a new site or when attributes are deleted from a site. Errors can exist within text, Conditions, Loops (when a Configuration Array Set is selected), and Loop Filters.

Email Templates will check for errors when the admin attempts to deploy or save the template.

Important: If an admin attempts to deploy a template and errors are found, the template will not be deployed. Templates that have errors present can still be saved.

If errors are present upon an attempted deploy or save, an Errors window will appear.



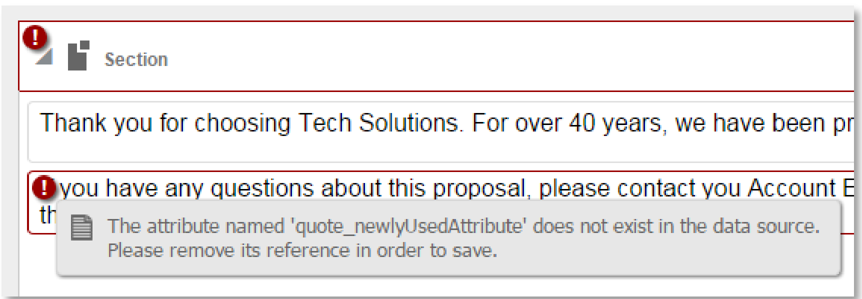
ERRORS WINDOW

The Errors window describes why an error exists and allows the admin to navigate to the Element that contains the error. Clicking **Ok** will close the Errors window. Clicking **Resolve** for a specific error will close the Errors window and select the Element that contains the error in the Template Flow.

Important: Clicking the Resolve button will not make any changes within the system—the error must be resolved manually by the admin in the template or within the application.

ERROR ICONS

Text Elements and Table Elements that contain an attribute inconsistency will have an error icon applied to them in the Template Flow. Hovering over the error icon will reveal the error description. Clicking the **error** icon will open the Errors window.

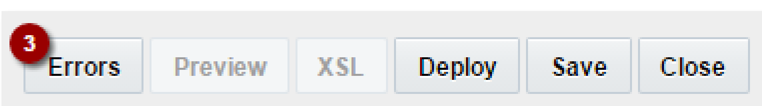


An error icon will be removed from the Template Flow if the error is resolved and admin attempts to deploy the template. The template will check for errors upon each attempted deployment, so errors that have been resolved will be removed from the Errors window and the Template Flow, even if the deployment is not successful due to remaining errors in the template.

Note: Elements that contain errors cannot be copied.

ERRORS BUTTON

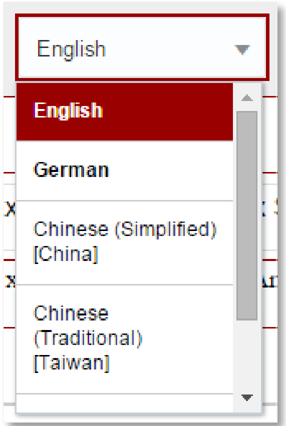
When errors are present in a template, an Errors button will be present in the Admin Action Bar. Clicking **Errors** will open the **Errors** window.



Important: The **Preview** and **XSL** buttons cannot be invoked when a template contains errors.

ERRORS AND TRANSLATIONS

If a multi-language template contains errors, the **Language** drop-down in the Template Flow will be highlighted in red, and the **Language** drop-down in Text Elements that contain an error will be highlighted in red. Within the **Language** drop-down, translations that contain errors are highlighted in red.



STEPS TO ENABLE

All Email Templates enhancements are automatically available on all 2015 R1 sites.

TIPS AND CONSIDERATIONS

- If an attribute is created and then used in a Condition or Loop Filter before Commerce is deployed, the Condition/Loop Filter will not function correctly when the template is previewed or printed, even if the template was deployed. In this scenario, Conditions will always evaluate to false, and Loops will not print any data. To avoid this issue, deploy Commerce after creating attributes that will be used in Conditions or Loop Filters.
- If an attribute is created and then used in a Text Element before Commerce is deployed, the attribute value placeholder will be empty when the template is previewed or printed, even if the template was deployed. To avoid this issue, deploy Commerce after creating attributes that will be used in Text Elements.
- Email Templates no longer use variable names. An Email Template's name and language setting ensures that it is unique from other templates, since Email Templates cannot have both identical names and language settings.
- When a single-language template and a multi-language template have the same name, and the language preference of the user matches that default language of the single-language template, the single-language template will be used.
- When upgrading to 2015 R1, Email Templates that do not have any translations defined will become single-language templates with the site's base language. Email Templates that have at least one translation defined will become multi-language templates with the site's base language as the default language.
- Text within a Text Element that is formatted with numbers or bullets can only be left-aligned. If an admin attempts to make text that is formatted with numbers or bullets center- or right-aligned, the text will remain left-aligned in the text editor as well as on the final printed output.

- After adding an attribute value to a Text Element, there appears to be a space after the attribute value, when in fact there will not be a space between the attribute and the subsequent text or attribute value unless a space is added by the user.
- Options available in the **Language** drop-down menu are populated from the list of supported languages on the **Host Company Admin** page; this list is in turn taken from the list of the site's supported languages, set by CPQ Cloud Ops. If a language is added or removed from the site's supported languages, admins must update the **Host Company Admin** page for the **Language** drop-down menu to reflect the change. To add or remove a language from a site's internal list of supported languages, open a ticket on My Oracle Support.
- If support for a language is removed from the **Host Company Admin** page, Email Templates using that language as their default language will lose any content in that language and may behave unexpectedly. Additionally, removing support for the default language of a multi-language template may cause errors when the template is printed on the user side. Before removing support for a language, it is recommended to remove translations and templates that use the language.

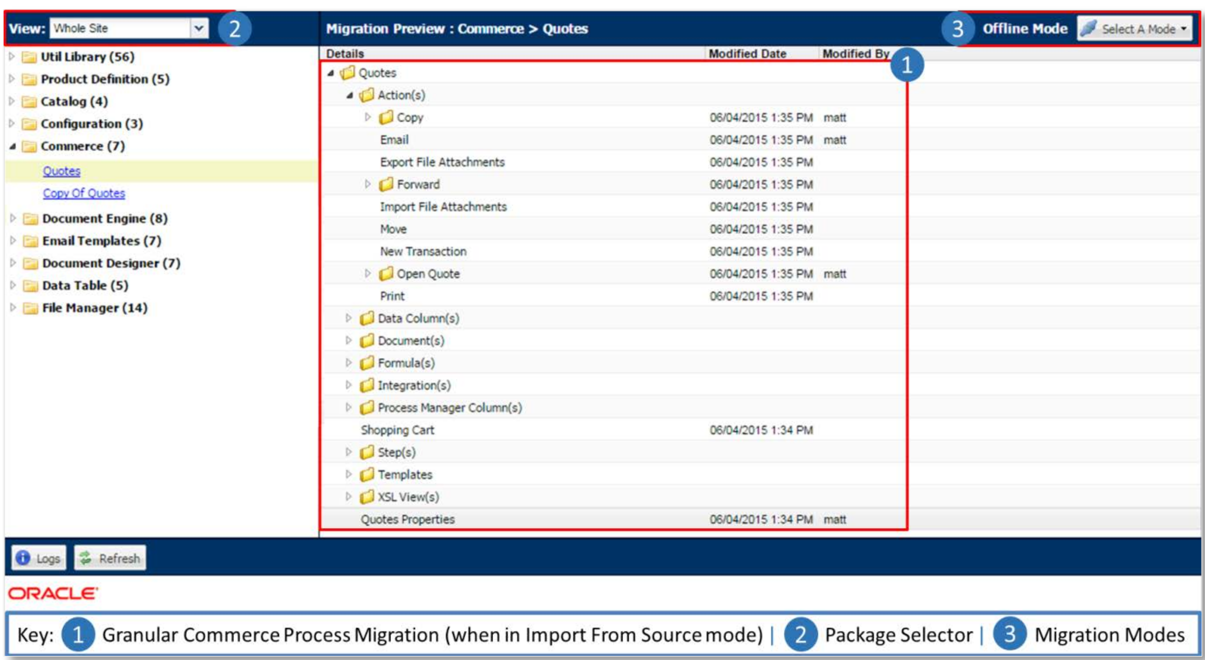
MIGRATION ENHANCEMENTS

Enhancements have been made to the migration process to give admins new ways to prepare for, and execute, the migration of content from site to site. New Features include:

- **Granular Migration of Commerce Processes**, which allows admins to choose which individual object or objects of a Commerce Process to migrate. For example, an admin can select only those objects that have been modified.
- **Migration Packages**, which allow admins to define and save custom groups of site components to migrate to other sites. This reduces the preparation time for a series of migrations.
- **Migration Modes**, which allow admins to manage Migration Packages without being connected to a source site, import Migration Packages, compare differences with target site(s), and perform standard source-to-target migration.
- **Rollback and Snapshots Enhancements**, which reduce migration time and reduce migration rollback time.

NEW MIGRATION CENTER OPTIONS

The main Migration Center page contains three new options to support the enhancements made to migration in this release.



GRANULAR MIGRATION OF COMMERCE PROCESSES

Previously, if any changes were made to a Commerce Process that needed to be migrated, the entire Commerce Process had to be migrated to the target site. Now, admins can select specific objects of a

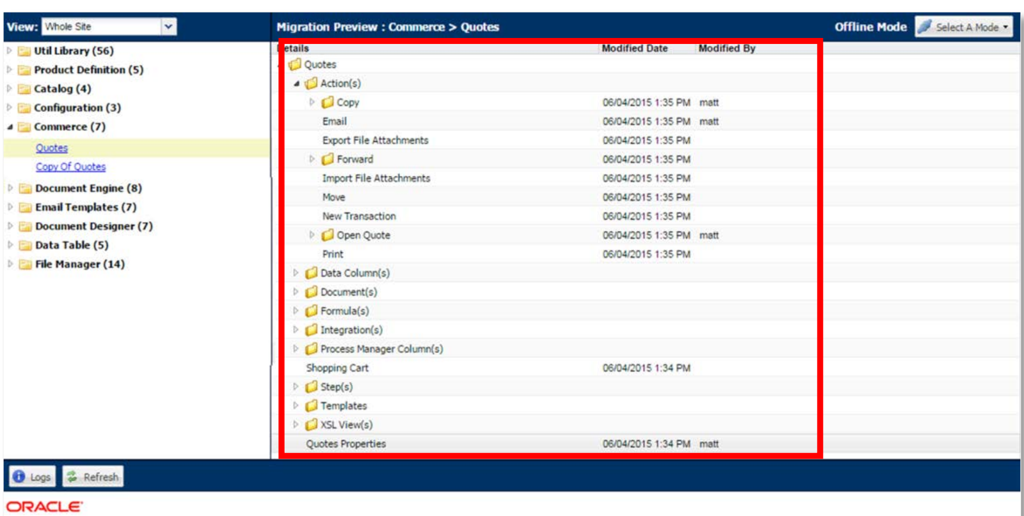
Commerce Process to migrate. This allows admins to manage their changes and migrations more easily since they can choose to only migrate the sections of a Commerce Process that are ready for migration.

Objects which can be granularly migrated include:

- Main Documents
- Sub Documents
- Attributes
- Document Actions
- Process Actions
- Library Functions
- Rules
- Steps
- Formulas
- XSL Views
- Data Columns
- Process Manager Columns
- Integration XSLs
- Composite Attribute XSLs
- Text Library Templates

Note: The Commerce Stylesheet cannot be granularly migrated.

The **Migration Center** page has changed to show individual, granular, objects.



To view and select individual Commerce items, expand the **Commerce** folder within the **Content** pane, click the name of a Process, and continue expanding the Process within the **Details** pane.

Note: If a Process's checkbox is selected in the **Content** pane and the Process is subsequently expanded in the **Details** pane, the objects in the **Details** pane will not appear selected. That is, the checkboxes will not be checked, but the objects would still be included in the migration.

Selecting the Commerce Process in the **Content** pane, which is equivalent to selecting the entire process, will result in a normal full Commerce Process migration. The checkboxes in the **Detail** pane are used for granular migration; in this case, you don't use the checkbox in the **Content** pane. Checkboxes in the **Detail** pane are only for granular migrations. Therefore, checkboxes only appear for Commerce Process sub-items.

If an object has child objects, selecting the parent object will also select and migrate its children. For example, while individual attributes can be selected for migration, selecting **Attributes** under a Main Document's name will migrate all of its Quote-level attributes.

Just as previous Commerce migration functionality took into account any dependencies, if a granular Commerce object selected for migration potentially impacts other objects by its changes, those dependent objects will display in a pop-up for optional selection upon triggering a migration.

MIGRATION PACKAGES

Migration packages allow admins to create a grouping of objects to be quickly referenced for repeated migrations. Packages can also be downloaded as ZIP files and passed along to other admins to upload to other sites. The CPQ Cloud Team and its Partners may also use packages to create and distribute groups of objects to customers to implement certain functionality on a new CPQ Cloud site.

Packages can be "imported" to a target CPQ Cloud site without logging in to a source site, in the following two ways:

- They can be downloaded to a user's computer and subsequently uploaded to a target site.
- They can be transferred to a target site directly, using the Migration Center.

Both of these methods will be discussed later in the Modes section of this document.

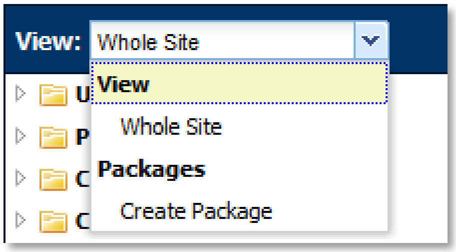
With either method, importing a Package will modify objects on the target site according to the state of the objects in the Package.

- If an object in a Package does not exist on the target site, it will be added to the site on import.
- If an object in a Package already exists on the target site, it will be modified on the site on import.

Similar to migration, objects in a Package will be compared to objects on the target site and the results of the comparison will be reflected by the standard Migration Center icons, such as **Doesn't exist on the source** and **Doesn't match the source**.

VIEWS

A new **View** drop-down menu, in the upper left-hand corner of the **Migration Center** page, is part of Package administration. The menu is divided into *View* and *Packages*. The menu will default to **Whole Site** when first opening the Migration Center.



WHOLE SITE VIEW

In the **Whole Site** view, consistent with previous functionality, an admin can see a tree of the current site's content in the **Content** pane, as well as expand lower level content in the **Details** pane.

PACKAGES VIEW

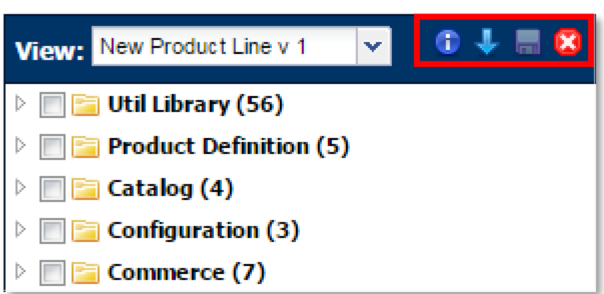
The **Packages** section will always have the **Create Package** option listed at the top, followed by an alphabetical list of existing Packages.

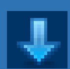
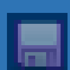
- Select **Create Package** to submit details for a new Package and then switch to the view for the new Package.
- Select the name of an existing Package to switch to that Package's view.

The **Package** view also uses both the **Content** and the **Details** panes for the content tree and low level content, respectively. However, now the checkboxes are used to select items to be included in the Package currently being viewed. In the **Package** view, elements which are checked reflect elements included in the Package.

Note: When a high level Commerce object in the **Content** pane is selected to be included in a Package, the low level Commerce checkboxes in the **Details** pane will not appear checked. However, those objects are in the Package.

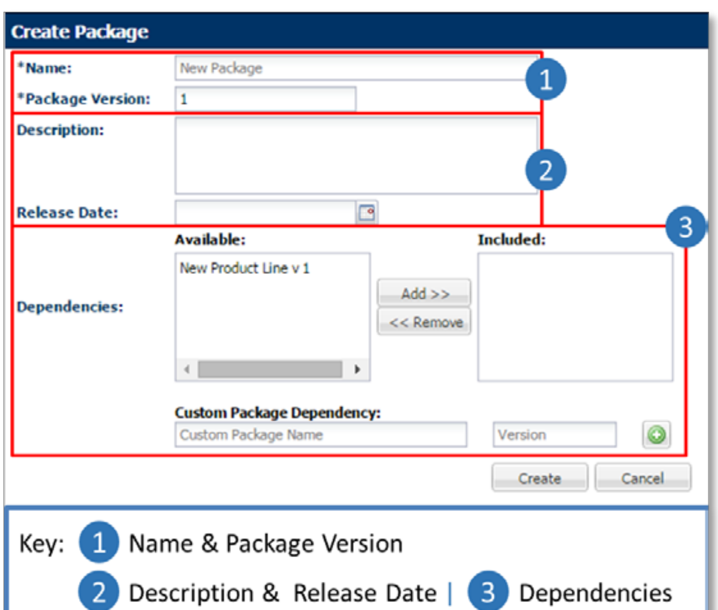
Icons in the Migration Center header bar, outlined in red below, appear in the **Package** view.



Button	Button Name	Description
	Package Information	**Package Information** opens a dialog box to display and edit all high level details entered when a Package was created.
	Download Package	**Download Package** prepares a Package ZIP file to be downloaded to the user's local file directory. The status of the download will appear in the bottom left of the Migration Center. Once the download is complete, the user can click the Package name link within the Status area or the **Migration Logs** page. Clicking the name opens a standard browser prompt to **Open** the Package ZIP file or **Save** it to the user's local file directory.
	Save Package	**Save Package** saves all changes to the current Package. This button is disabled until changes have been made to the Package.
	Delete Package	**Delete Package** deletes the current Package. The user will receive a pop-up to confirm the delete.

CREATING A PACKAGE

Selecting **Create Package** from the **View** drop-down menu will open a **Create Package** dialog box to define the new Package.



1. The **Name** and **Package Version** fields are required. The combination of these two fields must be unique to the site. The **Name** field cannot be edited once a Package has been created. The **Name** and **Package Version** will be concatenated to display in the **View** drop-down menu.
2. **Description** and **Release Date** are optional. This data will only display when viewing the **Package Information** dialog box or when importing a Package.
3. The **Dependencies** section is optional and can be used to indicate that the Package depends on certain other Packages to be installed first in order to function. These dependencies can be indicated by adding them from the list of Packages on the site in the **Available** box, or by specifying the Package name and version manually in the **Custom Package Dependency** fields. This data will only display when viewing the **Package Information** dialog box or when importing a Package.

Note: Packages cannot contain other Packages.

Clicking **Create** will save the new Package and switch to the new Package's view.

MIGRATION MODES

New Migration Center modes support managing and importing Packages and offer new site comparison functionality.

The Migration Center now opens in Offline mode. You can return to this mode by clicking **Disconnect** when you are in another mode. The **Whole Site** view is automatically selected when going into Offline mode.

The other modes, shown in the **Select A Mode** drop-down menu, are:

- Import From Source
- Import Package
- Connect To Destination

OFFLINE

The Migration Center is in Offline mode when a user:

- First enters the Migration Center
- Clicks **Disconnect**, which replaces the **Select A Mode** drop-down menu when connected to another site
- Clicks **Cancel**, which replaces the **Select A Mode** drop-down menu when importing a Package

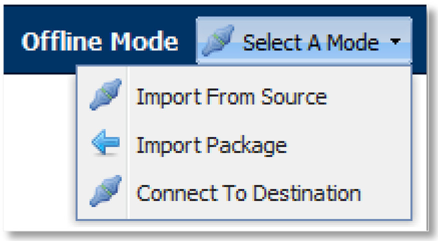
In this mode, the site is not connected to another CPQ Cloud site for comparisons or migrations. As such, comparison icons will not be available in this mode, and checkboxes will not be present in the **Whole Site** view. However, admins can use the checkboxes that are available in the **Package** views to manage Package contents.

Note: The Migration Center's Offline mode indicates that the current site is not logged in to another CPQ Cloud site. Offline in this context denotes a connection to another CPQ Cloud site. An Internet connection is still required to use all functionality in this mode.

IMPORT FROM SOURCE

This is the standard migration mode which existed prior to 2015 R1.

For Import From Source mode, the user must first select a **View** for the **Content** and **Details** panes to appear.



Upon selecting **Import From Source**, a dialog box appears to log in to a source site. Once connected, the target site is compared with the source site, and the user can select objects for a source-to-target migration.

Packages can be migrated in Import From Source mode, either in full or with specific objects removed. Once connected to a source site, a user must then select the desired Package's view from the **View** menu.

The **Package** view in this mode will display all objects of the current site within the **Content** pane as usual; however checkboxes will only be present for objects which are included in that Package. The user can uncheck checkboxes next to objects to exclude them from the migrated Package. Excluding a Package's objects for migration will not alter the Name or Version of the Package that is migrated, nor will it impact the Package contents on the source site.

Once selections are made, clicking **Migrate** will open the **Description** dialog box to complete the migration as usual.

Package migrations are included on the **Migration Logs** page, just like standard migrations. On the **Migration Logs** page, Package migrations will have the name of the Package listed as the **Source Site** so that admins can differentiate between standard migrations and Package migrations.

IMPORT PACKAGE

This mode allows an admin to upload a previously downloaded Package to the current site.

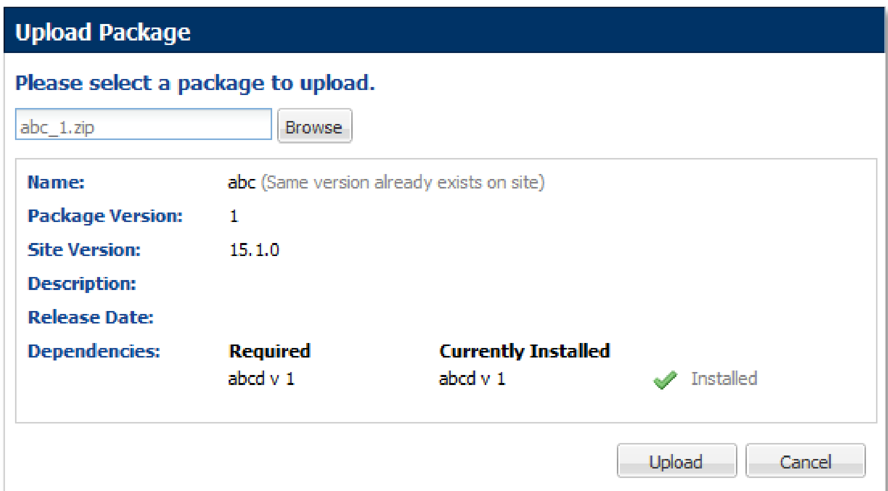
Importing a Package has the same effect as executing a migration, where the Package is the source and the current site is the target site. Each object within the Package will either update the corresponding object on the current site if it already exists, or be added to the current site if it does not already exist. As such, the success of a Package Import relies on the same conditions as the success of a migration.

Upon selecting **Import Package,** an **Upload Package** dialog box appears in which the user can click **Browse** to select a valid Package ZIP file from their local file directory. Once a valid Package has been selected, the **Upload Package** dialog box displays the corresponding Package's details. The user can then either click **Upload** to proceed or **Cancel** to cancel the upload.

Clicking **Upload** will close the dialog box and stage a migration, with the Package as the source. The differences between the current site and the Package will be calculated and reflected by the standard comparison icons. At this point, the user may deselect any object in the Package that he/she does not wish to add to or modify on the current site.

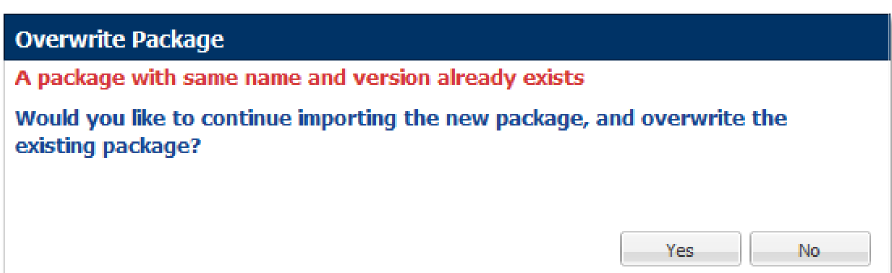
To complete the Package import, the user must click **Migrate**, which will trigger a migration. The status and details of this migration can be found on the **Migration Logs** page. If the migration is successful, the Package has been imported and will appear in the list of Packages on the current site.

If the migration is not successful, the Package import is not complete and none of the objects in the Package will be added or modified on the current site.



Note: If a Package with the same **Name** and **Version** combination already exists on the site, the Packages will be recognized as being the same, even if they don't contain the same objects.

In this case, a dialog box appears to ask if the existing Package should be overwritten. If the user then selects **Yes**, and the import is successful, the uploaded Package will replace the existing Package, and the objects within the uploaded Package will be modified on the site according to their state in the uploaded Package.



CONNECT TO DESTINATION

This mode allows an admin to view a comparison of the source site and the destination site. Because this mode is initiated from the source site, admins will have easy access to the comparison without logging into the destination site and initiating the migration process.

Migrations cannot be performed in this mode, so checkboxes are not present in the **Whole Site** view. However, checkboxes are present in the **Package** views, as are site comparison icons. This allows admins to use the comparison between the two sites to manage Package contents.

ROLLBACK AND SNAPSHOTS ENHANCEMENTS

Migration Rollback has been enhanced to require both less time upfront during a migration and less time for the rollback itself.

There are now two options to return a site to a former state:

- Rollback
- Snapshots
    - Migration
    - On Demand

ROLLBACK FUNCTIONALITY

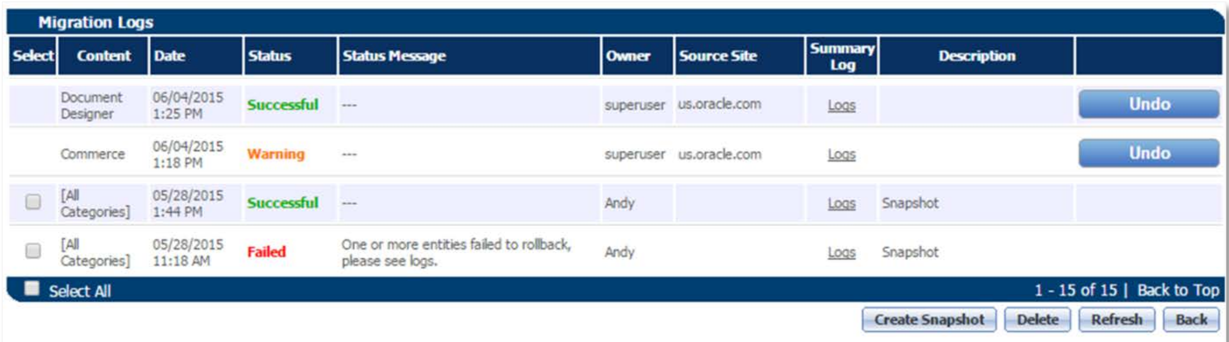
In previous releases, Rollback required a *Snapshot*, a capture of the state of a site's migratable objects, to be taken immediately before migration. The time required for the system to capture this sizeable data increased the overall length of a migration. Additionally, if a minor change was migrated and the change turned out to be unwanted, the target site could only be returned to the previous state by applying an entire Snapshot. This, too, could involve a large time commitment as all objects in the Snapshot were evaluated, not just the ones that were changed.

By default, Rollbacks will now only record the changes performed during a migration, significantly reducing the time required to perform and revert a migration. Snapshots will no longer be automatically taken for each migration, but the option is available. Snapshots taken during a migration can be subsequently applied to a site for a comprehensive rollback of changes.

More information on previous Snapshot behavior can be found in the *2013 Autumn Release Notes*.

ROLLBACK

As before, successful migrations add a new line to the **Migration Logs** page with an inline **Undo** button. Previously, this **Undo** button triggered a Rollback using Snapshot data. Now, clicking **Undo** triggers the new Rollback functionality which only impacts the objects changed in that migration. Essentially, the system will unmake all the changes that were made.



Note: Similar to previous Rollbacks, if additional migrations have been successfully completed since a migration that has been selected for **Undo**, all changes made in those subsequent migrations will be undone as well.

A line on the **Migration Logs** page is created for both the initiation and the successful completion of a Rollback. Once a Rollback is complete, the **Undo** button for that migration and all migrations that took place after that date no longer appears on the **Migration Logs** page. However, the migration records remain.

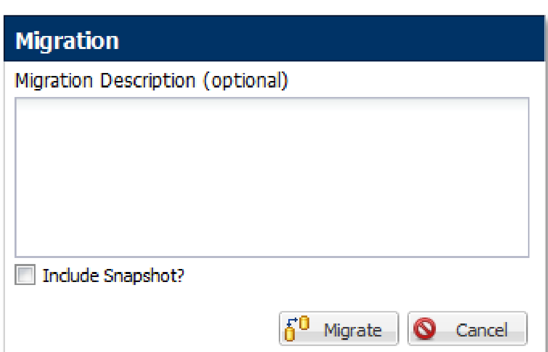
Warning: Avoid making changes to a production (target) site directly, especially if you plan to use Rollbacks. Changes made to migratable objects outside of the Migration Center may cause a Rollback to fail if the objects to be reverted are missing or have been modified.

SNAPSHOTS

MIGRATION SNAPSHOTS

Snapshots can be taken during migration by selecting the **Include Snapshot?** checkbox on the **Description** dialog box that opens after a user clicks **Migrate**.

Snapshots taken by this method include the state of all objects available for a migration, such as Configuration, Commerce, Util Libraries, and so on, with the exception of Data Tables and File Manager. Only Data Tables and File Manager files included in the present migration will be included in the Snapshot. This is consistent with previous Snapshot behavior.



ON DEMAND SNAPSHOTS

Snapshots can also be taken on demand using the **Create Snapshot** button on the **Migration Logs** page. Snapshots taken by this method will include all migratable objects except Data Tables and File Manager, which cannot be added to On Demand Snapshots.

APPLYING A SNAPSHOT

The creation of a Snapshot will add its own line to the **Migration Logs** page. The line will include a **Revert to Snapshot** button.

If the Snapshot was taken during a migration, the line will appear below and separate from the migration entry. Clicking **Revert to Snapshot** applies that Snapshot, which will return all migratable objects contained within the Snapshot to their state when the Snapshot was taken.

STEPS TO ENABLE

All migration enhancements are automatically available on all 2015 R1 sites.

TIPS AND CONSIDERATIONS

- A migration cannot be performed while a Rollback is in progress or while a Snapshot is being applied.
- Only one migration can be performed at a time.
- A Package cannot be imported or downloaded while a migration is in progress, a Rollback is progress, or a Snapshot is being applied.
- All Rollback data and all Snapshots are permanently deleted when upgrading to a major Release.
- Consistent with previous Rollback behavior, Transaction data will not be affected by a Rollback or Snapshot application.
- Consistent with previous Rollback behavior, Commerce Steps will not be deleted in a Rollback or Snapshot application.

- Only users with access to perform Migrations can also perform Rollbacks and Snapshot applications.
- If the user selects to have a Snapshot taken when triggering a migration and that migration fails, the Snapshot will still be created.
- Migration records cannot be deleted from the **Migration Logs** page if the “Undo” or “Revert to Snapshot” option is still available.
- The system will store data for up to 20 Rollbacks at a time. After a 21st successful migration, Rollback data for the oldest migration will be permanently deleted.
- The system will store up to 10 Snapshots at a time, whether or not they are Migration Snapshots or On Demand Snapshots. After an 11th Snapshot of either kind, the oldest Snapshot will be permanently deleted.
- Commerce objects cannot be deleted from a target site in a granular migration; they can only be deleted in a full migration of a Commerce Process. For example, if a Commerce Main Document attribute exists on the target site but does not exist on a source site, that attribute will not be deleted from the target site if a Main Document's Attributes are selected and then migrated.
- After performing a granular migration of a Commerce Process, differences calculated between the source and target site within the **Content** pane may show the sites to be different, even if all the differences within the Details pane show the sites to be the same. In order to completely sync a Commerce Process between two sites, perform a full migration of the Commerce Process using the **Content** pane.

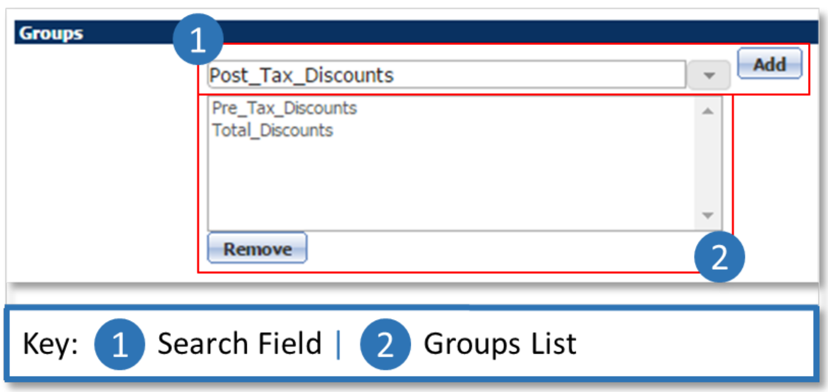
ATTRIBUTE GROUPS

Commerce Integer, Float, and Currency attributes can now be added to Attribute Groups. Attribute Groups can contain one or more attributes and can be referenced in SUM and AVG aggregation functions in Formulas.

When an Attribute Group is referenced as a parameter in a SUM or AVG function, all attributes within the Attribute Group are included in the function's calculation, eliminating the need to explicitly list every attribute in the function. In many cases, pricing logic will become simpler to administrate, since admins can modify Attribute Groups as needed instead of having to restructure Formulas by adding or removing attributes.

GROUPS PANEL IN THE ATTRIBUTE EDITOR

A **Groups** panel now exists on the **General** tab of Integer, Float, and Currency attributes. An attribute will be in each Attribute Group that is listed in the **Groups List** of its **Groups** panel.



1. Attribute Groups are created and searched for in the search field. Typing a new, valid Attribute Group name in the search field will produce a `Create {GroupName}` Group option in a drop-down from the search field, where `{GroupName}` is the text in the search field. Selecting the **Create Group** option and then clicking the **Add** button will create the Attribute Group and add the attribute that is currently open to the Attribute Group.

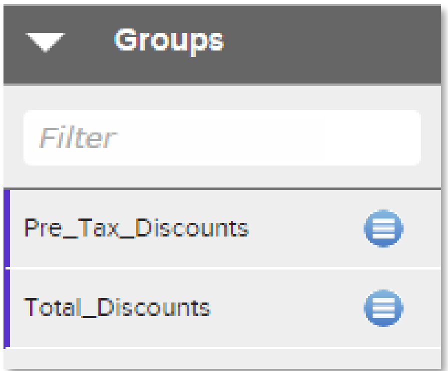
   Typing in the search field will produce suggested, existing **Groups** in a drop-down below the search field. Selecting an existing Attribute Group and then clicking the **Add** button will add the attribute that is currently open to the selected Attribute Group.

2. The **Groups List** contains all Attribute Groups that the attribute in. Selecting an Attribute Group within the **Groups List** and then clicking the **Remove** button will remove the attribute from the Attribute Group and the Attribute Group will no longer appear in the **Groups List**.

Note: All changes made within the **Groups** panel (including the creation of an Attribute Group), will not be saved unless the attribute is saved.

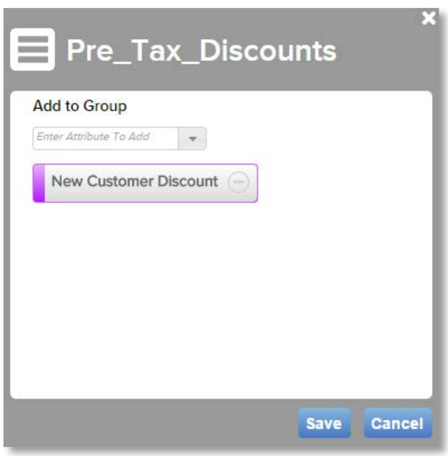
GROUPS PANE IN FORMULA MANAGEMENT

A **Groups** pane now exists in the left panel of Formula Management. All existing Attribute Groups will be listed in the **Groups** pane. If many Attribute Groups exist, the admin can filter the list by typing an Attribute Group's name in the **Filter** field.



The Groups Pane in the left panel of Formula Management

Clicking an Attribute Group in the **Groups** pane will open the **Group** editor window.



Group Window in Formula Management

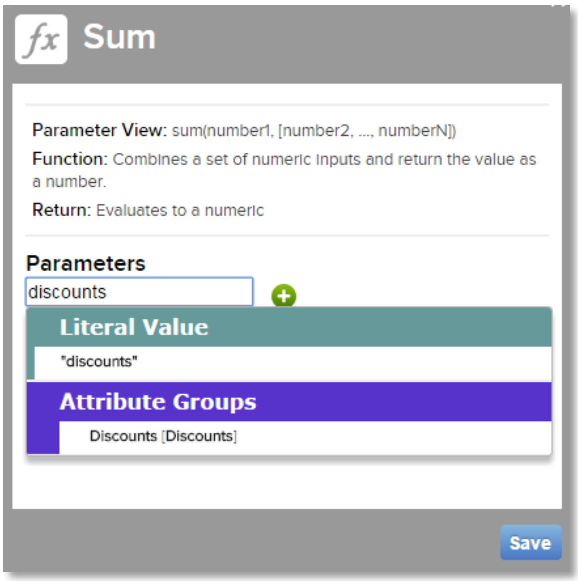
Attributes can be added to the Attribute Group via the **Add to Group** field. Admins can type an attribute's name into the **Add to Group** field and select the attribute when it is suggested in the drop-down below the **Add to Group** field in order to add it to the Attribute Group. The attribute will then show up in the attribute list in the **Group** editor window.

Clicking the **Remove** icon () of an attribute will remove the attribute from the **Group** editor window, and the attribute will no longer be a part of the Attribute Group.

Clicking **Save** applies the changes made to the Attribute Group, while clicking **Cancel** reverts all changes.

SUM AND AVG FUNCTION EDITOR PARAMETERS

SUM and AVG functions in Formula Management can now have Attribute Groups defined as parameters. The **Parameters** field within a SUM or AVG function's editor window will now suggest Attribute Groups that are similar in name to what the user has entered.



SUM Function Editor Window in Formula Management

If an Attribute Group is a parameter in a SUM or AVG function, all attributes within the Attribute Group are included in the function's calculation,

STEPS TO ENABLE

Attribute Groups are automatically enabled on all 2015 R1 sites.

TIPS AND CONSIDERATIONS

- Attribute Groups that do not contain at least one attribute and are not referenced in Formula will automatically be deleted upon deployment of the Commerce Process.
- The value of empty Attribute Groups that are referenced as parameters in SUM or AVG functions will be equal to 0 when used in function calculations.
- Attribute Group names can only contain alphabetical characters, numerical characters, and underscores. Attribute Group names cannot contain spaces.

TENANT AUTOMATION SYSTEM (TAS) ENHANCEMENTS

All new 2014 R2 and 2015 R1 instances of CPQ Cloud are now provisioned through the Oracle Public Cloud infrastructure. This adherence to Oracle standards results in faster provisioning of sites and access to site metrics through the Oracle Cloud My Account portal.

When a new CPQ Cloud site has been created, the site's main admin will receive an email with a link and credentials to the live CPQ Cloud site, a link and credentials to the Oracle Cloud My Services portal, and a link to the Oracle Cloud My Account portal, which requires an Oracle.com username and password.

Each CPQ Cloud site that was provisioned through the Oracle Public Cloud infrastructure will report usage and performance metrics to the Oracle Cloud My Account portal, where they can be viewed by each site's main admin. The main admin can give additional users access to the Oracle Cloud My Services portal so they can view these site metrics through the My Services portal. Only the main admin can access the Oracle Cloud My Account portal.

CPQ Cloud site metrics on the Oracle Cloud My Account portal can be viewed per day or as a compilation of data over a specified period of time. CPQ Cloud site metrics that are reported to the Oracle Cloud My Account portal include:

Site Metric Name	Description
New Quotes	Total number of new quotes that were both created and saved at least once during the specified time range
New Internal Quotes	Total number of internal quotes created during the specified time range
New Partner Quotes	Total number of partner quotes created during the specified time range
Internal Users	Total number of active internal users
Internal Licenses	Number of licenses remaining for internal users
Internal Users Logged In	Total number of unique internal users that have logged in during the specified time
Percentage of Internal Users Logged In	Percentage of all internal users that have logged in during the specified time range
Partner Users	Total number of active partner users
Partner Users Logged In	Total number of unique partner users that have logged in during the specified time range

Site Metric Name	Description
*Average Time to Create a New Quote	The average time (in milliseconds) it took to create a new quote during the specified time range
*Ninetieth Percentile Response Time To Create a New Quote	The ninetieth percentile response time (in milliseconds) to create a new quote during the specified time range

**Only CPQ Cloud sites with Application Logging and Response Time Logging enabled will report performance-based metrics to the Oracle Cloud My Account portal. These properties are enabled by default. To disable these properties and not report performance-based metrics to the Oracle Cloud My Account portal, open a ticket on My Oracle Support.*

Important: There is no change to the new instance purchasing process. CPQ Cloud sites should still be requested and paid for through your Oracle CPQ Cloud application sales representative.

STEPS TO ENABLE

No steps are needed to enable this feature. All new 2014 R2 and 2015 R1 instances of CPQ Cloud will be provisioned through the Oracle Public Cloud infrastructure.

TIPS AND CONSIDERATIONS

- Enabling all existing CPQ Cloud sites to report site metrics to the Oracle Cloud My Account portal is on the CPQ Cloud product road map.
- Existing customers with 2014 R2 sites will not report metrics to or be visible on the Oracle Cloud My Account portal.
- Existing customers with 2014 R2 sites that are updated to 2015 R1 will not report metrics to or be visible on the Oracle Cloud My Account portal.
- A FullAccess user with permission to create and modify users will automatically be created on the new CPQ Cloud site for the main admin as a part of the provisioning process. The user's username will be the email address of the main admin, unless another username is requested. Inform your Oracle CPQ Cloud application sales representative if you have a preference for the user's username when you request the new instance(s).
- Initially, the main admin will receive the same username and temporary password for both the new CPQ Cloud instance and the Oracle Cloud My Services portal. Single Sign-On does not exist between these two systems, so the main admin will be prompted to change his or her password upon logging in to each system for the first time.
- Site metrics that are reported to the Oracle Cloud My Account portal can still be viewed at their original locations within CPQ Cloud.
- CPQ Cloud does not report uptime to the Oracle Cloud My Account portal.

KEY RESOURCES

- [Oracle Cloud My Services]
- [Oracle Cloud My Account]

SINGLE SIGN-ON (SSO) ENHANCEMENTS

Enhanced SSO and user management features better support the SAML 2.0 standard. Enhancements to Single Sign-On include several changes to username formation and the uniqueness of email addresses.

Enhancements to Single Sign-On include the following features:

- Usernames can now be an email address and can include the dash (-) character.
- Email addresses can now be validated to ensure that each user's email address is unique.
- A new Single Sign-On method, Federated and Remote, has been introduced.
- You can now choose to automatically redirect users without an active CPQ session to your Identity Provider (IDP) login page.
- A new SSO method that combines existing method has been added
- CPQ Cloud now uses your IDP Assertion Time setting to confirm that a session is still active.
- CPQ Cloud SAML requests to the IDP can be signed.

CHANGES TO VALID USERNAME FORMATION

There are several updated guidelines for creating valid usernames, for both the host and for Partner Organizations.

Note: This has changed the rules on what constitutes a valid username.

- Name length restrictions have changed from 3-60 characters to 3-128 characters.
- The "@" character is now allowed in usernames, but cannot be at the beginning or end of the name.
- Usernames can now be an email address, and can contain the dash (-) character.
- The following domains are not allowed in usernames:
    - bigmachines.com
    - guestcompany
    - [company name]_buy (for the host company)
    - reporting

These changes also apply to Partner Organizations and their users.

Partner Organization users will continue to log in by adding @[Partner Organization name] to the end of their usernames. For example, if the username "user1@domain.com" is added to the Partner Organization "po1", the user would log in as "user1@domain.com@po1".

Both Host Company and Partner Organization users share validations for unique usernames, but only when the Partner Organization name is taken into consideration. For example:

- Both the Host Company and a Partner Organization can have a user named "user1@domain.com".
- If a Host Company has a user named "user1@po1", the Partner Organization "po1" cannot have a user named "user1", and vice versa.

EMAIL ADDRESS VALIDATION TO MAKE EACH EMAIL ADDRESS UNIQUE PER USER

Email addresses can now be validated to enforce that all user email addresses are unique.

- This validation is not enabled by default for customers upgrading to 2015 R1, but is enabled by default for new customers starting on 2015 R1.
- Both Superuser and Guest are exempt from unique email address validation and can have the same email address as another user. This is true for both the Host Company and Partner Organizations.
- If validation is enabled and multiple users already share the same email address, a validation error message appears only when the profile of a user with a shared email address is updated in any way.
- This validation does not apply to the email addresses of inactive users. However, trying to modify an inactive user's email address will use the validation to check against the list of active user email addresses, and generate a validation error message if appropriate.
- If the user that triggers a validation error message has the ability to add/modify users, the user will see a full list of the users that have the duplicate email address. This list will include what company these users are from. If the user triggering the error does not have the ability to add/modify users, the validation error message will only mention that the email address is being used by another user.
- A validation error message is triggered, as appropriate, by any change to a user's profile except changing an expired password. In Web Services, this error is triggered on the updateUsers and addUsers calls, but not on the resetPassword call.

Note: Open a Ticket on My Oracle Support to enable or disable this feature. If you are upgrading, confirm that users do not share email addresses before enabling this feature.

NEW SINGLE SIGN-ON METHOD

The option "Federated and Remote" has been added to the **Single Sign-On Method** menu, which is a combination of the "Federated Authentication" and "Remote Webservices" methods.

AUTOMATIC IDP REDIRECT

You can now choose to automatically redirect users without an active CPQ session to the IDP login page, without having to append "`/sso/saml_request.jsp`" to the URL. The IDP login page becomes, in effect, the official login page for that CPQ Cloud site. This option is implemented for an entire site.

With this option enabled, if a user manually enters the URL for a specific CPQ page, they will still be taken to the IDP login page. However, relay logic is put in place so that the user is automatically directed to the desired endpoint (the specific CPQ page) after login.

Logging out of a CPQ session will do one of two things:

- If the user no longer has an active IDP session, the user is redirected back to the IDP login page.

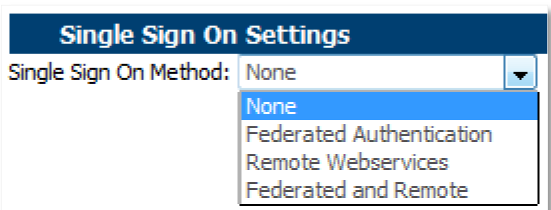
- If the user still has an active IDP session, the user is redirected back to CPQ Cloud with a renewed session. To the user, it is as if they have not logged out.

This ensures that the IDP is the session master, not CPQ Cloud. If this is not the desired functionality, specify the **SAML Logout URL** and **SAML Single Logout Endpoint** on the **Single Sign-On Settings** page. With this information, logging out of the CPQ session also logs out of the IDP session.

Automatic IDP redirect is not compatible with guest sessions. If guest sessions are enabled (“Allow Guest Access” on the General Site Options page is set to “Yes”), automatic redirect will not work.

Instead of being redirected automatically to the IDP login page, the user will go to the CPQ Cloud login page. Similarly, if automatic IDP redirect is enabled, validation will prevent guest sessions from being enabled.

Automatic IDP redirect is only supported if **Single Sign-On Method** (on the **Single Sign-On Settings** page) is set to **Federated Authentication** or **Federated and Remote**.



This feature is disabled by default. Open a ticket on My Oracle Support to enable this feature.

ASSERTION TIME

Assertion time, also known as a heartbeat, TimeToLive, or NotOnOrAfter, is used by an IDP to check if an IDP session is still active. If you have specified an assertion time on your IDP, CPQ Cloud will use it to check if the IDP session is still active.

Assertion time is independent of the CPQ session timer (to change the session timer, open a ticket on My Oracle Support), and elapses regardless of whether the time is spent idle or not.

- If the IDP session is still active, the CPQ session continues and the assertion timer resets and starts over again.
- If the IDP session is no longer active, the user is automatically redirected to the IDP login page to renew the IDP session. This will, in turn, renew the CPQ Cloud session as well.
- A user cannot bypass an expired assertion time by returning to a CPQ Cloud page. If a user tries to do this, they are redirected back to the IDP login page. If the IDP session is not renewed within two minutes, the IDP logs the user out of the CPQ session.
- When an IDP assertion check occurs, the user’s CPQ Cloud page refreshes briefly. After asserting the IDP session is still active, the user is taken back to the CPQ Cloud page they were on, but unsaved work will be lost.
- If an IDP assertion check occurs while the user is on a Transaction, and the IDP session has been confirmed as still active, the user is taken to an **Access Denied** page. From that page,

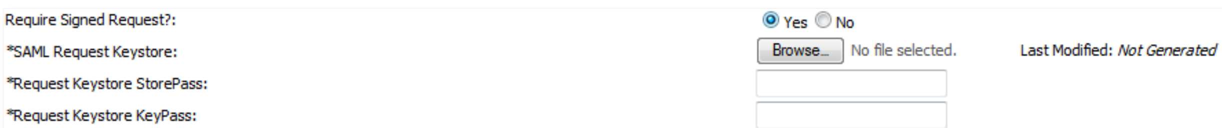
the user has the option to **Go Home**. The user can then return to the Transaction from the Home Page.

Best practice suggests that the assertion time should be a very long time, usually several hours. The assertion time is set in the IDP.

SIGNED REQUEST OPTION

A *signed request* is sent to and from a Service Provider (SP) and an IDP. It is sent with a signature (a digital identity certificate), which is granted by a Certificate Authority. This helps establish a level of trust to ensure that, for example, when CPQ Cloud makes a request to an IDP, the IDP can verify that it is actually CPQ Cloud that made the request, and not an attacker disguised as CPQ Cloud.

In the **Single Sign-On Settings** page, a CPQ Cloud admin can now optionally provide a **Java SAML Request Keystore** file, along with a corresponding **Request Keystore StorePass** and **Request Keystore KeyPass**, so that SAML requests to the IDP are signed.



Note: This is different than SAML Responses from the IDP, which must always be signed.

For more information on SAML standards, see the Key Resources section below.

SAML ENHANCEMENTS

The property "`SPNameQualifier`" is no longer required in an IDP's SAML response.

If a SAML assertion from an IDP is missing the signature tag, CPQ Cloud will reject the request and log the failure.

TIPS AND CONSIDERATIONS

AUTOMATIC IDP REDIRECT

Perform the following two tasks before opening a ticket on My Oracle Support to enable automatic IDP redirect:

- Confirm your SSO implementation is tested and working. If you enable this feature and an issue prevents you from logging in through your IDP, you will have no access to your site. Open a ticket on My Oracle Support to resolve this issue.
- Ensure all users have an associated IDP user. This is especially important for admins with FullAccess or Superuser privileges, which typically don't have IDP users. They will not be able to log in to the site and make admin changes if they can't perform an SSO login.

If you need help accessing your site without SSO privileges, open a ticket on My Oracle Support.

There are no settings to observe to determine if Automatic IDP Redirect is turned on; open a ticket on My Oracle Support to see if Automatic IDP Redirect is on or off. Admins, however, must turn off guest sessions either before or after this feature is enabled.

To determine if automatic IDP redirect is working or even enabled:

- If the feature is enabled and working properly, the automatic redirect will occur.
- If the feature is enabled but the user is taken to the CPQ login page, there will be an entry in the error logs about why the automatic redirect did not occur. For troubleshooting purposes, there are two main causes for this:
    - SSO is set to None or Web Services
    - Guest Sessions are enabled.
- If the automatic redirect to the IDP does not occur and there is no error entry indicating the cause, then the feature is not enabled on the site.

EMAIL ADDRESS VALIDATION

Before enabling email address validation, check for duplicate emails. An admin might have to check each user profile one at a time. Otherwise, you can enable the feature without checking for duplication first, and resolve the duplications as validation error messages appear.

Some existing customers already have users with shared email addresses like mailing lists, or otherwise rely on one user to have multiple profiles (like test users or special approver profiles). In this case, review whether or not you want to enable this feature.

KEY RESOURCES

For more information about Security Assertion Markup Language (SAML), consult the following resources:

- http://www.oracle.com/technetwork/articles/entarch/saml-084342.html
- https://www.oasis-open.org/committees/tc_home.php?wg_abbrev=security
- http://en.wikipedia.org/wiki/Security_Assertion_Markup_Language
- https://wiki.oasis-open.org/security/FrontPage

SITE INFORMATION ON HOST COMPANY PAGE

Technical site information has been moved from the Version page to the Host Company page. This data did not fit the purpose of the Version page, and now admins can open one page to view relevant site information alongside Host Company information and options. Data that is now present on the Host Company page includes:

- Stage
- Download/Deployment
- Upload/Commerce Migration
- Reporting
- CRM Partner URL (if CRM integration is enabled)

Only technical site data that is relevant to the CPQ Cloud instance will appear on the Host Company page. If you have questions about why certain information does not appear on the Host Company page, open a ticket on My Oracle Support.

Additionally, the following technical site data has been removed from the Version page:

- Connection Pool Size
- Run Task Thread
- WebMethods
- Commerce Timer
- File Table Cleanup
- Display Base Currency Symbol
- CRM Integration
- Configuration Cache
- Features

STEPS TO ENABLE

No steps are needed to enable this feature.

INTEGRATION

Features include:

- Integration Cloud Service
- Interface Catalog
- CPQ-EBS Integration
- CPQ Commerce Integration
- REST APIs for Transactional Objects

INTEGRATION CLOUD SERVICE (ICS)

With the introduction of native integration with Oracle Integration Cloud Service (ICS), CPQ Cloud can now provide an all-encompassing, standard Oracle solution to all integration needs. By utilizing the power of ICS, system integrators can manage all CPQ Cloud integrations from a single location with a consistent toolset. This new feature enables CPQ Cloud to connect to back office systems, on premise environments, and other Oracle products in a consistent, enhanced manner.

ICS is the recommended go-forward Oracle solution for customers who have previously relied on third-party middleware solutions, including webMethods and Cast Iron, to integrate Oracle CPQ Cloud with a variety of other systems.

For more information about ICS in general, see cloud.Oracle.com/integration. More information about ICS and CPQ Cloud will be made available on My Oracle Support.

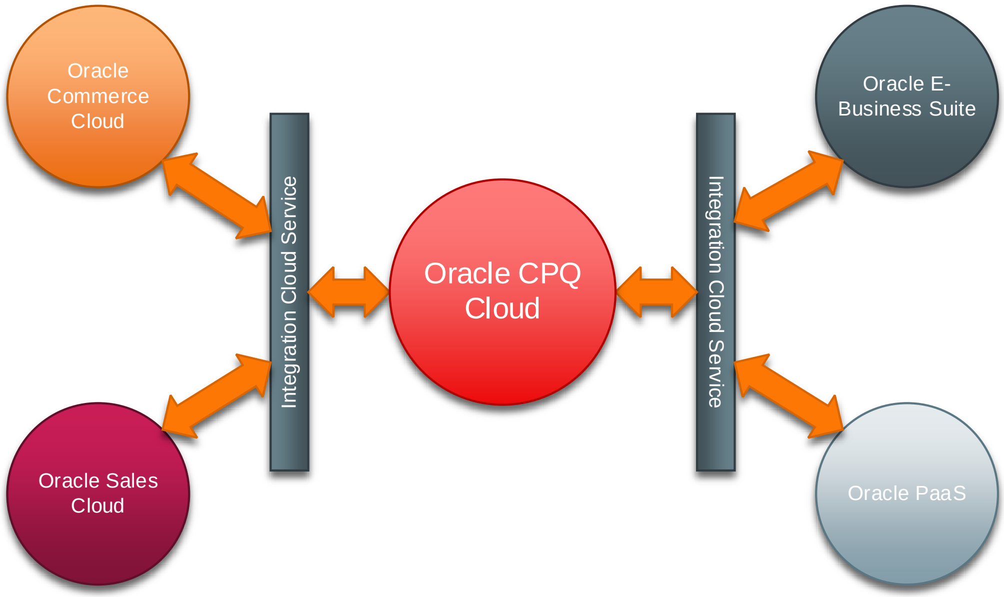
Note: Existing point-to-point integrations will still be available.

OVERVIEW OF ICS

To easily integrate applications with each other, use ICS as the middleware. Any application with an integration to ICS can integrate with any other application with an integration to ICS.

The ICS interface contains both pre-defined and customized data mappings between applications. It discovers all SOAP and REST services available from CPQ Cloud.

By leveraging these existing ICS integrations, it is easy to connect two applications through ICS.

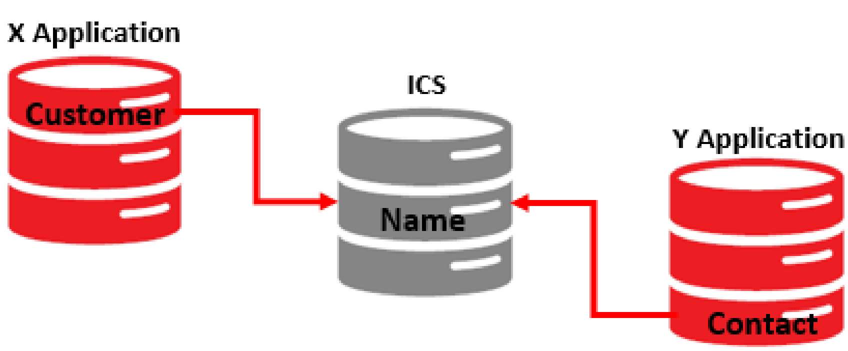


ORACLE CLOUD ADAPTERS

Cloud Adapters simplify and accelerate integration with your SaaS applications. These adapters provide lower costs of implementation and maintenance, ease of use, improved developer productivity and faster time-to-market for SaaS application integrations.

The Adapters enable the ability to create ICS flows, or mappings, and pre-defined Packages, or collections of ICS flows. ICS flows establish the relationship between an application and ICS. With these flows, you do not have to write the SOAP messages that are at the heart of an integration. The messaging has been written, and tested, for you.

For example, an application might map what they call the Customer field to what ICS calls the Name field. Another application might map what they call the Contact field to what ICS calls the Name field.



When both applications exchange data, through ICS, referring to ICS' Name field, they can exchange data even though the individual applications refer to the fields differently. And, the applications can exchange data without one application knowing how the other defines its fields.

Note: You can create your own ICS flows. See the Oracle Cloud Integration page for more information.

ORACLE CLOUD ADAPTERS: AN EXAMPLE USING ORACLE SALES CLOUD

Leverage pre-defined ICS flows in CPQ Cloud, built by Oracle product development, for the following integrations:

- Import Opportunity: imports data from Oracle Sales Cloud (OSC) into the CPQ Cloud reference application
- Create Quote: creates a quote in OSC, using the Commerce information from the CPQ Cloud reference application
- Update Quote: updates a quote in OSC, using the Commerce information from the CPQ Cloud reference application

Note: Other required Sales Cloud to CPQ Cloud integrations (such as revenue items, Parts, and Accounts) are part of the CPQ Cloud reference application. Because these integrations can already occur through existing means, they have not been defined in an ICS flow.

STEPS TO ENABLE

Before you can leverage the pre-built ICS flows, you must establish a connection between ICS and CPQ Cloud. For this example, you must also establish a connection between ICS and OSC. In both cases, this is done in ICS, and the steps are not covered in this document.

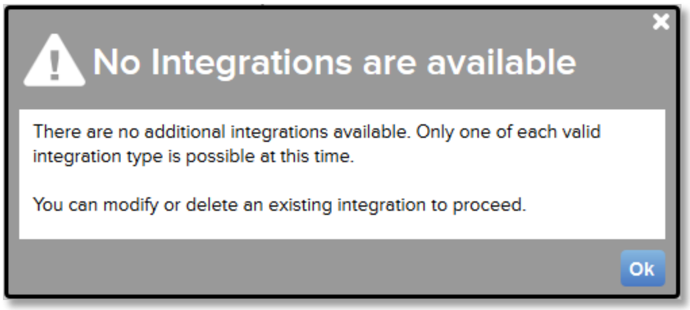
For information on how to set up these connections, see the Oracle Cloud Integration page.

CONNECT FROM CPQ CLOUD TO ICS

In CPQ Cloud, you must establish a connection from CPQ Cloud to ICS that complements the existing one from ICS to CPQ Cloud.

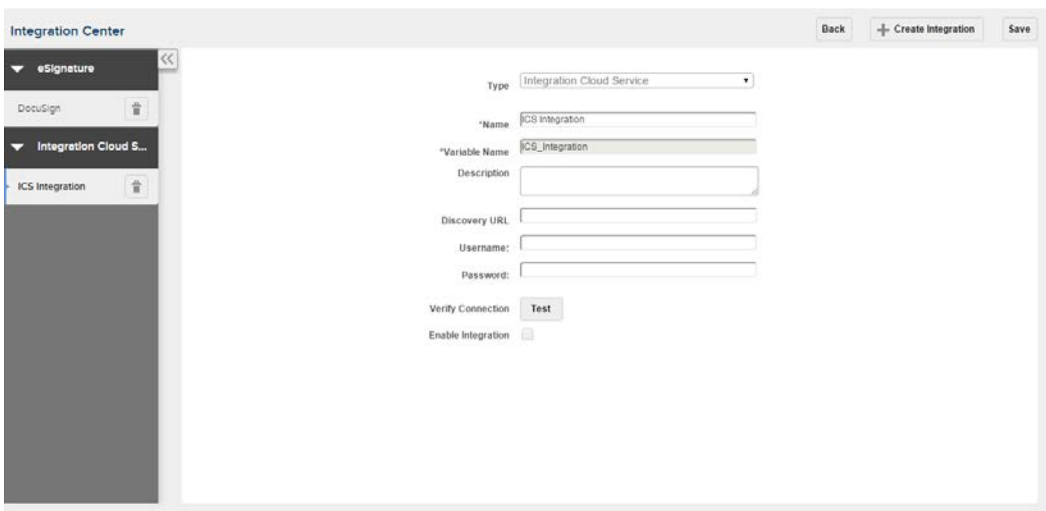
1. In CPQ Cloud, go the Admin Home Page.
2. Click **Integration Center** under Integration Platform.
   The **Integration Center** page appears.
3. Click **Create Integration**.

   Note: If you click **Create Integration** when there are no more available integrations to create, the following message appears:



4. Select **Integration Cloud Service** from the **Type** drop-down menu.
   Only one entry can be created for each integration type. Any previously created integration types are disabled, and only uncreated integration types can be selected.
   The first valid selection is selected by default.

> **Note:** Only 2 integrations are available in this release: eSignature and Integration Cloud Service (if enabled).



   Changing the Integration **Type** will immediately change which fields are present.
5. Enter a Name and Variable Name.
   Use a name that will make it easy for you to find your integration.
6. Enter the Discovery URL.
   For Middleware integrations, the **Discovery URL** is pre-populated with '`https://`'. For example, it might look like this:
   ```
   https://<ICS URL>:7002/icsapis/v1/integrations
   ```
7. Enter your ICS **Username** and **Password**.
8. Optionally, click **Test** to verify your connection to ICS.
9. Enable your integration by checking **Enable Integration**.

> **Note**: **Enable Integration** is disabled until the **Discovery URL**, **Username**, and **Password** have been entered.

An enabled integration shows the **Discover URL**, **Username**, and **Password** fields as read-only once it has been saved.

10. Click **Save**.

DISABLING AN INTEGRATION

If a user disables a previously enabled integration—by removing the checkmark next to **Enable Integration**—a warning appears that this will disable all existing integrations based on that integration type.

When the user clicks **Save**, this alert disappears, the integrations are disabled, and the **Discover URL**, **Username**, and **Password** fields return to being editable.

Any Integration Processes tied to the integration that was disabled will no longer execute as it did; these processes are effectively disabled as well.

WORKING WITH INTEGRATIONS

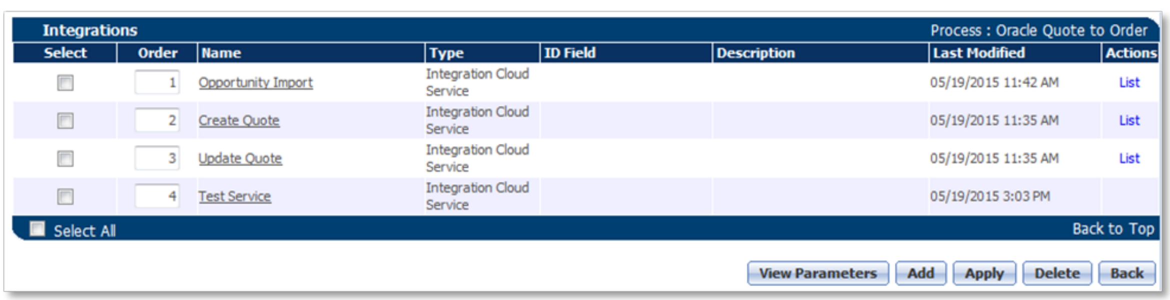
To use the integration you just created in the Integration Center, you must create an integration on an existing Process.

CREATING AN INTEGRATION PROCESS

1. Go the Admin Home Page.
2. Click **Process Definition** under Commerce and Documents.
   The **Processes** page appears.
3. For the Commerce Process, choose **Integrations** in the **Navigation** drop-down menu and click **List**.

> **Note:** This selection was called **Integration XSLs** in previous releases.

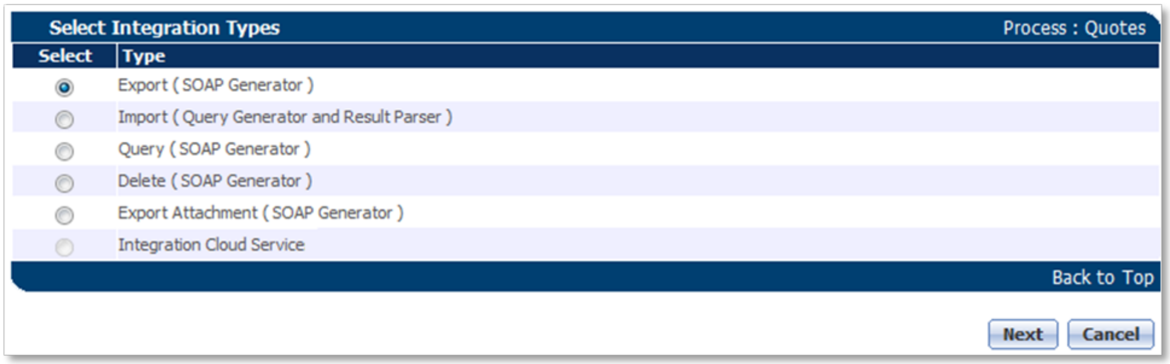
The **Integrations** page appears. This page lists any XSL Integrations, as well as any Middleware Integrations.



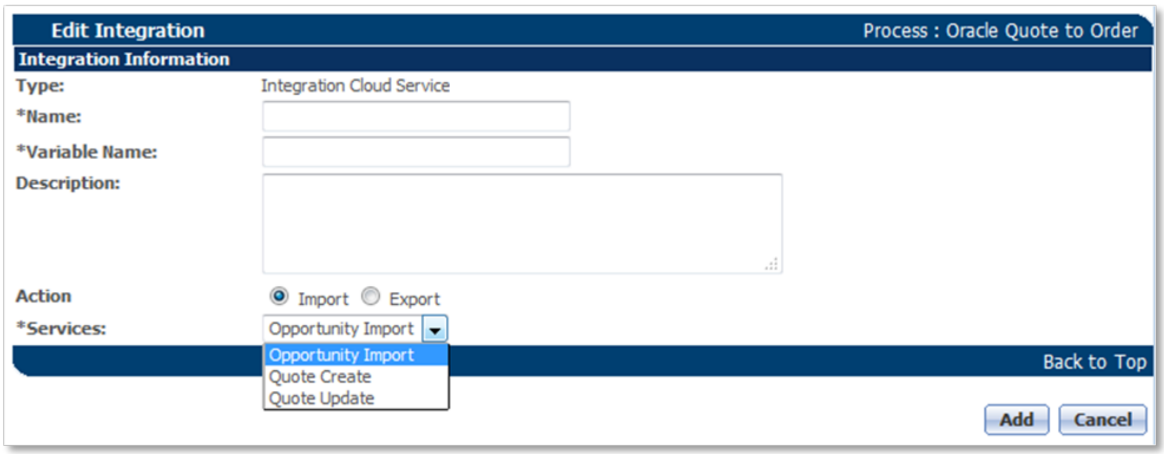
Integrations — Process : Oracle Quote to Order

Select	Order	Name	Type	ID Field	Description	Last Modified	Actions
☐	1	Opportunity Import	Integration Cloud Service			05/19/2015 11:42 AM	List
☐	2	Create Quote	Integration Cloud Service			05/19/2015 11:35 AM	List
☐	3	Update Quote	Integration Cloud Service			05/19/2015 11:35 AM	List
☐	4	Test Service	Integration Cloud Service			05/19/2015 3:03 PM	

4. Click **Add**.
5. Select **Integration Cloud Service** and click **Next**.



6. The **Services** drop-down menu shows a dynamic list of the services available in the CPQ Cloud–ICS Adapter. Select a **Service**.



7. Enter a **Name** and **Variable** Name.
8. Select an **Action**. This is just a label for the integration to describe how it will be used, and does not have any effect on how it works.
9. Click **Add**.

   The process now appears on the **Integrations** page.

NEXT STEPS

Now that you have an Integration Cloud Service Integration and a Process that uses it, tie the Integration to a new or existing Action and put the Action on a Layout. The integration is performed when a user clicks the button.

Or, if you add the Integration to an existing Action, it will run implicitly with other Actions that a user would normally click.

For example, a Quote Update Integration process would be run on an existing Quote. It makes sense to add this Integration to the Action that the user already uses to save the Quote. You could, for instance, rename the button from “Save” to “Save and Sync” to convey everything that happens when the button is clicked. Or, leave the button name as it was; functionality is not affected.

After tying the Integration to an Action or Process, remember to deploy the Commerce Process.

DEPLOY COMMERCE

You have now performed all the steps necessary to create a new Integration for end users. All that is left is to deploy the changes.

1. Go to the Admin Home Page.
2. Click **Process Definition** under Commerce and Documents.
   The **Processes** view appears.
3. For the Commerce Process to which you added the Integration, select **Deployment Center** in the **Navigation** column and click **List**.
4. Click Add Event.
5. Click **Refresh**.

When the **Last Deployed** column shows the current time, users will be able to see and use the integration, by clicking the button you added to the layout.

Clicking the button you modified triggers the Integration action, which links to the Integration process, which sends and receives the data using the Integration service you set up, which interacts with ICS.

TIPS AND CONSIDERATIONS

You must be on 2015 R1 release or later of Oracle CPQ Cloud to integrate with ICS.

INTERFACE CATALOG

The Interface Catalog is a "catalog of catalogs" that provides the framework to expose and describe the available interfaces for all services supported by CPQ Cloud.

This feature is designed to discover existing SOAP and REST web services, along with their definitions, shapes, and endpoints. The Interface Catalog also provides additional information to help you discover, learn, and use the correct interface.

Features include:

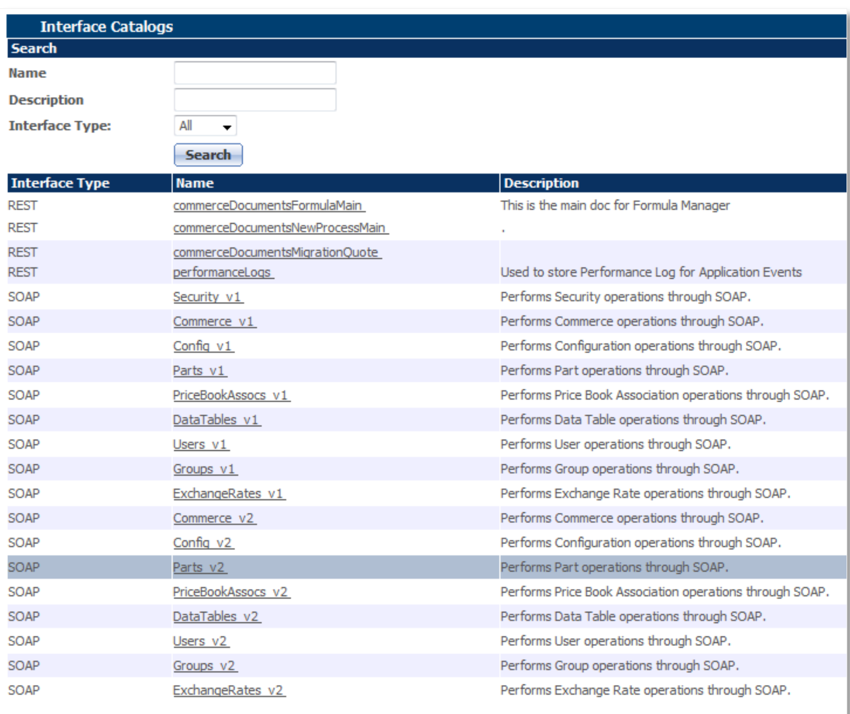
- A catalog of all SOAP and REST services available to users
- A new search page
- Access restricted to FullAccess users

The Interface Catalog provides a list of all available interface type specific catalogs; for now, this is the SOAP Catalog and the REST Catalog. It is also the entry point to the newly exposed REST APIs for transactional objects.

USING THE INTERFACE CATALOG

To see the Interface Catalog:

1. Go to the Admin Home Page.
2. Click **Interface Catalogs** under Integration Platform.
   The Interface Catalogs page appears.
3. Select an interface, or All, from the **Interface Type** drop-down menu and click **Search**.
   A list of interfaces appears. Each result represents a service.



Interface Type	Name	Description
REST	commerceDocumentsFormulaMain	This is the main doc for Formula Manager
REST	commerceDocumentsNewProcessMain	.
REST	commerceDocumentsMigrationQuote	
REST	performanceLogs	Used to store Performance Log for Application Events
SOAP	Security_v1	Performs Security operations through SOAP.
SOAP	Commerce_v1	Performs Commerce operations through SOAP.
SOAP	Config_v1	Performs Configuration operations through SOAP.
SOAP	Parts_v1	Performs Part operations through SOAP.
SOAP	PriceBookAssocs_v1	Performs Price Book Association operations through SOAP.
SOAP	DataTables_v1	Performs Data Table operations through SOAP.
SOAP	Users_v1	Performs User operations through SOAP.
SOAP	Groups_v1	Performs Group operations through SOAP.
SOAP	ExchangeRates_v1	Performs Exchange Rate operations through SOAP.
SOAP	Commerce_v2	Performs Commerce operations through SOAP.
SOAP	Config_v2	Performs Configuration operations through SOAP.
SOAP	Parts_v2	Performs Part operations through SOAP.
SOAP	PriceBookAssocs_v2	Performs Price Book Association operations through SOAP.
SOAP	DataTables_v2	Performs Data Table operations through SOAP.
SOAP	Users_v2	Performs User operations through SOAP.
SOAP	Groups_v2	Performs Group operations through SOAP.
SOAP	ExchangeRates_v2	Performs Exchange Rate operations through SOAP.

4. Click an interface **Name** to open its content.

   Service listings and catalog descriptions are in JSON. SOAP WSDLs are described in XML. REST services are in JSON.

   Use an XML or JSON viewer to examine the content of the service descriptions.

   SOAP services are described for both version 1 and version 2 of Web Services. See the Online Help *Web Services* topics for more information about CPQ Cloud and these two versions of Web Services.

   The REST service names are in the following format:

   `commerceDocuments + process variable name` (first letter capitalized) + `main doc variable name` (first letter capitalized)

   Even though the process names listed on the **Processes** page may not match the REST service names exactly, you can find the process' name within the REST service name.

   In addition to the above REST services, there is an additional entry for the performanceLogs REST service on the **Interface Catalogs** page.

STRUCTURE OF THE INTERFACE CATALOG

The Interface Catalog contains individual Catalogs for each type of interface.

The structure of the top level of the Interface Catalog is described in the table below:

Catalog Node	Description
/items/name	This is the unique identifier of the interface type specific catalog.
/items/links	The "catalog" link points to the individual interface type specific catalog resource. The "`groups=client.cloud`" query parameter restricts the attributes that are shown to just what is needed by cloud clients. The "self" link points to the interface type specific singular catalog resource.
/items/interfaceType	Current valid values are SOAP and REST.
/links	A "self" link points to this interface catalog resource.

The content of /rest/v1/interfaceCatalogs/, listed below, can be matched to the nodes listed in the table above:

Catalog Node	SOAP	REST
/items/name	"name" : "soapCatalog",	"name" : "restCatalog",

/items/links	"links": [
	[
	{
	"rel":
	"catalog",
	"href":
	"http://xxx.oracle.com/rest/v1/interfaceCatalogs/soapCatalog?group=client.cloud"
	},
	{
	"rel":
	"canonical",
	"href":
	"http://xxx.oracle.com/rest/v1/interfaceCatalogs/soapCatalog"
	},
	{
	"rel": "self",
	"href":
	"http://xxx.oracle.com/rest/v1/interfaceCatalogs/soapCatalog"
	}
	]
	],
		"links": [
		[
		{
		"rel":
		"catalog",
		"href":
		"http://xxx.oracle.com/rest/v1/metadata-catalog"
		},
		{
		"rel":
		"canonical",
		"href":
		"http://xxx.oracle.com/rest/v1/interfaceCatalogs/restCatalog"
		},
		{
		"rel": "self",
		"href":
		"http://xxx.oracle.com/rest/v1/interfaceCatalogs/restCatalog"
		}
		]
		],

/items/interfaceType	"interfaceType" : "SOAP"	"interfaceType" : "REST"
/links	"links" : { "rel" : "self", "href" : "https://xxx.oracle.com/rest/v1/interfaceCatalogs/"	Same for REST as it is for SOAP.

This is a sample of the content of the Interface Catalog description:

```
{
  "items": [
    {
      "name": "soapCatalog",
      "links": [
        [
          {
            "rel": "catalog",
```

```
            "href":
"http://xxx.oracle.com/rest/v1/interfaceCatalogs/soapCatalog?group=cli
ent.cloud"
          },
          {
            "rel": "canonical",
            "href":
"http://xxx.oracle.com/rest/v1/interfaceCatalogs/soapCatalog"
          },
          {
            "rel": "self",
            "href":
"http://xxx.oracle.com/rest/v1/interfaceCatalogs/soapCatalog"
          }
        ]
      ],
      "interfaceType": "SOAP"
    },
    {
      "name": "restCatalog",
      "links": [
        [
          {
            "rel": "catalog",
            "href": "http://xxx.oracle.com/rest/v1/metadata-catalog"
          },
          {
            "rel": "canonical",
            "href":
"http://xxx.oracle.com/rest/v1/interfaceCatalogs/restCatalog"
          },
          {
            "rel": "self",
            "href":
"http://xxx.oracle.com/rest/v1/interfaceCatalogs/restCatalog"
          }
        ]
      ],
      "interfaceType": "REST"
    }
  ],
  "links": [
    {
      "rel": "canonical",
      "href": "http://xxx.oracle.com/rest/v1/interfaceCatalogs/"
    },
    {
      "rel": "self",
      "href": "http://xxx.oracle.com/rest/v1/interfaceCatalogs/"
    }
  ]
}
```

INTERFACE TYPE SPECIFIC CATALOG

The interface type specific catalogs are children of the Interface Catalog.

There are two interface type specific catalogs:

- rest/v1/interfaceCatalogs/soapCatalog
- rest/v1/metadata-catalog

STRUCTURE OF THE INTERFACE TYPE SPECIFIC CATALOG

Interface-type Specific Node	Description
/name	The unique name of the interface type specific catalog.
/interfaceType	Current valid values are SOAP and REST.
/links	The "catalog" link points to the individual interface type specific catalog resources. For the SOAP catalog, the "`groups=client.cloud`" query parameter restricts the attributes that are shown to just what is needed by cloud clients. The "canonical" and “self” links point to the catalog resource with all details of the service description. This is called the interface type specific singular catalog resource.

SAMPLE OF THE SOAP-SPECIFIC CATALOG


```
{
  "name" : "soapCatalog",
  "links" : [ [ {
    "rel" : "catalog",
    "href" :
"http://xxx.oracle.com/rest/v1/interfaceCatalogs/soapCatalog?group=cli
ent.cloud"
  }, {
    "rel" : "canonical",
    "href" :
"http://xxx.oracle.com/rest/v1/interfaceCatalogs/soapCatalog"
  }, {
    "rel" : "self",
    "href" :
"http://xxx.oracle.com/rest/v1/interfaceCatalogs/soapCatalog"
  } ] ],
  "interfaceType" : "SOAP"
}
```

SAMPLE OF THE REST-SPECIFIC CATALOG


```
{
  "name" : "restCatalog",
  "links" : [ [ {
    "rel" : "catalog",
    "href" : "http://xxx.oracle.com/rest/v1/metadata-catalog"
  }, {
    "rel" : "canonical",
    "href" : "http://xxx.oracle.com/rest/v1/
interfaceCatalogs/restCatalog"
  }, {
    "rel" : "self",
    "href" :
"http://xxx.oracle.com/rest/v1/interfaceCatalogs/restCatalog"
  } ] ],
  "interfaceType" : "REST"
}
```


SOAP CATALOG

The SOAP Catalog is the SOAP version of the interface type specific catalog resource. The link is seen in the sample above:
`http://xxx.us.oracle.com/rest/v1/interfaceCatalogs/soapCatalog?group=client.cloud`

SOAP Catalog Node	Description
/items	As part of the description for each service listed, the **id**, **name**, **description**, and **lifecycle** are displayed.
items/links	The "catalog" link points to this SOAP catalog resource with the "`groups=client.cloud`" query parameter. The "canonical" and “self” links point to the SOAP catalog resource with all details of the SOAP service description. The “WSDL” link, if shown, is a link to the Service WSDL.
/links	The "canonical" and “self” links point to the SOAP catalog resource with all details of the SOAP resource metadata URIs.

REST CATALOG

The REST Catalog is the REST version of the interface type specific catalog resource. The link is seen in the sample above:

`http://xxx.us.oracle.com/rest/v1/metadata-catalog`

REST Catalog Node	Description
/items/name	The unique name of a given REST resource.
items/links	The “alternate” link points to the REST resource metadata URIs for the given REST resource name, along with the schema. The schema follows Oracle REST standards. The "canonical" link points to the REST catalog resource metadata URIs for the given REST resource name. The “describes” link is a link to the item itself, which is the run-time endpoint of the service.
/links	The "canonical" and “self” links point to the REST catalog resource with all details of the REST resource metadata URIs.

ORACLE E-BUSINESS SUITE (EBS) INTEGRATION

CPQ Cloud can now be integrated with four Oracle E-Business Suite (EBS) applications to streamline the quoting and order creation process. New CPQ Cloud-EBS integrations include:

- EBS Customer (CDM)
- EBS Order Management
- EBS Inventory On Hand Balance (optional)
- EBS Material Reservation (optional)

The EBS Customer and EBS Order Management integrations have multiple interdependencies, so both integrations must be implemented with CPQ Cloud in order to use functionality from either integration. Integrations with EBS Inventory On Hand Balance and EBS Material Reservation are optional add-ons to existing integrations with EBS Customer and EBS Order Management, and do not function if they are the only EBS applications integrated with CPQ Cloud.

EBS CUSTOMER (CDM)

Integration with EBS Customer allows CPQ Cloud sales users to invoke actions to retrieve customer data from EBS Customer and add it to a Transaction, eliminating manual entry and ensuring accuracy. Error messages can be displayed when a sales user enters a company name that does not exist in EBS Customer.

EBS ORDER MANAGEMENT

Integration with EBS Order Management allows CPQ Cloud sales users to create, update, and cancel orders in EBS Order Management from within a CPQ Cloud Transaction. After relevant products have been added to a Transaction and approvals have been obtained, the CPQ Cloud sales user can invoke Create Order, Update Order, Cancel Order, and Cancel Line (to cancel a single line item on an existing order) to perform operations in EBS Order Management as needed.

EBS INVENTORY ON HAND BALANCE

Integration with Inventory On Hand Balance allows CPQ Cloud sales users to check the availability of line items for simple products before an order is created. The Query Quantity action is used to check the inventory/availability of line items as stored in Inventory On Hand Balance. Validation rules can be created to prevent order creation based on inventory. Additionally, Inventory On Hand Balance can be checked upon update operations in CPQ Cloud, so that current inventory statuses are automatically sent to CPQ Cloud if line items are added or updated on a Transaction.

EBS MATERIAL RESERVATION

Integration with Material Reservation allows CPQ Cloud sales users to utilize the material reservation functionality of EBS for simple products. Once an order is created, line items can be reserved using the Reserve action within a CPQ Cloud Transaction. Upon cancellation of an entire order or of one or more line items, the Relieve or Relieve Line actions can be performed to relieve the reservation done against the order or line items, respectively.

STEPS TO ENABLE

CPQ CLOUD

CPQ Cloud-EBS integrations can be implemented on any 2014 R2 or later CPQ Cloud site that has the base Reference Application deployed. A combination of Attributes, Actions, Library Functions, Step Transitions, Formulas, Rules, and Data Tables must be created within CPQ Cloud to enable EBS integrations.

In the future, Migration Packages will be released for the EBS integrations so that admins can download the components needed for integration directly to CPQ Cloud. In the present, detailed instructions for creating the necessary components manually on top of the base Reference Application can be found in the CPQ Cloud-EBS Integration White Papers (see the Key Resources section).

E-BUSINESS SUITE

Individual EBS applications must be on EBS Release 12 or later in order to integrate with CPQ Cloud. Additionally, several EBS web services must be running to enable integration. Enabling these web services requires an Internet Service Gateway (ISG) to be running on the EBS environment. See the CPQ Cloud-EBS Integration White Papers (see the Key Resources section) for a complete list of necessary EBS web services.

TIPS AND CONSIDERATIONS

Legacy customers that do not have the base Reference Application deployed can still integrate CPQ Cloud with EBS, but additional components must be created within CPQ Cloud. Contact your Customer Success Manager for more information.

KEY RESOURCES

My Oracle Support contains the following documents to assist with CPQ Cloud-EBS integration implementations:

- CPQ Cloud & E-Business Suite Integration Implementation Overview (PowerPoint)
- Implement CPQ-EBS CDM Reference Integration (white paper)
- Implement CPQ-EBS Order Management Integration (white paper)
- Implement CPQ-EBS Inventory On Hand Balance Integration (white paper)
- Implement CPQ-EBS Material Reservation Reference Integration (white paper)

ORACLE COMMERCE ON PREMISE INTEGRATION

As of version 2014 R2, CPQ Cloud supports a standardized integration to Oracle Commerce On Premise (Commerce). This integration combines the eCommerce capabilities of Commerce with the advanced quoting engine and automated approvals process of CPQ Cloud.

In a CPQ Cloud-Commerce integrated workflow, a customer creates a shopping cart in Commerce and requests a quote. A CPQ Cloud sales user will receive the request for a quote from Commerce. The CPQ Cloud sales user then prepares the quote, which can include discounting, approvals, and proposal document generation. When the quote is finalized, the CPQ Cloud sales user syncs the quote back to Commerce and the customer, in Commerce, can see the current order and shopping cart with the latest pricing info and a status of "Quoted."

If the quote is unsatisfactory to the customer, additional requests for quotes can be sent to CPQ Cloud as many times as necessary. Once the customer is satisfied with the quote, order creation and fulfillment can take place in either CPQ Cloud or Commerce, depending on which product is used for order processing.

STEPS TO ENABLE

CPQ CLOUD

CPQ Cloud-Commerce integration can be implemented on any 2014 R2 or later CPQ Cloud site that has the base Reference Application deployed. Attributes, Actions, Library Functions, Step Transitions, and Data Tables must be created within CPQ Cloud to enable integration with Commerce.

In the future, a Migration Package will be released for Commerce integration so that admins can download the components needed for integration directly to CPQ Cloud. In the present, detailed instructions for creating these components manually on top of the base Reference Application can be found in the white paper on CPQ-ATG Integration (see the Key Resources section).

COMMERCE ON PREMISE

Commerce must be on Release 11.1 in order to integrate with CPQ Cloud. A CPQ Cloud-specific reference integration module must be downloaded and installed on Commerce.

Additionally, several Commerce REST web services must be running to enable integration with CPQ Cloud. See the white paper on CPQ-ATG Integration (see the Key Resources section) for a complete list of necessary Commerce REST web services. These web services may require configuration work to be enabled. For more information about enabling Commerce web services, see the ATG Web Services Guide and the ATG Commerce Programming Guide.

TIPS AND CONSIDERATIONS

- Legacy customers that do not have the base Reference Application deployed can still integrate CPQ Cloud with Commerce, but additional components must be created within CPQ Cloud. Contact your Customer Success Manager for more information.
- 2015 R1 includes platform enhancements which enable embedding the CPQ configurator into the Commerce user interface. A white paper and a Migration Package will be released in the coming months to enable the implementation of this second phase of CPQ Cloud-Commerce integration.

KEY RESOURCES

This My Oracle Support page, focused on CPQ to Oracle Commerce (ATG) integrations, contains the following documents to assist with your CPQ Cloud-Commerce integration implementation:

- White Paper on CPQ-ATG Integration
- CPQ Cloud-Commerce On Premise Integration Implementation Overview (PowerPoint)

REST APIS FOR TRANSACTIONAL OBJECTS

CPQ Cloud now exposes transactional objects and Transaction data through REST APIs and RESTful standards. Adding to existing Web Services functionality that allows for Transactions to be created and updated via SOAP APIs, these REST APIs provide a new, modern way to access Transaction and line item information.

Exposing transactional objects through REST APIs promotes simpler API calls and more robust integrations using HTTP standards. Now, with appropriate HTTP Basic authentication, any other third-party system can query CPQ Cloud's REST APIs, get a response, and use the return data as needed. Additional resources allow credentialed third-party systems to create Transactions, and to update Transactions by invoking modify, version, and submit and approval actions in a Commerce Process through REST APIs.

With the exception of importing or exporting attachments, all Commerce operations that are supported by CPQ Cloud SOAP APIs are supported by CPQ Cloud REST APIs.

REST APIS

The endpoint for each REST API appends onto `http://{siteurl}`, where `{siteurl}` is the base URL of the CPQ Cloud site.

<table>
<tr><th colspan="3">Commerce Process API</th></tr>
<tr><td>Description</td><td colspan="2">API used for all Commerce Transaction-related REST operations, including:
Retrieving Transaction data for all Transactions, a subset of Transactions, or a single Transaction
Creating a Transaction
Updating a Transaction
Invoking a Commerce action on a Transaction
Removing line items from a Transaction</td></tr>
<tr><td>URI Endpoint</td><td colspan="2"><code>/rest/v1/commerceDocuments{ProcessVarName}{MainDocName}</code></td></tr>
<tr><td rowspan="2">Endpoint Parameter(s)</td><td><code>{ProcessVarName}</code></td><td>The variable name of the Commerce Process. The first character must be capitalized.</td></tr>
<tr><td><code>{MainDocName}</code></td><td>The variable name of the Main Document in the Commerce Process. The first character must be capitalized.</td></tr>
</table>

HTTP Method(s)	GET, POST, DELETE

Performance Logs API	
Description	API used for getting performance logs data.
URI Endpoint	`/rest/v1/performanceLogs`
HTTP Method(s)	GET

COMMERCE PROCESS REST API RESOURCES

- Get Transaction List (GET)
- Get Transaction (GET)
- Create Transaction (POST)
- Update Main (and Sub) Document Attributes (POST)
- Get Line Items (GET)
- Get Line Item (GET)
- Add Line Item (POST)
- Delete Line Item (DELETE)
- Update Sub Document Attributes (POST)

GET TRANSACTION LIST

Get Transaction List		
Description	Returns Transaction data for all Transactions or a subset of Transactions in a Commerce Process.	
URI Endpoint	`/rest/v1/commerceDocuments{ProcessVarName}{MainDocName}`	
Parameters	`{ProcessVarName}`	The variable name of the Commerce Process. The first character must be capitalized.
	`{MainDocName}`	The variable name of the Main Document in the Commerce Process. The first character must be

Get Transaction List		
		capitalized.
	Query specifications that follow CPQ Cloud query and pagination parameters syntax, and query specifications that follow a subset of MongoDB syntax can be used to organize or narrow return data. See the Query Specifications Syntax section for more information.	
HTTP Method(s)	GET	
Success Response	The JSON Transaction data of all Transactions in the Commerce Process, or a subset of Transactions, depending on the query.	
Sample URI Endpoint	`/rest/v1/commerceDocumentsNorthAmericaTransaction`	
Sample Request Payload	*None (nothing should be in the request payload)*	
Notes	• Only Commerce attributes that are also data columns will be returned in the JSON Transaction list data. • Transaction list queries support pagination and projection.	

GET TRANSACTION

Get Transaction		
Description	Returns Transaction data for a specific Transaction in the Commerce Process.	
URI Endpoint	`/rest/v1/commerceDocuments{ProcessVarName}{MainDocName}/{id}`	
Parameters	`{ProcessVarName}`	The variable name of the Commerce Process. The first character must be capitalized.
	`{MainDocName}`	The variable name of the Main Document in the Commerce Process. The first character must be

Get Transaction		
		capitalized.
	`{id}`	The Transaction ID of the Transaction
	Query specifications that follow CPQ Cloud query and pagination parameters syntax, and query specifications that follow a subset of MongoDB syntax can be used to organize or narrow return data. See the Query Specifications Syntax section for more information.	
HTTP Method(s)	GET	
Success Response	The JSON Transaction data of the Transaction.	
Sample URI Endpoint	`/rest/v1/commerceDocumentsNorthAmericaTransaction/12345678`	
Sample Request Payload	*None (nothing should be in the request payload)*	
Notes	• All of a Transaction's Commerce attributes will be returned in the JSON Transaction data, not just attributes that are also data columns (as with a Transaction list query). • Sub document attributes will also be returned if the expand parameter is used. See the Query Specifications Syntax section for more information. • Transaction queries support pagination and projection.	

CREATE TRANSACTION

Create Transaction	
Description	Creates a new Transaction in the Commerce Process with part line items as specified in the request payload.

<table>
<tr><th colspan="3">Create Transaction</th></tr>
<tr><td>URI Endpoint</td><td colspan="2"><code>/rest/v1/commerceDocuments{ProcessVarName}{MainDocName}</code></td></tr>
<tr><td rowspan="2">Parameters</td><td><code>{ProcessVarName}</code></td><td>The variable name of the Commerce Process. The first character must be capitalized.</td></tr>
<tr><td><code>{MainDocName}</code></td><td>The variable name of the Main Document in the Commerce Process. The first character must be capitalized.</td></tr>
<tr><td>HTTP Method(s)</td><td colspan="2">POST</td></tr>
<tr><td>Success Response</td><td colspan="2">The JSON Transaction data of the new Transaction.</td></tr>
<tr><td>Sample URI Endpoint</td><td colspan="2"><code>/rest/v1/commerceDocumentsNorthAmericaTransaction</code></td></tr>
<tr><td>Sample Request Payload</td><td colspan="2"><code>{
    "lineItem":{
    "items":[
    {
          "_part_number":"part10",
          "_price_quantity":"1",
          "_price_book_var_name":
"_default_price_book"
       } ,
 {
          "_part_number":"part1",
          "_price_quantity":"5",
       }
   ]
 }</code></td></tr>
<tr><td>Notes</td><td colspan="2">When creating a Transaction through a REST call, only a line item’s part number, quantity, and Price Book can be given values. The line items’ Price Book only needs to be declared when declaring the first line item in the payload. Other updateable sub document attributes can be given values through a subsequent POST call by invoking a Commerce action.
Similar to behavior in the CPQ Cloud user interface, Transactions created through REST calls will exist in a temporary state until they are updated. In order to view a REST-call-created Transaction in the Transaction manager, a subsequent UPDATE call must be made to update the Transaction.</td></tr>
</table>

UPDATE MAIN (AND SUB DOC) DOCUMENT ATTRIBUTES

Update Main (and Sub Doc) Document Attributes		
Description	Invokes a Commerce action and updates main document attribute values on a Transaction as specified in the payload. Sub document attributes for specific line items can also be updated if document numbers for each line item are included in the payload.	
URI Endpoint	`/rest/v1/commerceDocuments{ProcessVarName}{MainDocName}/{id}/actions/{actionVarName}`	
Parameters	`{ProcessVarName}`	The variable name of the Commerce Process. The first character must be capitalized.
	`{MainDocName}`	The variable name of the Main Document in the Commerce Process. The first character must be capitalized.
	`{id}`	The Transaction ID of the Transaction.
	`{actionVarName}`	The variable name of the action that will be invoked.
HTTP Method(s)	POST	
Success Response	The JSON Transaction data of the Transaction that was updated.	
Sample URI Endpoint	`/rest/v1/commerceDocumentsNorthAmericaTransaction/12345678/actions/save`	
Sample Request Payload	`{ "documents" : { "projectName" : "Company Name Quote #1234", "quoteDescription" : "Quote for Company Name" } }`	
Notes	• Only modify, version, and submit and approval actions can be invoked by a REST call.	

<table>
<tr><th colspan="2">Update Main (and Sub Doc) Document Attributes</th></tr>
<tr><td></td><td>REST calls that invoke a Commerce action do not have to have a request payload. If no request payload is present, the action will be invoked and no attribute values will be modified directly as a result of the REST call.
Any main document attribute can be updated using this resource.
Most updateable sub document attributes can be updated using this resource.
When invoking an approval action, the variable name of the approval reason must be referenced in the request payload. A comment can also be specified in the request payload, but a comment is not required.</td></tr>
</table>

GET LINE ITEMS

<table>
<tr><th colspan="3">Get Line Items</th></tr>
<tr><td>Description</td><td colspan="2">Returns line item data for all line items on a Transaction as specified in the URI endpoint.</td></tr>
<tr><td>URI Endpoint</td><td colspan="2"><code>/rest/v1/commerceDocuments{ProcessVarName}{MainDocName}/{id}/{subDocName}</code></td></tr>
<tr><td rowspan="5">Parameters</td><td><code>{ProcessVarName}</code></td><td>The variable name of the Commerce Process. The first character must be capitalized.</td></tr>
<tr><td><code>{MainDocName}</code></td><td>The variable name of the Main Document in the Commerce Process. The first character must be capitalized.</td></tr>
<tr><td><code>{id}</code></td><td>The Transaction ID of the Transaction.</td></tr>
<tr><td><code>{subDocName}</code></td><td>The variable name of the sub document.</td></tr>
<tr><td colspan="2">Query specifications that follow CPQ Cloud query and pagination parameters syntax, and query specifications that follow a subset of MongoDB syntax can be used to organize or narrow return data. See the Query Specifications Syntax section for more information.</td></tr>
</table>

Get Line Items	
HTTP Method(s)	GET
Success Response	JSON data for all line items on the Transaction.
Sample URI Endpoint	`/rest/v1/commerceDocumentsNorthAmericaTransaction/12345678/lineItem`
Sample Request Payload	*None (nothing should be in the request payload)*

GET LINE ITEM

Get Line Item		
Description	Returns line item data for a specific line item as specified in the URI endpoint.	
URI Endpoint	`/rest/v1/commerceDocuments{ProcessVarName}{MainDocName}/{id}/{subDocName}/{docNum}`	
Parameters	`{ProcessVarName}`	The variable name of the Commerce Process. The first character must be capitalized.
	`{MainDocName}`	The variable name of the Main Document in the Commerce Process. The first character must be capitalized.
	`{id}`	The Transaction ID of the Transaction.
	`{subDocName}`	The variable name of the sub document.
	`{docNum}`	The document number of the line item to be updated.
	Query specifications that follow CPQ Cloud query and pagination parameters syntax, and query specifications that follow a subset of MongoDB syntax can be	

Get Line Item	
	used to organize or narrow return data. See the Query Specifications Syntax section for more information.
HTTP Method(s)	GET
Success Response	JSON data for the line item.
Sample URI Endpoint	`/rest/v1/commerceDocumentsNorthAmericaTransaction/12345678/lineItem/2`
Sample Request Payload	*None (nothing should be in the request payload)*
Notes	Only one line item can be returned at a time using the resource.

ADD LINE ITEM

Add Line Item		
Description	Adds a line item to an existing Transaction as specified in the payload.	
URI Endpoint	`/rest/v1/commerceDocuments{ProcessVarName}{MainDocName}/{id}/{subDocName}`	
Parameters	`{ProcessVarName}`	The variable name of the Commerce Process. The first character must be capitalized.
	`{MainDocName}`	The variable name of the Main Document in the Commerce Process. The first character must be capitalized.
	`{id}`	The Transaction ID of the Transaction.
	`{subDocName}`	The variable name of the sub document.

Add Line Item	
HTTP Method(s)	POST
Success Response	JSON data for the newly added line item.
Sample URI Endpoint	`/rest/v1/commerceDocumentsNorthAmericaTransaction/12345678/lineItem`
Sample Request Payload	`{ "_part_number":"part1", "_price_quantity" : "25" }`
Notes	• Only one line item can be added at a time using the resource. • When adding a line item to a Transaction through a REST call, only a line item’s part number, quantity, and Price Book attributes can be given values. Other updateable sub document attributes can be given values through a subsequent POST call by invoking a Commerce action.

DELETE LINE ITEM

Delete Line Item		
Description	Removes a line item from an existing Transaction.	
URI Endpoint	`/rest/v1/commerceDocuments{ProcessVarName}{MainDocName}/{id}/{subDocName}/{docNum}`	
Parameters	`{ProcessVarName}`	The variable name of the Commerce Process. The first character must be capitalized.
	`{MainDocName}`	The variable name of the Main Document in the Commerce Process. The first character must be capitalized.
	`{id}`	The Transaction ID of the Transaction.

Delete Line Item		
	`{subDocName}`	The variable name of the sub document.
	`{docNum}`	The document number of the line item to be updated.
HTTP Method(s)	DELETE	
Success Response	HTTP 200 OK	
Sample URI Endpoint	`/rest/v1/commerceDocumentsNorthAmericaTransaction/12345678/lineItem/2`	
Sample Request Payload	*None (nothing should be in the request payload)*	
Notes	Only one line item can be deleted at a time using this resource.	

UPDATE SUB DOCUMENT ATTRIBUTES

Update Sub Document Attributes		
Description	Invokes a Commerce action and updates sub document attribute values for a specific line item on a Transaction as specified in the payload.	
URI Endpoint	`/rest/v1/commerceDocuments{ProcessVarName}{MainDocName}/{id}/{subDocName}/{docNum}/actions/{actionVarName}`	
Parameters	`{ProcessVarName}`	The variable name of the Commerce Process. The first character must be capitalized.
	`{MainDocName}`	The variable name of the Main Document in the Commerce Process. The first character must be capitalized.

Update Sub Document Attributes		
	`{id}`	The Transaction ID of the Transaction.
	`{subDocName}`	The variable name of the sub document.
	`{docNum}`	The document number of the line item to be updated.
	`{actionVarName}`	The variable name of the action that will be invoked.
HTTP Method(s)	POST	
Success Response	JSON data displaying the updated line item details.	
Sample URI Endpoint	`/rest/v1/commerceDocumentsNorthAmericaTransaction/12345678/lineItem/2/actions/save`	
Sample Request Payload	`{ "documents" : { "_price_quantity" : "74" } }`	
Notes	• Only modify actions can be invoked using this resource. • REST calls that invoke a Commerce action do not have to have a request payload. If no request payload is present, the action will be invoked and no attribute values will be modified directly as a result of the REST call. • Most updateable sub document attributes (of a specific line item) can be updated using this resource.	

PERFORMANCE LOGS REST API RESOURCE

Get Performance Logs Data	
Description	Returns performance logs data.
URI Endpoint	`/rest/v1/performanceLogs`

Get Performance Logs Data	
Parameters	Query specifications that follow CPQ Cloud query and pagination parameters syntax, and query specifications that follow a subset of MongoDB syntax can be used to organize or narrow return data. See the Query Specifications Syntax section for more information.
HTTP Method(s)	GET
Success Response	JSON performance logs data.
Sample URI Endpoint	`/rest/v1/performanceLogs?q={$and:[{component:{$eq:'superuser'}},{$or:[{event:{$eq:"Login"}},{browserTime:{$exists:true}}]}]}&orderby=eventDate:desc`
Sample Request Payload	*None (nothing should be in the request payload)*
Notes	• Dates can be used in query specifications. • Credentials for a FullAccess user must be in the Header of a performance logs call. No other user types can perform performance logs calls.

REQUEST PAYLOAD SYNTAX

Request payloads must be written in JSON and adhere to standard JSON syntax.

JSON Syntax Rule	Relation to CPQ Cloud REST Calls	Example

Colons (:) separate a name from its value in a name-value pair.	Colons must be placed between an attribute's variable name and its value, and between an object and any values that are set within the object.	`{ "documents" : {`
		`  "_price_quantity" : "74"`
		`  }`
		`}`

Curly braces ({})	The entire payload, as well	`{ "documents" : {`

JSON Syntax Rule	Relation to CPQ Cloud REST Calls	Example

hold objects.	as all objects within the payload, must be held by their own curly braces. The main document (documents) and the sub document {subDocName} are both objects.
	Note: "documents" will always be used to refer to the main document, regardless of what the main document's name is. To reference the sub document, use "{subDocName}", where {subDocName} is the variable name of the sub document.
		`"_price_quantity" : "74"`
		`}`
		`}`

Square brackets ([]) hold arrays.	Each line item is an array, and therefore must have its value defined within square brackets.	`{`
		`"lineItem":{`
		`"items":[`
		`{`
		`"_part_number":"part10",`
		`"_price_quantity":"1",`
		`"_price_book_var_name":`
		`"pb1"`
		`}`
		`]`
		`}`

Commas (,) separate data.	Attribute name-value pairs must be separated by commas. Additionally, line items must be separated by commas.	`{`
		`"lineItem":{`
		`"items":[`
		`{`
		`"_part_number":"part10",`
		`"_price_quantity":"1",`
		`"_price_book_var_name":`
		`"pb1"`
		`} ,`
		`{`
		`"_part_number":"part1",`
		`"_price_quantity":"5",`

JSON Syntax Rule	Relation to CPQ Cloud REST Calls	Example

		`}`
		`]`
		`}`

QUERY SPECIFICATIONS SYNTAX

When query REST calls need to be more specific, CPQ Cloud can interpret query specifications that follow CPQ Cloud query and pagination parameters syntax (specified below), and query specifications that follow a subset of MongoDB syntax.

Important: Not all MongoDB syntax can be interpreted by CPQ Cloud. See the MongoDB Query Specifications section for more information.

QUERY AND PAGINATION PARAMETERS RULES

- The parameters list must be separated from the URI endpoint of the REST resources by a "?"
- Each parameter in the parameters list must be separated by an "&"
- Each parameter must be connected to its parameter specification by an "="
- Parameters can appear in any order in the list

QUERY AND PAGINATION PARAMETERS URL FORMAT

```
{resourceURI}?{param}={paramSpec}&{param}={paramSpec}&{param}={paramSpec}
```

URL Parameter	Description
`{resourceURI}`	The URI endpoint of the REST API resource.
`{param}`	A query parameter (see the Query Parameters and Pagination Parameters lists below for parameter names, descriptions, and examples).
`{paramSpec}`	The parameter specification of the preceding parameter.

QUERY PARAMETERS

Query Parameter	Description	Example
`fields`	Specifies a comma-separated list of fields to be included in	`fields=node,eventDate,applicationVersion`

Query Parameter	Description	Example
	response. **Note**: Force-active fields are always included in the response.	
`q`	Declares a query specification expression in MongoDB format. See the MongoDB Query Specifications section for more information.	`q={createdBy:'Matt'}`
`orderby`	Specifies a comma-separated list of pairs to order the response by.	`orderby=node,eventDate:desc,applicationVersion:asc`

PAGINATION PARAMETERS

Pagination Parameter	Description	Example
`limit`	Specifies the pagination limit. If no limit is specified, a pagination limit of 1000 will be used. If a limit greater than 1000 is specified, 1000 will be used as the pagination limit.	`limit=2`
`offset`	Specifies the offset in the record set to start the response from. **Note**: Usually used in conjunction with limit parameter to obtain the next set of records.	`offset=2`
`totalResults`	Specifies that the total count of records should be included in the response when doing pagination. Always will be equal to `true`, because if `totalResults` is not specified, the total count of records will not be included in the response. **Note:** Only effective when `limit` or `offset` are specified.	`totalResults=true`

Important: When limit=1, the offset parameter is ignored in the query specifications.

MONGODB QUERY SPECIFICATIONS

When a q parameter is introduced within query parameters, CPQ Cloud will interpret the subsequent query specification as a JSON construct following MongoDB query syntax. The MongoDB expression can contain a single condition, or multiple conditions that are combined with a conjunction operator.

Important: `$and` and `$or` are the only MongoDB conjunction operators that can be interpreted by CPQ Cloud.

Each condition must be expressed as a name-value pair, using the following format:

`{[varName]:{$[op]’[value]’}}`

Condition Parameter	Description
`[varName]`	The variable name of the attribute being used in the condition.
`[op]`	The comparison operator to relate the attribute with an attribute value.
`[value]`	The value of the attribute to relate to the comparison operator

Important: The following MongoDB comparison operators are the only comparison operators that can be interpreted by CPQ Cloud.

Comparison Operator	Description	Example
`eq`	Equals (=)	`q={createdBy:{$eq: 'Matt'}}`
`ne`	Not equals (<>)	`q={createdBy:{$ne: 'Matt'}}`
`gt`	Greater than (>)	`q={quantity:{$gt: '100'}}`
`gte`	Greater than or equals (>=)	`q={quantity:{$gte: '100'}}`
`lt`	Less than (<)	`q={quantity:{$lt: '100'}}`
`lte`	Less than or equals (<=)	`q={quantity:{$lte: '100'}}`

Comparison Operator	Description	Example
`exists`	exists true = IS NOT NULL exists false = IS NULL	`q={createdBy:{$exists:true}}`

For more information on MongoDB syntax, see MongoDB's Query Documents documentation.

AUTHENTICATION

CPQ Cloud uses HTTP Basic authentication to authenticate REST calls from third-party systems. When making a call to a CPQ Cloud REST API, the third-party system's REST client must have encrypted CPQ Cloud login credentials in the Header and an Accept Header that both adhere to HTTP Basic authentication standards. The Accept Header must be set to `application/schema+json` to see the detailed schema of the resource.

REST APIS METADATA

Metadata for all REST APIs can be accessed directly by appending `/rest/v1/metadata-catalog` to a site's base URL. Admins can use this metadata to better inform custom API calls. REST API metadata can only be accessed by currently-logged-in CPQ Cloud FullAccess users.

Specific metadata for each individual CPQ Cloud REST API can be accessed through the Interface Catalogs. See the Interface Catalogs section for more information.

JSON TRANSACTION DATA

Accessing a `commerceDocuments{processVarName}{MainDocName}` REST API's URI endpoint directly reveals all Transaction data for the given Commerce Process in JSON form. While building API calls to retrieve or update Transaction data, admins can use these pages to see how CPQ Cloud references Transaction data in JSON.

JSON Transaction data can only be accessed by currently-logged-in CPQ Cloud users. Each user that accesses JSON Transaction data will only see data for Transactions that the user has access to in the Transaction Manager. JSON Transaction data can be loaded into a third-party JSON viewer for simpler viewing.

Use the URL and parameters below to access a Commerce Process's JSON Transaction data:

URL	`/rest/v1/commerceDocuments{ProcessVarName}{MainDocName}`	
Parameters	`{ProcessVarName}`	The variable name of the Commerce Process. The first character must be capitalized.
	`{MainDocName}`	The variable name of the Main Document in the Commerce Process. The first character must be

		capitalized.

Important: The following system attributes will have an "_" prepended on to their variable names in the JSON Transaction data: supplier_company_name, last_document_number, buyer_company_name, document_var_name, currency_pref, step_var_name, id, process_var_name, date_added, and date_modified.

JSON LINE ITEM DATA

JSON data for a single line item on a specific Transaction can be accessed directly by currently-logged-in CPQ Cloud users. While building API calls to retrieve or update line item data, admins can use these pages to see how CPQ Cloud references line item data in JSON.

Each user that accesses JSON line item data will only be able to see the data if they have access to the Transaction being referenced. JSON Transaction data can be loaded into a third-party JSON viewer for simpler viewing.

Use the URL and parameters below to access a line item's JSON data:

URL	`/rest/v1/commerceDocuments{ProcessVarName}{MainDocName}/{id}/{subDocName}/{docNum}`	
Parameters	`{ProcessVarName}`	The variable name of the Commerce Process. The first character must be capitalized.
	`{MainDocName}`	The variable name of the Main Document in the Commerce Process. The first character must be capitalized.
	`{id}`	The Transaction ID of the Transaction.
	`{subDocName}`	The variable name of the sub document.
	`{docNum}`	The document number of the line item to be updated.

Important: The following system attributes will have an "_" prepended on to their variable names in the JSON line item data: document_number, id, document_var_name, date_added, bs_id, and date_modified.

STEPS TO ENABLE

REST APIs for transactional objects are automatically available on all 2015 R1 sites.

TIPS AND CONSIDERATIONS

Process actions cannot be invoked through a REST API.

KEY RESOURCES

MongoDB Query Documents

GENERAL INTEGRATION ENHANCEMENTS

CUSTOM CONFIGURATION INTEGRATION PAYLOAD

Configuration integrations now allow admins to define a payload using a BML editor, and the Configuration XML as inputs.

CONFIGURATION INTEGRATION REDIRECT URL

The "Endpoint URL" on the Product Family's Integration page can be used to define the URL which the user is redirected to upon triggering the integration action.

TIPS AND CONSIDERATIONS

The length of the `sessionId` may have changed. If you are using this parameter, confirm that it is not being truncated, or that it has to be a certain length.

SECURITY ENHANCEMENTS

REFERRER HEADERS FOR LOGIN CALLS

Enhanced security for the CPQ login requires that the correct referrer header exist for all login calls using direct CPQ login functionality. This security enhancement will block login requests that have incorrect or missing referrer information.

This will not affect direct login functionality or punch-ins from partner sites like CRM systems. However, there are different browser plugins which are known to block the referrer header. If a user is encountering this issue, disable the plugins when using the CPQ site.

SECURE URL ADDRESSES

CPQ Cloud has added additional security to all CPQ Cloud URLs.

If a user accesses CPQ Cloud with a URL containing `http://` (instead of `https://`), or the URL does not use any http designation, the request is automatically redirected to the `https://` URL. For example, URLs like `http://one.bigmachines.com` or `one.bigmachines.com` will automatically be redirected to `https://one.bigmachines.com`.

Certain references to the site using a non-secure protocol (`http` instead of `https`) are no longer supported. The following items may no longer work as expected:

- SOAP calls
- REST calls
- References to other files
- Connections to other CPQ Cloud sites for migration
- Some existing custom integrations and third party tools

Important: All hard-coded CPQ Cloud URLs that reference `http` must be changed to reference `https` in order for the items above to behave as expected.

BEHAVIOR FOR A 404 ERROR

Previously, for the majority of 404 errors, CPQ Cloud would redirect the user to the homepage. This redirection no longer occurs, and users will now see a 404 error page.

This would occur for a link missing its destination.

PRE-UPGRADE CONSIDERATIONS

KNOWN FUNCTIONALITY

ATTRIBUTES

You can no longer create an attribute variable with the name `bs_id`. Existing attribute variables with this name will still function, but avoid using this name.

EMAIL TEMPLATES

The Commerce connection to Email Templates has changed. Instead of using the variable name of the template, the name of the template will be used.

If two or more templates have the same name, they are automatically renamed during the upgrade. The variable name is prepended to the template name. This allows admins to differentiate between the two templates. If necessary, the name is truncated to fit the size limit of the label.

The old variable name of the template is no longer displayed to the user.

FONTS

The SimSun, NSimSun, and SimHei fonts are no longer supported. When printing PDFs (in both Apache FOP and Antenna House), any text using the deprecated fonts will be replaced with the font Arial Unicode MS.

Note: Text with the font type Arial Unicode MS cannot be formatted in bold or italic in any output type. If bolding or italics are applied to Arial Unicode MS text, the text will appear bold/italic in the Document Designer/Email Templates editors, but the text will not be bold/italic in the output.

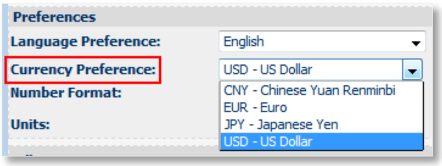
As needed, you can modify existing documents to use a font other than the default font.

In the Document Designer editor and the Email Template editor, the default font for new text is Helvetica.

SESSION CURRENCY

This functionality is no longer available. Instead, by default, Session Currency is now available only as a Web Service or as dynamic data in email and document templates. It is no longer available on the UI; the **Login**, **User Profile**, and **General Site Option** pages no longer contain any options for Session

Currency. A currency can still be specified by the **Currency Preference** option on a user's **My Profile** page, and can be manually changed for any given Transaction.



Session Currency is still respected in the following situations:

- Dynamic Data in the Document Engine
- Attribute values in the Document Designer
- Attribute values in Email Templates
- A variable in Web Services
- A query parameter in URL queries

SECURE URL ADDRESSES

Confirm that all references to your CPQ Cloud URL, such as in customizations or third-party tools, use `https://` in the URL.

TRANSLATION

For some system defined messages and components, some strings have been removed and others have been added. If strings have been previously translated, some strings will no longer appear and other strings will appear in English. The strings that appear in English are new, and need to be translated.

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

MIGRATION

MIGRATION CENTER

When migrating from one site to another using the Migration Center, both sites must be on 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. 2015 R1
- "Minor release" = A release update, e.g. 2015 R1 Update 1

FUNCTIONAL KNOWN ISSUES

2015 R1 FUNCTIONAL KNOWN ISSUES DOCUMENT

For information on bugs fixed for the 2015 R1 product release, refer to the 2015 R1 Functional Known Issues document, available on My Oracle Support and the Oracle CPQ Cloud product Help site.

POST-UPGRADE CONSIDERATIONS

All test instances should be upgraded and tested on Oracle CPQ Cloud 2015 R1 before upgrading production instances.

BROWSER SUPPORT

When using standard functionality, 2015 R1 is compatible with:

Browsers for desktop version of site:

- User-Side: IE11, Chrome 43.x, Firefox 34.x
- Admin-Side: IE11, Firefox 34.x

Browsers for mobile version of site:

- iOS 8.x—Safari 8.x
  Supported Screen Resolution: 2048 x 1536
- Android 4.4 Kit Kat—Chrome 43.x
  Supported Screen Resolution: 2560 x 1600

Important: Sites created with additional JavaScript, alternate CSS, or other custom functionality, may no longer be compatible with our supported browsers. Please open a ticket on My Oracle Support to determine if workarounds and minor fixes are available. Add-on work may be required to support customizations.

TRAINING

Please refer to release notes for all versions between your current version and the version that you are upgrading to in order to see all new functionality and known issues.

It is strongly recommended that users refer to the help documentation to become familiar with the new features introduced in Oracle CPQ Cloud 2015 R1. For additional help, see My Oracle Support.

Any information not explicitly mentioned in the release notes as being supported by the software can be verified against the product help for Oracle CPQ Cloud 2015 R1 and/or with the Oracle CPQ Cloud Consulting team.

ADDITIONAL INFORMATION

For more information on Oracle CPQ Cloud, visit the Oracle CPQ Cloud documentation site.

REVISION HISTORY

This document will continue to evolve as existing sections change and new information is added. All updates are logged below, with the most recent updates at the top.

Date	What's Changed	Notes
7/22/14	Document creation	
7/23/14	Added information on Apache FOP and Document Designer.	Information added in the introductory section of Document Designer.
8/17/15	Added information on Referrer Headers for LOGIN calls, Secure URL Addresses, and behavior for 404 errors. Added information about Microsoft Word.	Information added in the sections Security Enhancements and Document Designer Tips and Tricks.

DISCLAIMER

These Release Notes are provided for high-level informational purposes only and are not intended to function as a specification or to replace the Product Help and/or User Guide. Upgrading to a subsequent release may require Commerce Processes, Configuration, and/or global function settings to be re-deployed. Modifications to integration XSL files and/or APIs also may be required.