

**APTTUS<sup>®</sup>**

## CPQ on Salesforce Summer 2019 User Guide

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## About This Guide

*Apttus CPQ on Salesforce User Guide* explains how to use Apttus Configuration, Pricing, and Quoting (CPQ) to manage your organization's and your customers' configuring, pricing, and quoting requirements.

Topic	Description
What's Covered	This guide walks the Sales Representative through the entire process of configuring, pricing, and quoting. It provides conceptual information, step-by-step instructions, and use cases for the features provided by Apttus CPQ.
Primary Audience	<ul style="list-style-type: none"> <li>• Sales Representative</li> <li>• Collaborator (such as a product owner, manager, factory manager)</li> </ul>
IT Environment	Refer to the latest <i>CPQ on Salesforce Release Notes</i> for information on System Requirements and Supported Platforms.
Updates	For a comprehensive list of updates to this guide for each release, see the <a href="#">What's New</a> topic.
Other Resources	<ul style="list-style-type: none"> <li>• <i>CPQ on Salesforce Administrator Guide</i>: Refer to this guide for information on configuring Apttus CPQ.</li> <li>• <i>CPQ on Salesforce Release Notes</i>: Refer to this document for information on system requirements and supported platforms, new features and enhancements, resolved issues, and known issues for a specific release.</li> </ul>

This guide describes the following tasks:

- Create quotes/proposals
- Configure products from the catalog
- Price products and apply adjustments
- Work with cart
- Finalize quotes/proposals
- Manage assets
- Manage services

Before using CPQ, you must be familiar with the following:

- Basic knowledge of Salesforce
- Salesforce and Apttus terms and definitions

If you are new to Apttus CPQ, begin here: [Get Started](#) and [About Apttus Configure Price Quote](#).

## What's New

The following table lists changes in the documentation to support each release.

Release	Topic	Description
Summer 2019 Rev B	<a href="#">About Apttus Configure Price Quote</a>	Updated the description in the topic.
Summer 2019 Rev A	<a href="#">Changing a Configurable Bundle Asset</a>	Updated the topic with information about applying the bundle price ruleset when you amend a bundle and add a new option.
Summer 2019	<a href="#">Applying Promotions on the Products in the Shopping Cart</a>	Updated the topic with information about reapplying a promotion.
	<a href="#">Contract Pricing</a>	Updated the topic with information about adjustments applied as part of contract price and fallback method when contract list price is unavailable.
	<a href="#">Managing Views for Assets Grid</a>	Updated the topic with information about views on the Assets grid created by the administrator.
	<a href="#">Renewing an Asset</a>	Updated the topic with information about renewing an asset using current contract value.
	<a href="#">Terminating an Asset</a>	Updated the topic with information about validating the termination date and displaying contract term billing details.
	<a href="#">Favorite Configurations on the Cart</a>	Updated the topic with information about categorizing favorite configuration using <b>Favorite Filters</b> .
	<a href="#">Searching a Product from the Catalog</a>	Updated the topic with information about counter on mini-cart and recommendation icons.
Spring 2019 Rev A	<a href="#">Terminating an Asset</a>	Updated the topic with information about showing net price of the current year asset on the termination page.
Spring 2019	<a href="#">Searching a Product from the Catalog</a>	Updated the topic with information about actions products inheriting location of the condition products.
	<a href="#">Configuring a Product from the Catalog</a>	Updated the topic with information and a note about search functionality for options and attribute on the configuration page.
	<a href="#">Favorite Configurations on the Cart</a>	Updated the topic with information about saving constraint rule in favorite configuration.
	<a href="#">Working on the Configuration Request</a>	Updated the topic with the information about support for replacement and deletion of collaborated product



Release	Topic	Description
	<a href="#">Merging the Configurations in the Parent Cart</a>	Updated the topic with information about support for automatic child cart updates.
	<a href="#">Billing Schedules for Incremented Assets</a>	Updated the <a href="#">Increment Asset with Cotermiante Lines</a> topic with a use case for billing schedules.
	<a href="#">Splitting an Asset</a>	New topic. New feature for this release.
	<a href="#">Terminating an Asset</a>	Updated the topic with information about showing the original asset start date on the intermediate page UI.
	<a href="#">Assigning the configuration to the Collaborator or Queue</a>	Updated the topic with information about adding products to a collaboration request.
Winter 2018 Rev B	<a href="#">Creating the Price Ramp on the Cart Page</a>	Updated the topic. <ul style="list-style-type: none"> <li>Removed a limitation about Cart Grid UI.</li> <li>Removed the note about support for IE 11.</li> </ul>
	<a href="#">Billing for Assets</a>	Updated the topic with information about billing.
	<a href="#">Configuring Document Generation Preview Setup in Internet Explorer</a>	Updated the topic with a note that the feature is no longer supported.
	<a href="#">Applying Promotions on the Products in the Shopping Cart</a>	Moved the "Applying and Removing Promotions or Coupons on Line Items in Cart" topic from <i>CPQ on Salesforce Winter 2018 Administrator Guide</i> to this guide and merged the contents.
	<a href="#">Creating the Price Ramp on the Configuration Page</a>	This topic is removed because the feature is no longer available.
Winter 2018 Rev A	<a href="#">Splitting Large Cart</a>	This topic is removed because the Large Cart feature was not part of the Winter 2018 release.
Winter 2018	<a href="#">Configuring Service Products</a>	Updated the topic with information about cloning service line.
	<a href="#">Pricing Products</a>	Updated the topic with new options in Adjustment Type and a note to the <b>% Discount Off Lift</b> option.
	<a href="#">Assigning the configuration to the Collaborator or Queue</a>	Updated the topic with notes about access permissions being considered in the Collaboration Feature.
	<a href="#">Bucket Adjustments</a>	Updated the topic with a note about bucket adjustment applicable on the preceding bucket.

Release	Topic	Description
	<a href="#">Service Pricing</a>	Updated the topic with information about splitting the Related Line Items from Service Line.
	<a href="#">Configuring a Product from the Catalog</a>	Updated the topic with information about selecting products from a prompt.
	<a href="#">Favorite Configurations on the Cart</a>	Updated the topic with information about access permissions.
	<a href="#">Managing Views for Assets Grid</a>	New topic. New feature for this release.
	<a href="#">Performing Mass Update for Assets</a>	New topic. New feature for this release.
	<a href="#">Increment Asset with Coterminate Lines</a>	New topic. New feature for this release.
	<a href="#">Creating Quote/Proposals from Opportunities</a>	Updated the topic with information about purchase identifier.
Summer 2018	<a href="#">Bucket Adjustments</a>	Included a note about the creation of an adjustment line.
	<a href="#">Viewing Installed Products Page</a>	Changes to the Installed Products User Interface is added.
	<a href="#">Searching Assets</a>	Enhancements to the Search functionality are added.
	<a href="#">Viewing Service Products on the Installed Products page</a>	The Relate and relate Component flows are added.
	<a href="#">Service Pricing</a>	Service Configuration and pricing information are added.

## About Apttus Configure Price Quote

A quote or a proposal is a formal statement of promise that lists the products and services to be sold to a customer at a defined price. Quote creation involves configuring products and services, pricing them, and generating quotes based on predefined rules. Apttus Configure Price Quote (CPQ) is a sales tool for companies to generate quotes for orders quickly and accurately. CPQ produces accurate quotes making complex products, pricing, and business rules centralized, automatic, and available in real-time.

As a Sales Representative, you need to configure products according to your customer's requirements. A product can be standalone or bundle with options and attributes. You can configure products accurately based on predefined business rules and constraints.

CPQ enables you to manage product pricing and adjustments. The price calculation of a product also includes its options and attributes. Apttus CPQ allows you to apply discounts, markups, promotions to further adjust the price of the product.

After you finalize the configuration and pricing, you can generate quotes. You to generate a quote using predefined templates and send the quote to the customer for approval using an email. Your customer can use E-signature to sign and accept the quote. In addition, by integrating quoting software with your contract processes, you can automate renewal quotes based on previously agreed upon pricing and terms.

Apttus CPQ allows a user to perform the following tasks:

- Manage quotes
  - Create, Edit, Clone, and delete quotes
- Search products on the catalog
  - Refine Your Search
  - Product comparison
  - Guided selling
- Configure and add products to the cart
  - Configure product on the catalog by selecting options and attributes
  - Import a saved favorite configuration
  - Collaborate to configure products
- Price products
  - Create price ramp
  - Define tiered-price
  - Apply adjustments and bucket adjustments
  - Apply promotions
- Finalize Cart
  - Save cart configuration as favorite
- Finalize quote
  - Generate a proposal document
  - Present a proposal document
  - Analyze a quote
  - Accept a quote
  - Activate an order
- Manage assets
  - Search assets
  - Renew, change, swap, or terminate assets

- View asset transaction history
- Integrate assets and contracts
- Generate bills for assets
- Manage services
  - Configure a service product
  - Manage a service cart
  - Manage service pricing

## Key Terminology

It is important to understand how terms are used when working with Apttus CPQ.

Term	Description
Adjustments	Any discounts or markups applied to the product on the cart.
Assets	Assets define a purchased product or service. An asset is associated with an account. After being processed and fulfilled, the line items associated with new quotes, agreements, or orders result in the creation of new assets, which can then be viewed or managed from the customer's account.
Asset Pricing	A pricing method that allows you to leverage the sale price of an asset for its ongoing management.
Attributes	Features of a product, such as color, size, weight, and more.
Bundled Products	A combination of standalone products that offer added value to the customer while increasing overall sales.
Catalog	A view that allows hierarchical categorization of products for users to search through and add to their configuration.
Change	An ABO action that is available on the Installed Products page to increase or decrease the quantity of assets. Applicable for all product types.
Contract Price List	A price list that helps the customer keep track of specific price agreements as applicable for that account.
Line Item	Represents a product or service line item.
Opportunity	Salesforce Standard object that allows you to create opportunity records.
Option Group	A group of product options that are associated with a bundled product.

Term	Description
Order	A confirmation document created by CPQ for a customer before delivering the goods or services.
Price Lists	Containers of items that are grouped in a price list. A price list controls which products are visible to the end user. A price list contains several price list items; each linked to a product. A product can be set up with one or more price list items.
Price Ramps and Price Tiers	Pricing mechanisms that establish pricing that varies by time (ramp) or quantity (tiers).
Product	A product or service that can be sold on its own as a standalone item, an option of other products, or as part of a bundled product.
Promotions	Promo codes or coupons to apply additional adjustments.
Quote or Proposal	A structured definition of a prospective sale that contains product configurations, pricing, and customer opportunity information.
Renew	A tab on the Installed Products page. The renew action is applicable for all product types. Supports options to choose the renewal date in the form of Proposal End Date, Asset End Date, Farthest End Date, and a manually entered Renewal Date.
Sales Representative or Sales Rep	Individuals responsible for configuring and pricing the products on the cart and generate quotes
Standalone Products	Refers to a device or software that is self-contained, one that does not require any other devices or software to function.
Swap	Swap is an ABO action that is available as a tab on the Installed Products page. The Swap action uses the constraint rule of type = Replacement for execution.
Terminate	A tab on the Installed Products page. The Terminate action is used to terminate the contract for a product. Applicable for all product types.

## Getting Started

This section explains the tasks to perform to get started with the Apttus CPQ.


### System Requirements

Apttus CPQ is a web-based, on-demand application that is accessed via a standard web browser through the Internet. Before you install and start using CPQ, you must ensure the minimum system requirements.

For more information, refer to [Release Notes](#).

### Logging on to CPQ

Log on to your [Salesforce.com](#) org to access Apttus CPQ.

 Do not use the Back button on your browser when using CPQ.

Before you log in to CPQ, make sure you meet the following criteria.

- You have installed all of the required CPQ module packages.
- You have administrative privileges.
- You have login credentials provided by Apttus.

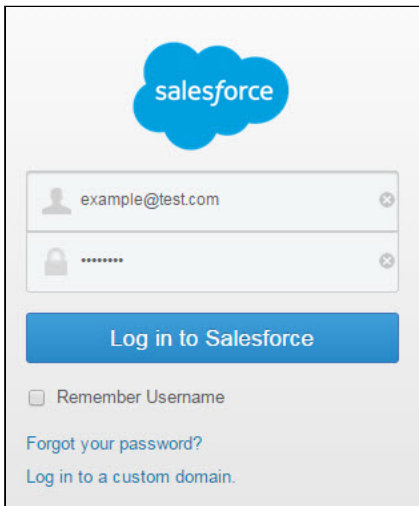
### To log on to CPQ

1. Go to <http://www.salesforce.com/>.

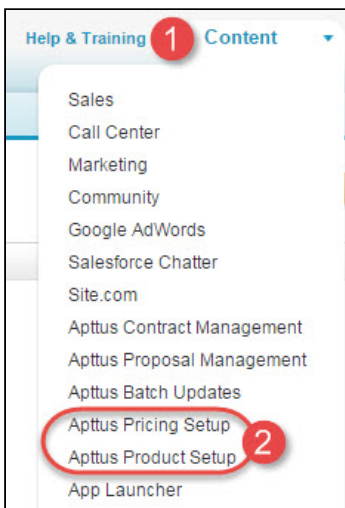
Or

If your organization is using a sandbox or test environment to access Apttus CPQ (for example, if you are doing user acceptance testing), go to <http://test.salesforce.com/> instead.

2. In the toolbar at the top of the page, click **Login**. The login page opens.



3. Enter your User Name and Password, and click **Log in to Salesforce**. You have successfully logged into CPQ.
4. Navigate to the [Force.com](#) App Menu and select either **Apttus Product Setup** or **Apttus Pricing Setup** to access the Product or Pricing setup tabs, respectively.



**Congratulations!** Now you are ready to start working with your products and pricing in Apttus CPQ. Now that you have logged in, know more [About Apttus CPQ UI](#).

## About Apttus CPQ UI

The CPQ Home page is the starting point of various functions in the application.

The home page consists of the following components:

 The Home page view depends on the user settings.

Feature/Section	Description
Search	This feature enables you to quickly search for various items like Quote/ Proposals, Templates, Accounts, Contacts, and more. You can further search within the results for specific objects using the Advanced Search feature. A search bar is available at the top of every window within the application, backed by an easy-to-use search engine. Based on the keyword you enter, the system searches against all key elements and retrieves quotes or proposals.
Create New	This button is located on the left-hand side of the homepage. This button provides an easy way to initiate new items like Quote/Proposal, Opportunity, Template, Account, Report, and more.
Tabs	These are individual tabs that provide you a broader view of specific items like Proposals, Templates, Reports, and more.
Dashboard	Dashboards give you a real-time snapshot of corporate metrics and key performance indicators. A dashboard is a group of different charts (or components) that graphically display your custom report data.
My Tasks	Quick summary of tasks that have been assigned to you.
Items To Approve	Quick summary of items that have been assigned to you for approval.
Setup	This link is located on the top right-hand corner of the homepage. The link redirects you to the Force.com home page using which you can perform actions, such as view, customize, add, or edit objects and fields.
Salesforce menu	The drop-down menu provides you with the list of Apttus modules that you can use for configuring, pricing, and quoting.

The CPQ Home page enables you to access quoting information in a variety of ways; Searching, Reporting, Dashboards, and Views.

- [Creating Views](#)  
Views are a very powerful, and an easy way to create a virtual file cabinet of your proposals. You can create views based on dates, values, products, any data field, or a combination of fields and also have specific fields displayed. Views are a customized way to display the exact information you are looking for.
- [Reports](#)  
Salesforce delivers standard report folders containing reports for each record type. For example, Accounts, Opportunities, Leads, and more. These reports are used as a starting point for your organizations reporting efforts. Salesforce allows all users to run, customize, and create reports. For



more information on setting up and managing reports within Apttus, see [salesforce.com](https://www.salesforce.com) information related to creating and customizing reports.

- [Dashboards](#)  
Dashboards organize key statistics in easy to understand, bottom-line format, allowing you to gain the insight you need to fulfill your business needs.

## Creating Views

Views are a very powerful, and an easy way to create a virtual file cabinet of your proposals. You can create views based on dates, values, products, any data field, or combination of fields and also have specific fields displayed. Views are a customized way to display the exact information you are looking for.

### To create views

1. From the Salesforce drop-down menu, select Apttus Proposal Management and go to the Proposals tab.
2. Click the Create New View link.
3. In the **Enter View Name** section, enter a mandatory **View Name** and a **View Unique Name**.
4. In the **Specify Filter Criteria** section, specify the filter options to narrow down to your preferred view for proposals. For example, you can choose to view only those proposals for a specific Account.
5. In the **Select Fields to Display** section, from Available Fields, select one or more options and click the icon to move to Selected Fields.
6. In the **Restrict Visibility** section, select one of the following:
  - **Visible only to me**
  - **Visible to all users** (Includes partner and customer portal users)
  - **Visible to certain groups of users**
7. To save the view, click **Save**.

## Dashboards

Dashboards organize key statistics in easy to understand, bottom-line format, allowing you to gain the insight you need to fulfill your business needs.

Apttus provides a robust Dashboard capability at your fingertips, adding an edge to your business solutions. Navigate to the Dashboards tab to customize the page by designating which dashboard type you would like to see from a list. For more information, see [Working with Dashboards](#).

## Reports

Salesforce delivers standard report folders containing reports for each record type. For example, Accounts, Opportunities, Leads, and more. These reports are used as a starting point for your organizations reporting efforts. Salesforce allows all users to run, customize, and create reports. For more information on setting up and managing reports within Apttus, see [salesforce.com](https://www.salesforce.com) information related to creating and customizing reports.

Apttus provides you a set of out-of-the-box reports. You may create new reports or customize existing reports. To modify an existing report, run the report and click **Customize**. For more information, see [Create a custom report](#).

## Creating Quotes

- [Creating Quote/Proposals from Opportunities](#)  
Apttus provides you the capability to enter necessary information via a user-friendly interface to prepare a quote/proposal request or a draft.
- [Quote Lifecycle Collaboration](#)  
Quote Lifecycle Collaboration allows multiple users to work on different parts of a quote simultaneously and then merge the data and finalize in a single quote.
- [Cloning existing Quote/Proposal](#)  
You can clone the existing Quote/Proposal using the Clone button on the Quote detail page.
- [Creating Quick Quotes](#)  
You can use Quick Quote mode to quickly select numerous products from the product selection page directly from an opportunity with just one click.
- [Including Product Footnotes in Proposal Documents](#)  
Product footnotes enable you to dynamically include static *footnote* content in your quote/proposal documents, based on the products that are included in the quote.

### **i** Notes:

#### **Displaying Quote Name in the Application Browser Tab**

Apttus CPQ shows a quote or proposal name for an ease of navigation through the browser tabs.

- It shows the Quote/Proposal name when you are on the Catalog page, Installed Products page, Attribute/Options page, Cart page (Angular or Cart Grid UI), Analyze Quote page
- It shows the browser tab named as "Apttus" when you are on the Proposal Document Generation page.
- It shows the Collaboration ID in the browser tab for a Quote Collaboration Request.

#### **Displaying Apttus CPQ Quote ID in the Application Browser Tab**

When you create a quote/proposal, Apttus CPQ used to autogenerate a Salesforce Quote ID. To improve the user experience you can see a new CPQ specific Quote ID in the browser tab. On the following pages Apttus CPQ shows the browser tab name according to the name of the quote/proposal: Catalog, Installed Products, Options or Attributes, Angular Cart or Cart Grid, and Analyze Quote.

#### **Displaying Quote/Proposal Names instead of Numbers**

Apttus CPQ displays the name of the Quote/Proposal adjacent to the its label at the top left corner of the page. If the proposal name is too long then you can see up to 26 characters and then an ellipsis to expand the full name. While if you hover over, you can see the whole text.

You can see the proposal names on the following pages: Catalog, Installed Products, Renew, Terminate, Swap, Service Catalog, Attribute or Options, Angular Cart, Cart Grid, Service Cart, Analyze Quote, and Compare Products.

## Creating Quote/Proposals from Opportunities


Apttus provides you the capability to enter necessary information via a user friendly interface to prepare a quote/proposal request or draft.

To complete the quote/proposal, you must enter details relevant to a proposal. Some of the fields identified with (red vertical line) are required fields, without which you cannot save the proposal record. If required details are not entered or incorrect details are entered, the system displays validation rule errors at the top of the page highlighted in red.

### To create a quote/proposal

You must be logged into Salesforce.com. A series of colored tabs are aligned along the top navigation area.

1. From the Salesforce.com application menu, select **Apttus Proposal Management**.
2. Go to the Proposal tab and click **New**.  
- OR -  
Go to the Opportunities tab and click the **Create Quote/Proposal** button.

 If you have installed CPQ for the first time, use Edit Layout to drag the button to the layout.

3. From Record Type of new record, select the desired record type and click **Continue**. Apttus can accommodate any type of Quote/Proposal template (Budgetary, Final, and more). The out-of-the-box system only has the Proposal and RFP type. If quote/proposal types are not set up or if you have access to only one quote/proposal type, skip to the next step.
4. Type a mandatory **Proposal Name** and enter a mandatory Opportunity.
5. Enter a Price List and an Account.  
The Price List determines the categories and products you see in the configuration. Account is auto-populated if the proposal is created from an opportunity.
6. An Opportunity may have many proposals or quotes. To set this record as a primary quote, select the **Primary** check box.
7. In **Primary Contact**, enter the primary contact person name for the account.
8. In the **Purchase Identifier** field, enter a unique identifier.

**i** A purchase identifier is populated to cumulate the quantity, coterminate assets during quantity changes, bind various asset streams together, or add quantity upsell to the original renewal quote during renewal automation. This purchase identifier floats from quote to cart line items > proposal line items > order line items > asset line items. This purchase identifier is used to calculate the total quantity that spans multiple streams during the increment scenarios, on the Installed Products page (of a renewal quote). For example, you enter PI-01 in the **Purchase Identifier** field and the account has the following assets:

- Asset A
- Asset A
- Asset B

Then the total quantity of both Asset A and Asset A = 2, and the total quantity of Asset B = 1. For more information, see [Increment Asset with Coterminate Lines](#).

9. From Approval Stage, select the stage of the proposal. The approval stage determines the actions available to you for a quote/proposal. For detailed information on various approval stages and the actions available, refer to Glossary of Apttus Approval Stages.
10. To enable the final quote or proposal generation from the current proposal, select **Ready to Generate**. The **Ready to Generate** checkbox is selected by default. If it is not selected, the **Generate** button does not appear in the proposal.
11. To attach and send the proposal in an email to a configured account, select Ready to Present. The Ready to Present check box is selected by default. If it is not selected, the Present button does not appear in the proposal.

**i** Before saving the quote/proposal, ensure that you have set the **Pricing Date** that falls in between PLI expiration and effective dates. Otherwise Quote cannot pick the PLI with a pricing date from an expired PLI.

12. Click **Save**.

You have created the draft proposal which you can use for searching and reporting. Various new related lists are enabled on the quote/proposal page. To know more, refer to Glossary of New Sections.

Navigate to the proposal you just created, and proceed with product selection.

**i** **Create quotes from opportunities inheriting the related line items**

You can create a draft quote with the selected service product and its related line items (asset line items) and then synchronize it with the opportunity. After clicking the synchronize with opportunity, you can also cascade the related equipment lines to the opportunity and forecast the service revenue in conjunction with the opportunity.

Similarly, you can create a renewal quote that carries over the related line items to the quote or cart.

## Cloning existing Quote/Proposal

You can now clone the existing Quote/Proposal using the **Clone** button on the Quote detail page. Cloning copies all the information from the existing quote, including field data, line items, and proposal header information. If an approval trigger is set on the existing quote, the approval status and trigger is not copied to the cloned quote. You must re-trigger approval on the cloned quote.

The new cloned quote will retain all the information of the parent quote, including:

- Proposal header details
- Configuration line items (if parent quote is not finalized)
- Proposal line items (if parent quote is finalized)
- Attributes of line items

The following information is not retained from the parent quote:

- Activity history
- Notes and Attachments

Whenever an account executive needs to have multiple draft options of the same quote or needs to make changes (example, extend the quote expiry date) to a finalized quote before sending it out to the customer, he/she can clone the quote with the line items and with or without the approval status.

**i** You can Generate a quote when the **Status** of your Product Configuration records is *Saved* or *Ready For Finalization*.

### To clone an existing quote

1. Navigate to your existing quote.
2. Click the **Clone** button.
3. Fill in the required details in the cloned quote and click **Save**.

When you clone a quote with its line items, a new quote is generated with a unique quote number whose **Status** will be *Draft* and **Configurations** status will be *Saved*.

The table below details the changed behavior when you clone a Quote/Proposal:

Behavior in New version	Behavior in Old version
A new custom setting <b>Clone With Approval Status</b> to alter the Approval status of a cloned Quote/Proposal.	No custom setting to control the cloning of Approval status of a Quote/Proposal.

Behavior in New version	Behavior in Old version
<p>Approval is not triggered for the header and line items which have already been approved in the previous Quote/Proposal unless you make any change to the new cloned Quote/Proposal and click <b>Save</b>.</p> <p>The values in the <b>Approval Status</b> on the header and line item fields are blanked out, except for the Quote/Proposal which has Approval Status as <i>Approved</i>.</p>	<p>All the header and line item level fields, which satisfy the entry criteria for approvals were re-evaluated for approvals, irrespective of the approval status of the parent and related line items. All the values were blanked out and the value in the <b>Approval Status</b> was not carried forward to the cloned quote after cloning.</p>

In cases when the status of Quote/Proposal is *Not Submitted, Pending for Approvals, Cancelled or Rejected*, its corresponding **Approval Status** is cleared while cloning. The Same rule applies for line items. This indicates that you might want to trigger an approval request upon the newly cloned Quote/Proposal.


To enable the above enhancement, go to **All Tabs (+) > Admin** and create a new entry with the following details:

Field	Description
Name	Enter <i>APTS_CloneWithApprovalStatus</i> as the name of the entry.
Value	<ul style="list-style-type: none"> <li>• <i>True</i>: Enter this value if you want to clone the value in the <b>Approval Status</b> of an approved Quote/Proposal in the newly cloned Quote/Proposal.</li> <li>• <i>False</i>: Enter this value if you do not want to carry forward the value of the Approval Status in the newly cloned Quote/Proposal.</li> </ul>

## Creating Quick Quotes

You can use Quick Quote mode to quickly select numerous products from the product selection page directly from an opportunity with just one click.

Quick Quote has enhanced search capabilities that include targeting standard and custom fields, advanced search, automatic pre-filters, saved list views, and can be sorted. When you have a long list of individual products, you can use the Select All function to select all individual products together.

-  Before you can create a quick quote, you must have an existing opportunity with a price list associated to it.
  - Only auto-inclusion constraint rules can be used with Quick Quote. Other constraint rules will be ignored.

### To create a quick quote

1. Navigate to the Opportunities tab, select an existing opportunity, and click Create Quick Quote. The product selection page is displayed with products from the price list associated with that opportunity.
2. Select a product from the list and click Select.

3. Do one of the following:

- To add more products, click **Add More Products**.
- To add miscellaneous line items without any particular product, click **Add Miscellaneous Items**.
- To recalculate the pricing after making changes, click **Reprice**.
- To save the product configuration and return back to the quote/proposal page, click **Save**.
- To save your changes and continue pricing, click **Quick Save**.
- To proceed to the final stage of configuration, click **Review & Finalize**.

Your quote is ready using the Quick Quote mode. Now, you can price, review, and finalize the shopping cart and proceed to the quote process.

## Including Product Footnotes in Proposal Documents

Product footnotes enable you to dynamically include static *footnote* content in your quote/proposal documents, based on the products that are included in the quote.

### To include product footnotes in Proposal documents

1. Login to X-Author Contracts, select the **X-Author Templates** tab and check out (or create a new) a proposal document template.
2. Place the cursor in the template where you want the footnotes and click **Insert Merge Fields**.
3. Select **Lookup Fields**, and then select **Product Footnote Fields > Footnote > Text** and click **Insert Field**. The merge field is entered into the document template.
4. Click **Check-In** and ensure that **Type** is **Proposal** and that the selected **Agreement Types** also match those of the proposals you will use the template with.

When you **Finalize** your shopping cart and subsequently **Preview** or **Generate** the proposal document, you should see the text associated with the product footnotes – for the products included in the **Line Items** – displayed in the document.



## Adding Products

The Quote creation process involves, product selection, configuring attributes, configuring options, and pricing the products. Pricing can be done only after you have added products to the shopping cart.

The Quote/Proposal detail page is the gateway to select and configure your products, and later price and finalize them to generate a Quote/Proposal.

The Quote creation process comprises the following four steps:

- **Select** - This stage of the process enables you to select products from the Catalog page. You can select and add Standalone and Bundle products directly to the shopping cart or choose to configure products that have attributes or options associated with it. While doing this, you can also view the Product Summary by clicking a specific product, which lists the Product Code, Product Description, and whether a product has attributes and options associated with it.
- **Configure** - On the Catalog page, if you choose to configure products, you can select attributes from the Attributes page or select and options from the Options page.
- **Price** - After you are done with your product selection or configuration, you can price them on the Shopping Cart page.
- **Finalize** - Once your cart is complete, you can finalize the cart and your quote is ready to be generated.

Note: Depending on your profile or any other business use case set for your organization, when you click Configure Products, you might view different versions of the following:

- Catalog page, Attributes page, Options page, Cart page, and Assets page.
- Action buttons like Next, Reprice, Save, and more.
- Columns on the Cart page.
- **Searching a Product from the Catalog**  
The Catalog page enables you to select and configure products. This page allows multiple ways to search and choose the product you are looking for.
- **Configuring a Product from the Catalog**  
If you have attributes and/or options associated with your products, you can configure them from the Catalog page.
- **Pricing Products**  
In the Pricing stage, you can price the selected products and apply adjustments such as markup value, discounts, and more from the Cart page.
- **Finalizing Products**  
This is the final step before taking the finalized set of products and prices back to the Quote/Proposal.
- **Using Guided Selling**  
Guided Selling is a process that helps you to choose the product best fulfilling your customer's needs. The goal of guided selling is to provide you a way to figure out which product to sell to a customer.
- **Using Refine your Search**  
When you are selecting items from the Product Catalog, *Refine Your Search* enables you to narrow the list of products to those that match your search filter questions.

- [Using the Product Comparison Feature](#)

Product comparison allows you to compare features of multiple products on the catalog page enabling you to narrow down to products that best fit your customer's need.

## Searching a Product from the Catalog

The Catalog page enables you to select and configure products. This page allows multiple ways to search and choose the product you are looking for.

You can select products by using the **Browse Catalog list**, **Browse**, or the **Search bar**. When using the search bar, you can search for a product across all categories, or for an individual category by:


- Product Code
- Product Family
- Product Description
- Product Configuration Type
- Category Names
- Location

The search works for all the products, even if the product is not associated with the category. However, the products must have their respective Price List Items associated with a Quote.

If Smart Search is enabled in your org, there will be typeahead results available while searching. Note that the typeahead is case sensitive.

**Note:** If your smart search is using Azure, ensure that you search term does not contain hyphen (-).

The sorting is done alphabetically. In the search bar, enter the desired product and click **Search**. For a description of the product, click the icon.

 As per the Salesforce limitation, the Text Search in the **Search bar** does not support wildcards at the beginning of the search term. For example, there are 3 products in your Catalog, namely Cat1\_Product1, Cat1\_Product2 and Cat2\_Product4. If your Search Term is *\*Product1*, the search returns 0 result and if your search term is *Cat1\**, the search returns 2 results (Cat1\_Product1 and Cat1\_Product2).

Based on your selection from any of the above-mentioned sections, the products are displayed in the Product Catalog section in the center. You can [use the refine your search](#) feature to narrow the list of products.

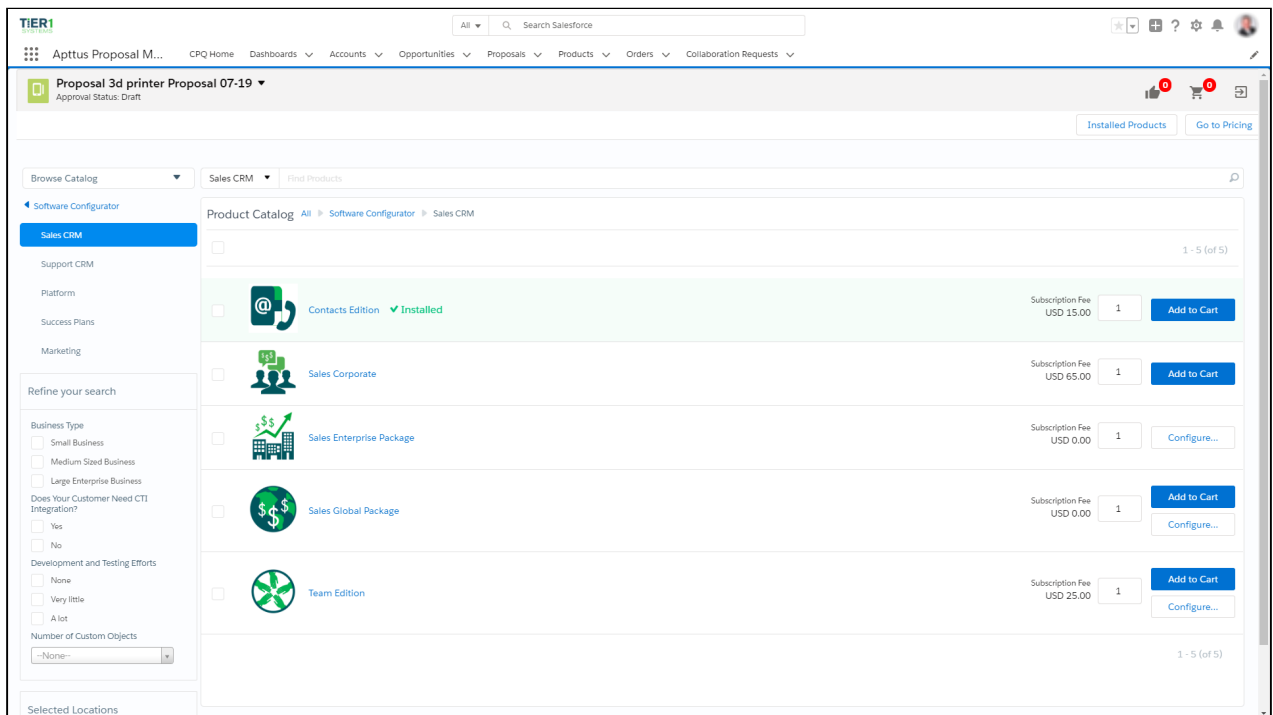
### To search for a product from the catalog

1. You can search for a product by doing any of the following:
  - From the **Browse Catalog** list, select a category hierarchy you want to view.
  - From the Browse section, navigate to the category hierarchy for the desired product.
  - In the Search bar, type a category or product name and click Search.

Based on your selection, the products are displayed in the Product Catalog section. If you have Refine Your Search configured, all the filter fields related to the selected category and Search bar are displayed dynamically in the Refine Your Search section. The system displays the products you search using the Search box, Refine Your Search, and Browse Catalog feature collectively. Proposal Locations are defined to distinguish differentiate the products as per your customer locations. Depending on the Account and Proposal Locations defined for your Quote/Proposal, the system displays products on the catalog page:

- If no account is selected on Quote/Proposal, the system does not filter any product.
  - If an account is associated with your Quote/Proposal, the system return displays account locations (in the drop-down list) which are associated to the Account.
  - If no proposal locations are defined, the system filters the products based on the account (previous 2 points).
  - If you have defined proposal locations on your Quote/Proposal, the system displays only proposal locations in the drop-down list.
  - If you add a product to the cart after you defined a location, any product that is auto-included through a constraint rule inherits the location you defined for the condition product.
2. You can further filter the product list by selecting the filter values from the **Refine Your Search** section. These filter fields change dynamically based on your Category and Search to further filter the products.

**i** If you perform another search from Step 1, all your previous search selections are reset.



3. You can also edit the quantity of your product if the quantity field is enabled. To view the quantity field on the catalog page, the administrator must make appropriate settings.
4. From the Product Catalog section, to select a product and add it to the cart, click **Add to Cart**. The selected product is displayed in the Selected Products section on the right. After you add the product to the cart, the counter on the mini-cart icon at the top right-hand side corner is updated.

The number of products in the cart is reflected on the counter. If there is a recommendation constraint rule defined on any product you added to the cart, the counter on the recommendation icon is also updated.

The product is added to the Selected Products panel on the right. If a product is configurable, you can configure a product with multiple options or attributes.

## Configuring a Product from the Catalog

If you have attributes and/or options associated to your products, you can configure them from the Catalog page.

[Configure Product Attributes](#) - You can select and configure attributes for your products from the Attributes page.

Configure Options for [bundle product](#) - You can select and configure options for your products from the Options page.

If the system is configured such that you have to include one or more products along with your regular product selection, you may view the following possibilities on the Catalog page and Options page:

- If there is only one product, it is auto-included automatically and you will see only the **Add to Cart** button.
- If there is an option to select only one product from a product group, you will see a radio button next to each product and the **Add to Cart** button.
- If there is an option to select multiple products, depending on the minimum/maximum number of products set for your organization, you will see a checkbox next to each product and the **Add to Cart** button. This enables you to select multiple products at once.



- If no option products are visible due to Visibility rules configuration or different price lists, and your administrator have set the minimum options as zero, the system considers this configuration as invalid. Ensure that your administrator has set the right configuration for the Min/Max option for an option group.
- Apttus CPQ does not display a message when you hover over an option product which is disabled on the configuration page. As a part of notification and error handling, Apttus CPQ provides a defined Rule Messaging for exclusion rules. If you run the exclusion rules successfully, no hover over message is displayed, unlike in the case of inclusion rules where such messages are helpful for you to make a decision about adding products to the cart.

### To configure product attributes

1. You can select a product by doing any of the following:
  - From the Browse Catalog list, select a category hierarchy you want to view.
  - From the Browse section, navigate to the category hierarchy for the desired product.

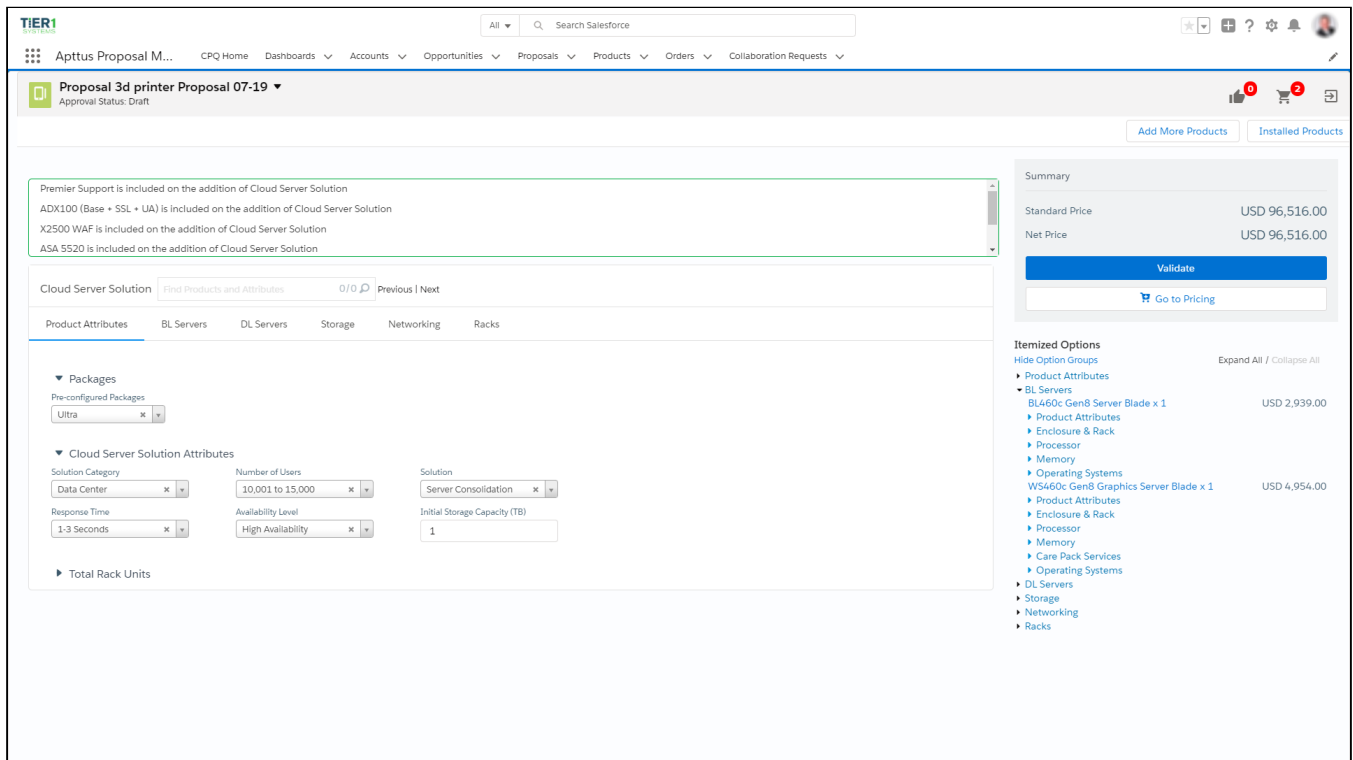
- In the Search bar, type a category or product name and click **Search**.
- 2. From the Product Catalog section, to configure attributes for a product, click **Configure** next to it.
- 3. Configure the required attributes. You can search for attributes using the search bar next to the bundle name. Type full or partial text and click **Next** or **Previous** or press *Enter* to search the attribute. The search result is highlighted under the respective tab.
- 4. The following actions are available for you once you select the attributes.
  - Click **Next**. This button appears in case of bundled products where you may need to configure or add additional products.
  - Click **Add More Products**, to add additional products.
  - Click **Remove Item**, to remove a product.
  - Click **Go to Pricing** to price the product.
  - Click **Validate** to verify your configuration.

The values for an attribute can be driven by the numeric expression builder configured for the selected product. While the constraint and pricing rules are processing in the system, the **Go to Pricing** button is disabled on the Configuration page.

Based on your selected attributes, the system saves the product in your shopping cart.

**i**

- On the Product Attribute Group Detail page, you can set the Two or Three Column Display for the product attributes in order to view the configured attribute groups in two or three column format.
- Apttus CPQ displays a red border on the left when attributes are set required in the UI



## Attribute Enhancements: Hidden Attributes

The CPO Attributes feature is enhanced further to derive the price for a product from an attribute without additional configurations to the Attribute Group for that attribute.

Consider a product Internet Plan, with three attributes - Internet Speed, Data Limit, and Package Price. On configuring the product from the cart page, the user enters the value for Internet Speed and Data Limit. Create an attribute Package Price, for which the value is calculated using the formula Internet Speed \* Data Limit using field expression builder. The Package Price attribute value will not be shown to the user on the ProductAttributeDetail, ConfigureBundle, and ConfigureOptions pages. The user can choose to derive the Base Price of the product Internet Plan from the Package Price Attribute Value using the Default Price From field from the Default tab of the Price List Item.

The attributes calculated using formula fields are hidden from the following pages:

- Apttus\_Config2\_\_ProductAttributeDetail3- Attributes for Bundle or Standalone products
- ProductAttributeDetail
- PageConfigureBundle page - Attributes for Options
- SelectConfigOptionsDetailView- Attributes for Options shown in line with the option
- ConfigureOption page.

## To configure bundle products

1. You can select a product by doing any of the following:
  - From the Browse Catalog list, select a category hierarchy you want to view.
  - From the Browse section, navigate to the category hierarchy for the desired product.
  - In the Search bar, type a category or product name and click **Search**.
2. From the Product Catalog section, to configure options for a product, click **Configure** next to it. The selected product is displayed in the Selected Products section on the right and the options page is displayed.
3. Select the options for your bundle. You can search for products using the search bar next to the bundle name. Type full or partial text and click **Next** or **Previous** or press *Enter* to search the product in various option group tabs. The search result is highlighted under the respective tab.
4. The following actions are available for you once you select the options.
  - Click **Add More Products**, to add additional products.
  - Click **Remove Item**, to remove a product.
  - Click **Go to Pricing** to price the product.
  - Click **Save** to save your selected product for that quote.
  - Select **Optional** to consider a particular line item as an optional one.

The values in the **Quantity** field for options can be driven by the numeric expression builder configured for the selected option.

The **Save** button is used in case you want to save your configuration before proceeding to the attributes and cart page. For example, if you change the **Quantity** of the options associated with your bundle product, you might want to save the configuration before moving to the cart page.

**i** The administrator must enable the search bar on the Configuration page. For more information, refer to "Configuring Config Page Settings" in *CPQ on Salesforce Administrator Guide*. Hidden options and attributes are not displayed in the search result.

## Configuring Optional Line Items

You can give a choice to the customers via the proposal if they want to mark the line item as not required, but recommend these as part of the configuration. You can present these line items separately in a proposal document or keep them as a part of the configuration. An important aspect is that you can choose to price these line items separately or as part of the bundle (applicable for option line items). Marking a bundle as *Optional* enforces the sub-bundle and the option products below them as optional line items by disabling the **Is Optional** checkbox. For such bundle products which are marked as *Optional*, it is recommended to keep the option products as optional. Otherwise, the system considers this as an incorrect configuration.

Note that the price of the "optional" options under bundle does not get added to the bundle price. However, if the bundle itself is marked as "optional", all the selected options under the bundle are forced to be "optional" and the bundle does include the price of all the options. The bundle then is not added to the totals to ensure that the quote total is not including the "optional" products.

Additionally, the required options cannot be made "optional" unless the whole bundle is marked optional. You cannot mark an option as "optional" in the following two conditions:

If the option product is configured as *Required*.

If the option product belongs to an Option Group that has **Min Options** and **Max Options** set as 1.

The **Validate** button ensures that the constraint and pricing rules are processed for your products. While the configurations are validated, the **Go to Pricing** button is disabled on the Configuration page. Once validated, the **Go to Pricing** button is enabled.

After you click **Go to Pricing**, the Cart page is displayed.

You can clone a bundle within the same quote, make modifications, and use it as another bundle.

This feature enables you to clone a bundle with attributes, options, and pricing, make desired changes and save it as another bundle.

**i Min-Max Messaging:** On the product configuration page, when you make a selection of options in the desired Option Group, Apttus CPQ displays the min-max messages guiding you about how many options can be selected. For example, If you want to select X number of options where options can be X to X+n (n=1,2,3...). Then you will see an appropriate message for selecting those options from the desired Option Group.


**Horizontal Scroll for Option Groups Tab:** The Product Configuration page provides a horizontal scroll bar when you have many option groups. You can see a single line of tabs for option groups and for menus with many option groups, you can also see the submenus with option groups being available for selection.

**Increased Threshold for Bundle Maintenance Job:** You can run Bundle Maintenance Job without failure when Apttus CPQ has large number of options validated with the following scenarios.

- 10,000 options groups for the entire system
- 10,000 options in a given option group
- 2,000 option groups for a given bundle with an average of 3 to 5 options each group

### To clone a bundle within the same quote

You must have an existing bundle.

1. Select a bundle and click **Validate**. You can only clone a bundle.
2. Click  (Copy icon).
3. You can configure the bundle or make the desired changes and click **Validate**.

You have created another bundle from an existing bundle. You can proceed to pricing.

### To lock an option value

Ensure that field derives its quantity from an expression built using the field expression builder.

1. To lock an option quantity, navigate to the **Option group**, choose your option and select **Auto-Update Quantity**.
2. On selecting the checkbox, a lock icon appears next to Quantity, when you configure your Bundle from the Catalog Page. The user can click the lock icon next to an option, to ensure that any updates to the field from which its value is derived does not affect the value set the first time. For example, you can lock the quantity field for an option is populated based on multiple attribute values using the field expression builder, once the user enters the attribute value on the AttributeDetail3 page and clicks Next, the value for quantity is auto-populated.
3. Select the option and click the Lock icon.
4. Navigate back to the Attribute detail page and edit the attribute value and click **Next**. Notice that the value of the Option does not change even though the attribute value has changed.



- If you skip any mandatory configurations, the status of your configuration is shown as pending with a red exclamation mark on the Cart page. You must complete the pending configurations in order to finalize the Cart.
- If you have added any items by auto-inclusion rules, you cannot make them optional.

When a product is added by rule that means AddedByRuleInfo\_\_c field on the line item has a value populated, Apttus CPQ does the following:

- Clears "Is Optional" flag" if previously checked
- Hides "Is Optional" field
- Unchecks or disables "Is Optional" if line item "Is Required" flag is checked at the Option Group level.

### To select products from prompt

The prompt appears on the Catalog page when you add a product to the cart that cannot be sold alone, but other specific products must be sold with that product. When you add such product, Apttus CPQ requires you to select a minimum or a maximum number of products from the prompt to add to the cart. The product listed in the prompt is based on the inclusion constraint rule defined by the Administrator.

There are two types of prompt that appear on the Catalog page.

- With checkboxes: In the prompt with checkboxes, select the checkbox against the product you want to add to the cart and click **Add to Cart**. The **Add to Cart** button is not enabled until you select at least a minimum number of products and the remaining products are disabled when you have selected a maximum number of products. The prompt is closed when you click **Add to Cart**.
- Without checkboxes: In the prompt without checkboxes, you need to click **Add to Cart** button against the products. After you click **Add to Cart**, the product is removed from the prompt. When you select less than the maximum value, you have to manually close the prompt because the prompt closes automatically only when the maximum number is reached.

## Favorite Configurations on the Cart

A sales rep you can use a saved configuration to add products to the cart and also save an already configured cart and use the same configuration multiple times. These configurations are saved using Save as Favorite feature. Favorite configuration enhances the product configuration and quoting process by providing the user an ability to create, share, and import favorite configurations or its designs.

The saved configuration also includes the products added through constraint rules and default options that are auto-included. You can add a favorite to the cart same as you would add any other product from the catalog. You can add multiple saved configuration to the cart.

The favorite configuration can be private or public. A private configuration is saved to your library and is only visible to you. However, public configurations are displayed on the Catalog page of all other sales reps as well. Product Manager or Sales Admin can set a pre-defined configuration for all users or group of users, making such configuration as public configuration.

You can also categorize the saved configuration using the filters provided on the Save as Favorite pop-up on the Cart page. You can use these filters to search for the saved configuration on the Catalog page similar to how you search for product using Refine Your Search.

A sales rep you can use a saved configuration to add products to the cart and also save an already configured cart to the same configuration multiple times. These configurations are saved using Save as Favorite feature. Favorite configuration enhances the product configuration and quoting process by providing the user an ability to create, share, and import favorite configurations or its designs. The favorite configuration can be private or public.

**i** The administrator must configure the Save as a Favorite feature. For more information refer to "Configuring Save as a Favorite Feature" in *CPQ on Salesforce Administrator Guide*. The visibility of the functionalities provided in this feature depends on the permissions defined by the administrator for your user or profile.

Vertical industries in the quote to cash domain require a capability of favorite configurations. This feature is useful for the following scenarios:

- Speed up quoting process – you can save frequently configured solution, which is complex in nature for its re-use at a later time.
- Dynamic bundles – as a product manager, you have the ability to create, save and import a saved configuration as a whole.

Apttus CPQ provides the following functionalities in the Save as Favorite feature

### Saving your Favorite Configurations

A button called **Save as Favorite** is available on the Cart to save the configuration for a particular Quote/ Proposal. Select the products you want to save in the configuration and click **Save as Favorite**, a pop-up is displayed. You can customize the fields displayed this dialog box by using Favorite Configuration settings. The following table explains the different fields inside the pop-up.

Field	Description
Name	Enter a suitable name for your favorite configuration. This name is displayed as a record under your Favorites category.
Scope	Choose an option for the visibility of your configuration record. The available values are, <i>Public</i> and <i>Private</i> . If you set this to <i>Private</i> , this record is visible to only the owner of the record. If you set this to <i>Public</i> , this record is accessible to all the users. The default value is <i>Private</i> . The visibility of this field depends on the configuration defined by your administrator.
Description	Enter details about your favorite configuration.

Field	Description
Favorite Filters	Select values from the picklists to categorize the favorite configuration. You can select the values as you desire or leave the default values of the picklists that are displayed. Your admin must pre-define the picklists that are displayed on the dialogue box in the <b>FavoriteFilters</b> setting.

These favorite configurations are saved on Price Lists and can be used across multiple quotes.

The favorite configurations records are visible on the Catalog page only after you save your favorite configuration record and reconfigure the Cart.

### Reusing your Favorite Configurations

As a sales rep, you can add a saved configuration to the quote. You can also add multiple configurations. When you add a saved configuration to the quote, a copy of the original design is created. This is useful in case if you want to edit the design on the quote without impacting the original design.

After you have saved your favorite configurations for a particular Price List and have associated this Price List with your Quote/Proposal, a separate category, named **Favorites**, containing your favorite configurations is displayed on the Catalog page. Apttus CPQ creates a clone of the favorite configuration records every time you associate the Price List with a Quote/Proposal. Ensure that the primary charge type is same on both the price lists.

 You can set your favorite category to be displayed first when you have multiple offerings, using a custom setting **Show Favorite as First Category**. For more information, see "Ordering Favorite Category" on the Catalog page in the Admin Guide.

Note that the rules (Constraint rules, Validation rules, and more) are carried forward in the cloned favorite configuration records.

You can search the favorite configuration records just like the normal products on the Catalog page using **All Favorites** option from the Search drop-down list. You can also use **Refine Your Search** to search for the desired saved configuration. While importing a favorite, you can also control whether you want to include discounts to the cart or not. The price of the favorite product is derived from the Price List associated with the Quote. You can only import a Favorite Configuration when your administrator has defined appropriate access for your profile.

For every favorite configuration record, Add to Cart action button along with the drop-down list containing **Exclude Adjustments**, **Delete** and **Publish** buttons is displayed on the Catalog page.

- **Add to Cart** – this will simply put all the cloned Line Items (including Options, Attributes, and manual adjustments) of your favorite configuration record in the Cart.
- **Exclude Adjustments** – this will fetch details of all the Line Items (including Options and Attributes, excluding manual adjustments) and add them to the Cart. The manual adjustments that you have applied to the original favorite configuration record are not carried forward to the cloned favorite configuration record.

- **Delete** – this will delete a favorite configuration record. This button is dependent on the privacy defined for your favorite configurations. As a user, you can view all the public configuration records and can delete only those records for which you are the record creator or owner.
- **Publish** – this will publish your favorite configuration record to another Price Lists. From the **Choose Price Lists** dialog box, you must select the price lists to which you want to publish your favorite configuration record. You can publish a favorite configuration record using the **Publish** button on your favorite configuration record in Salesforce also. Once published, this record shows up under your **Favorites** category of the Quote/Proposals that use the price lists containing these favorite configuration records.

You can control the fields displayed in the pop-up dialog box when you click the Product Name on the Catalog page. Similar to custom settings defined for normal products, you can create a separate record under **Object Summary Settings** for the favorite configuration record.

Name the new record as *Favorite Configuration* and select *FavoriteConfiguration\_\_c* as the **Object Name**. Refer to Object Summary Settings in the admin guide.

#### Multiple Adjustments Using Favorite Configuration

##### **Multiple Adjustments Using Favorite Configuration**

You can configure and add a product to the cart and then apply price adjustments to it. Save this product configuration as Favorite on the cart. Hence, next time you can leverage the favorite configuration to add multiple adjustments to products in the cart. This helps you save time and expedite the process of applying price adjustments using the Favorites on the Product Catalog page.

#### Providing Ability to Add Multiple Favorites with a Single Click

Apttus CPQ provides you an ability to add multiple favorite product configurations to the cart with a single click.

On the Catalog page, if you click **Add to cart** for any of the Favorites, Apttus CPQ disables the **Add to cart** button for all the available favorites and enables them back when you complete pricing operation.

## Quote Lifecycle Collaboration

Quote Lifecycle Collaboration allows multiple users to work on different parts of a quote simultaneously and then merge the data and finalize in a single quote.

Quote collaboration feature empowers your sales reps to work together on the same quote. A sales rep starts the configuration process, and assigns configuration request to Queue or to other sales rep (called collaborator) where he needs help. A Sales rep can assign multiple line items to a collaborator. A Sales rep can also assign different line items to different collaborators. Through the collaboration request, Quote Lifecycle Collaboration allows the sales rep and collaborators to communicate via Salesforce Chatter.

The Collaborator can then work on his piece of the configuration and submit his changes. Once Sales rep receives such configurations from different collaborators, he can accept or reject the configuration at the individual line item level.

### When should it be used

- When a sales rep needs help with configuration or pricing from a number of people who will work simultaneously on their respective parts.
- Quote collaboration is designed for working on specific products and to not send whole configurations to a certain collaborator.

### Types of collaboration

- Peer to peer: To easily send line items to a collaborator. This copies over all the information on the relevant line items. Ideal for a situation in which the sales rep needs help with pricing and configuration.
- Multi-tier: To send only specified fields from chosen line items and merge back specific fields as well. Ideal for situations for which creating a cost structure is necessary, when using transfer price mapping or any other collaboration scenario that requires a specific update of certain fields.

### Key Capabilities

- Assign multiple collaboration requests from a single configuration.
- Monitor and administer collaboration requests.
- Review submitted child carts.
- Reassign collaboration requests to new users.
- Sequential assignment: A->B->C.
- Have a back and forth pricing/cost/transfer price negotiation between a sales rep and a collaborator.

### Role-wise definition

Role	Description
Sales Rep	A sales rep initiates a collaboration process. Typically he is a member of the sales team and has a customer facing role. The sales rep is in charge of sending out a single final quote to the customer.
Collaborator	A collaborator is a product owner, manager, factory manager, or another user who has the knowledge about a particular configuration.

### Process flow

When the sales rep initiates the collaboration request from the cart page, a collaboration record is created on the 'business object' with the status as *Assigned*. The notification is sent out to the collaborator. Once collaborator receives the assigning notification, he can work on his part of the configuration. Optionally, the collaborator can see the parent cart in a read-only mode. Once collaborator has finished working on his piece of the configuration, he can submit the configuration. Collaboration status is now changed to *Completed*. The notification is sent out to the sales rep. Once the Sales rep receives the notification that a configuration has been submitted, child cart of the collaborator is merged with his own parent cart. A Sales rep can accept or reject the configuration changes, and can finalize the cart.

The following table describes the Collaboration status and the actions associated with it.

Collaboration Status	Description
Assigned	Sales rep has assigned the configuration request to the collaborator. This status is shown with an orange exclamation mark when the sales rep assigns the request to the collaborator.
Submitted	Sales rep has submitted the configuration request to the collaborator.
Completed	Collaborator has submitted the configuration back to the sales rep.
Accepted	Sales rep has accepted the configuration and has merged with the parent cart.
Cancelled	Sales rep has cancelled the collaboration request.
Abandoned	Sales rep has abandoned the cart.
Deleted	Sales rep has deleted the line item from the cart.

The collaboration status depends upon the access permissions defined by the administrator. To understand how the access permissions defined by the administrator impact the collaboration pop-up, refer to "Enabling Quote Collaboration in your org" in *CPQ on Salesforce Administrator Guide*.


**i** The **Finalize** button is disabled on the Cart page when the collaboration requests are not accepted. This prevents the Sales rep from finalizing the cart premature. A warning message is displayed on the Cart page when collaboration requests are not closed.

### Assigning the configuration to the Collaborator or Queue

From the cart page, you can request the collaboration from other users.

**i** The administrator must define proper **Read, Create, Edit** and **Delete** permission to give the user access to the Quote Collaboration feature. To define the permissions refer to "Enabling Quote Collaboration in your org" in *CPQ on Salesforce Administrator Guide*.

### To assign the collaboration request to a collaborator or queue

At the line item level, click collaborate icon (  ) for your corresponding product. You can also select multiple products and click the **Collaborate** button at the top. You can collaborate on bundle as well as a standalone product. When you click Collaboration icon, **Quote Collaboration** popup is displayed.

Quote Collaboration

! Not Assigned
Submitted
Completed
Accepted

✕

---

Assignment Details
Chatter

**\* Owner ID**

User     Queue

Select User ▼

**Specifications**

**Start Date**

**Collaboration Type**

Peer-To-Peer ▼

**Priority**

**Grant Access to Merge Cart (Read Only)**

**Completion Due Date**

**Attachments**


Browse

\* Select Collaboration request owner, otherwise Collaboration request will be assigned to current user.

Cancel

Notify Collaborator(s)

In the **Quote Collaboration** popup, specify the following details.

Field Name	Description
User or Queue Assignment	<p>Select the user (collaborator) or queue to whom you want to assign the configuration.</p> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> <p> Only the users with <b>Edit</b>, <b>Delete</b> or <b>Modify All</b> access are displayed in the drop-down list.</p> </div>
Collaboration Type	<ul style="list-style-type: none"> <li>• <i>Peer-To-Peer</i>: Same business units collaborate for the configuration. When peer-to-peer collaboration type is selected, the system copies the entire line item over to the child cart.</li> <li>• <i>Multi-Tier</i>: Different business units collaborate for the configuration. In multi-tier collaboration type, a sales rep from the different business units collaborates for the configuration.</li> </ul>
Specifications	Specify the information that you want to convey to the collaborator in this text box.
Start Date	Specify the start date by which the collaborator should start the configuration.
Completion Due Date	Specify the completion date by which the collaborator should submit his configuration.
Priority	Specify the urgency of this request.
Grant Access to Merge Cart (Read Only)	Select this check box to allow the collaborator to view the entire cart in a read-only mode. This can be useful when you want the collaborator to see the entire cart to gain a better understanding of the overall offering. This functionality is yet not implemented.
Attachments	Attach the additional documents or images.

Click **Notify Collaborator(s)** to send the notification email to the collaborator. The collaboration status is updated to *Submitted*.

You can add products to an existing collaboration request using a global method. Refer to "Adding Products to a Collaboration Request" in *CPQ on Salesforce SOAP API Guide*.

The collaborator can now start working on the assigned configurations as explained in the [Working on the Configuration Request](#) section.



## Working on the Configuration Request

To start working on the configuration request assigned to the Collaborator, he can access the collaboration requested configuration by clicking on the link given in the email that he receives. The collaborator can also access the collaboration request from **All Tabs > Collaboration Requests**. When a collaboration request is assigned to a Queue, each queue member receives the email notification (depending on queue setup).

**i** When the sales rep deletes the line item associated with a work-in-progress collaboration request, the corresponding request gets deleted automatically. Hence, the collaborator cannot access and continue working on the collaboration request even by clicking on the email link. The deletion action also resets the configuration status on the cart from *In Collaboration* to *Saved*.

1. The Collaborator can click **Collaboration Request Id** to access the specific collaboration request. From the Collaboration Request Details screen, he can click **Configure Products** button to start working on his piece of the configuration. Collaborator is redirected to the cart page to perform the configuration tasks.
2. After the collaborator completes his configuration for the line item, he must submit his configuration back to the sales rep by clicking **Submit For Merge**. The collaborator can add, delete, and replace products in his cart including product for which the sales rep initiated the collaboration request. He can then send the configuration back to the sales rep.
3. Upon submission, the sales rep (who requested the configuration) receives an email notification and a message is displayed that notifies the changes submitted by the collaborator. In the parent cart, sales rep sees the newly added or replaced product as a separate line item. Collaboration status is now updated to *Completed*. The updated status is reflected in the Collaboration Request as well as in sales rep's parent cart. The sales rep can also delete products from a completed collaboration request. The child cart is updated automatically.
4. The sales rep can merge the configuration and the Collaboration Status changes to *Accepted*.

The Collaborator can create a sequential collaboration. For example, Sales Rep can assign a collaboration request to Collaborator A, who in turn can further assign the same collaboration request to Collaborator B. B's completed configuration will merge onto A's cart, and A's completed configuration will merge onto the Sales rep's cart respectively.

When a collaboration request is assigned to a Queue, collaborator does not see **Configure Products** button. Follow the steps mentioned in the below procedure to see the **Configure Products** button.


## Taking ownership of the collaboration request assigned to a Queue

1. Go to **All Tabs > Collaboration Requests**.
2. From **View** drop-down, select the appropriate Queue and Click **Go!**
3. Click the **Collaboration Request Id** to view the details of the configuration request.
4. In the **Collaboration Request Detail** screen, use the **Owner** field to change the ownership from Queue name to the Collaborator username.
5. In the **Collaboration Request Detail** screen, click **Configure Products** button under **Action** column to work on the configuration request.

- i** Unless the User owns a particular Collaboration Request, he does not see the Configure Products button on the detail layout. Even if the Collaboration Request is assigned to a Queue and the current logged-in User is a member of that Queue, he does not see the **Configure Products** button unless he accepts the collaboration request.

## Merging the Configurations in the Parent Cart

Once the collaborator has submitted his completed configuration, you can decide either to accept the configuration or ask for updates to the current configuration.

1. Click the collaboration icon (  ) to see the Quote Collaboration pop-up again.
2. Perform any one of the following actions:
  - a. Click **Merge** to accept the configuration submitted by the collaborator and to merge this line item with the parent cart. The status is updated to *Accepted*.
  - b. In case if further collaboration is required, you can update the fields in the collaboration popup and click **Update** to assign the collaboration task back to the collaborator. You can use the same configuration request to send the configuration back and forth to the collaborator. This is useful in a scenario when you are negotiating a transfer price or you need to further request additional changes in the configuration submitted by the collaborator.

As a Sales Rep, you have the ability to make changes to the configuration request details and you can re-submit the same configuration to the same collaborator or to someone else, without losing previously merged configuration. When you change the configuration request owner and re-assigns the same configuration to someone else, the previous collaborator receives the cancellation notification email.

1. You can review the completed configuration submitted by the collaborator before merging with the parent configuration. You can review the submitted configurations from *Completed Configuration* tab. When you navigate to **Completed Configuration** tab and click **More details**, you can see the child configuration in a read-only mode.
2. Complete your pending configurations and finalize the cart. Note that **Finalize** button is enabled only after you have merged the collaboration request in your parent cart.

- i** When you update a Completed or Merged configuration, the status of such configuration reverts to Submitted, and the Collaborator receives an email notification.

You can also delete products from a completed collaboration request. These products are automatically deleted from the child cart as well.

While using Cost and Profitability functionality with Quote Collaboration, if the collaborator and the Sales User are from different business units and the collaborator sends a price which becomes one of the cost elements of the Sales Users cart and this price is negotiated, you must use multi-tier as the collaboration type. In Peer-to-peer collaboration, the only difference is that the merge copies over entire line items rather than merging field values based on transfer price map and merge field set.

Consider that a parent cart has a product and that product is already collaborated by the Collaborator. Originally collaborated line item should get merged as per the transfer price map and merge field set. The

child cart now has one line item containing the product. If the Quote Collaborator added the same line item and performs a merge operation, the line item would be overridden during the merge operation. After the merge operation, if two line items have the same product, and the collaborator performs a merge operation, the line items are saved as individual records.

For more information, see "Cost and Profitability (Cost Breakdown)" section in *CPQ on Salesforce Administrator Guide*.

## Pricing Products

In the Pricing stage, you can price the selected products and apply adjustments such as markup value, discounts, and more from the Cart page.

You can choose to view the cart in the normal UI or [grid UI](#). The functionality and buttons remain the same, only the orientation and spacing of columns and buttons are different in both the UI.

You can perform the following actions:

- **Add More Products:** Return to the Catalog page to add more products.
- **Installed Products:** Select products from a list of products that have been purchased and associated with the account associated with the proposal. This enables you to select products directly that are previously purchased by the account.
- **Add Miscellaneous Item:** Add any miscellaneous charges that are not SKU related such as shipping charges or sales tax to the quote.
- **Reprice:** To recalculate the manual pricing adjustments.
- **Review & Finalize:** Proceed to the final stage of configuration.
- **Save:** Saves and changes the status to Saved, if status did not equal to Saved, Pending Approval or Ready for Finalization. You may return to the specified return URL or proposal object. For example, if you came to arrive on the cart from the Opportunity, the system will return to the Opportunities page.
- **Quick Save:** Saves and changes status to Saved if status did not equal to Saved, Pending Approval or Ready for Finalization. You stay on the same page
- **Save & Reload:** Saves and changes status to Saved if status did not equal to Saved, Pending Approval or Ready for Finalization. Reloads the Cart by re-querying the Product Configuration and setting the cart to show the first page, by doing this it runs Pricing.
- **Edit Price Agreement:** Enables you to add and set prices for a product that are associated with your contract. When you renew or regenerate a catalog from your contract the defined price agreement prices are applicable.

Key fields in the Summary tab and their description:

Fields	Description
Actions	<p>You can see the one or more of the following icons:</p> <ul style="list-style-type: none"> <li>• Click <b>Configure</b> to configure a bundle option within a bundle. This offers increased control over product selection, as well as making it easier to select products as selecting one bundle full of products can replace having to select those products separately.</li> <li>• Click <b>Copy</b> to clone a bundle with attributes, options, and pricing and make modifications as needed and save it as another bundle.</li> <li>• Click <b>Remove</b> to remove a product from your current selection.</li> </ul>
Totaling Group	The group used for a line item in the Totals view.
Product	The selected product.

Fields	Description
<b>Charge Type</b>	The relevant charge type for a product. A product can have multiple charge types such as License Fees, Implementation Fees, and more.
<b>Base Price</b>	The base, or starting price of a product. This is the List Price with any line item automatic adjustments applied.
<b>Option Price</b>	The sum of all option prices chosen if this is a bundle product.
<b>Quantity</b>	The quantity of product being quoted.
<b>UOM</b>	Unit of measure for the quantity field. Set up by the System Administrator per product/charge type.
<b>Term</b>	The selling term of the product, measured in Months, Days, Years etc.
<b>Frequency</b>	Whether the charge is One Time, Recurring, or Usage.
<b>Extended Price</b>	Base plus Option Price multiplied by Quantity and Term. (Base Price * Quantity * Term)
<b>Adjustment Type</b>	Values for manual adjustments whether you want to apply discount or markup on the price.
<b>Location</b>	The location in which the said product will be available and delivered.
<b>Adjustment Amount</b>	Field to enter the amount or percentage of manual adjustment.
<b>Adjusted Price</b>	Extended Price with any manual adjustments applied.
<b>Renewal Adjustment Type</b>	Specifies the type of renewal you want to apply for an asset during renewal. Values are: <i>%Uplift</i> and <i>Uplift Amount</i> . Applying any value here shows the effect on asset renewal only.  Ensure that you have an active Workflow executing asset pricing, else the price change will not appear in the Cart.
<b>Renewal Adjustment Amount</b>	Specifies the actual amount of the value you have chosen in <b>Renewal Adjustment Type</b> . This amount is applicable when you renew an asset.  Ensure that you have an active Workflow executing asset pricing, else the price change will not appear in the Cart.
<b>Guidance</b>	Specifies the percentage range within which you can adjust the amount. This amount can be the amount range by which a product can be marked up or discounted.
<b>Net Price</b>	Adjusted price with any category level adjustments applied.
<b>Is Optional</b>	Indicates if your line item is an optional one. This column works only when you have set <b>Enable Optional Items</b> to true in System Properties. Refer to System Properties topic for details.

Fields	Description
<b>Is Optional Rollup Line</b>	Indicates if the price of the optional line item should roll up at the bundle level. This column works only when you have set <b>Enable Optional Items</b> to true in System Properties. Refer to System Properties topic for details.
<b>Allocate Group Adjustment</b>	Indicates if the line item is eligible for group adjustments. Set this to <i>true</i> when you want to allow group adjustments to be applied at the line item level also. Set this to <i>false</i> to lock a line item record and prevent manual and group adjustments. This functionality is helpful when your cart has many products and you want to prevent the sales representative from applying mass adjustments to certain products that are approved by your Sales Head. For such scenarios, you can lock these products on the cart.

The Show Duration link is for advanced functionality related to Pro-ration and co-termination of recurring charges. If this is setup for a price list item, then you can charge in a different frequency from what the price list item is defined in and set Start and End Dates and a Term. For example, a price list item may be a recurring yearly charge but on this quote, you may wish to charge only for 6 months.

In the **Shopping Cart** section, the price line items are further broken out to reflect pricing for any options associated with the bundle product.

The **Totals** section shows all Totals by product category and a Grand Total sum of one time plus recurring charges. The Totals tab also allows for a discount or markup to applied to a category as a whole and rolled down to the individual line items in that category. The system distributes the adjustments uniformly across each line item. If any automatic summary adjustments have been configured, they will also appear in this view.

Proposal Locations are defined to distinguish differentiate the products as per your customer locations.

On the cart page,


- The location drop-down list displays all the account and proposal locations.
- If your system admin has created any lookup filter criteria, the system follows the criteria and filters the locations accordingly.

## To price a product on the shopping cart

You can edit any field for an added product on the cart only if the administrator has set requisite permissions for the CartDetailView page.

1. In the **Quantity** column, you can change the quantity for a product. The values in the Quantity column for a product can be driven by the numeric expression builder configured for the selected product. You can click **Reprice** link individually to enable the system to recalculate the price considering the new quantity.
2. In the **Selling Term** column, you can enter a number to specify the term duration during which the product is sold.
3. In the **Frequency** column, you can select a frequency type. The frequency type is displayed for recurring charges.

4. From the **Adjustment Type**, you can select one of the following and enter a numeric value in the **Adjustment Amount** column:

Option	Description
<b>% Discount</b>	Select this and enter a discount percentage in the <b>Adjustment Amount</b> column. For example: If you enter 10 in the Adjustment Amount column, this implies that you want to give a discount of 10%.
<b>Discount Amount</b>	Select this and enter a flat discount amount in the <b>Adjustment Amount</b> column.
<b>% Markup</b>	Select this and enter a markup percentage in the <b>Adjustment Amount</b> column. For example: If you enter 10 in the Adjustment Amount column, this implies that you want to markup the price by 10%.
<b>Markup Amount</b>	Select this and enter a flat markup amount in the <b>Adjustment Amount</b> column.
<b>Price Override</b>	Select this and enter an amount in the <b>Adjustment Amount</b> column. The amount you enter overrides the net price of the product.
<b>Base Price Override</b>	Select this and enter an amount in the <b>Adjustment Amount</b> column. The amount you enter overrides the base price of the product and all the other calculations on the product would happen based on the new base price. <b>Allow Manual Adjustment</b> must be selected on the product line item, in order to make <b>Base Price Override</b> editable.
<b>% Discount Off List</b>	This is similar to % Discount; except it calculates the discount amount always on List Price of a Bundle and applies to Extended Price.  <div style="border: 1px solid #ccc; padding: 10px; margin: 10px 0;"> <p> The option % <i>Discount off List</i> is not available by default. The administrator must add the value to the <b>Adjustment Type</b> field in the Line Item object. For more information refer to "Multiple Adjustments at the Line Item" in <i>CPQ on Salesforce Administrator Guide</i>.</p> </div>
<b>% Uplift</b>	This gets applied every time to products that are added from the Asset.
<b>Price Factor</b>	Select this and enter an amount in the <b>Adjustment Amount</b> column. The amount you enter gets multiplied by the <b>Extended Price</b> to calculate the new <b>Net Price</b> .
<b>Base Price Discount</b>	Indicates that the adjustment amount is reduced from the Base Price.
<b>Base Price Markup</b>	Indicates that the adjustment amount is added to the Base Price.
<b>% Discount (Bundle Only)</b>	Select this and enter a discount percentage in the <b>Adjustment Amount</b> column. The value you enter applies a discount on the bundle without applying that same adjustment on the options within the bundle.
<b>Discount Amount (Bundle Only)</b>	Select this and enter a flat discount amount in the <b>Adjustment Amount</b> column. The amount you enter applies a discount on the bundle without applying that same adjustment on the options within the bundle.

Option	Description
<b>% Uplift (Bundle Only)</b>	Select this and enter an uplift discount percentage in the <b>Adjustment Amount</b> column. The value you enter applies an uplift to the bundle every time a product is added from the Asset.
<b>% Markup (Bundle Only)</b>	Select this and enter a markup percentage in the <b>Adjustment Amount</b> column. The value you enter applies a markup on the bundle without applying that same adjustment on the options within the bundle.
<b>Markup Amount (Bundle Only)</b>	Select this and enter a flat markup amount in the <b>Adjustment Amount</b> column. The amount you enter applies a markup on the bundle without applying that same adjustment on the options within the bundle.
<b>Price Override (Bundle Only)</b>	Select this and enter an amount in the <b>Adjustment Amount</b> column. The amount you enter overrides the net price of the bundle without applying that same adjustment on the options within the bundle.
<b>Price Factor (Bundle Only)</b>	Select this and enter an amount in the <b>Adjustment Amount</b> column. The amount you enter is multiplied with the Extended Price to calculate the new Net Price of the bundle.
<b>% Discount Effective</b>	Select this and enter a discount effective percentage in the <b>Adjustment Amount</b> column. The value you enter applies a discount on the bundle or total so that the Net Adjustment % on the Bundle or Total is set to the user requested value. This adjustment type is applicable when the following requirements are fulfilled: Group Adjustment Spread is set to True. Max Adjustment Line must be blank or 1. Bundle price must be zero.
<b>% Markup Effective</b>	Select this and enter a discount effective percentage in the <b>Adjustment Amount</b> column. The value you enter applies a markup on the bundle or total so that the Net Adjustment % on the Bundle or Total is set to the user requested value. This adjustment type is applicable when the following requirements are fulfilled: Group Adjustment Spread is set to True. Max Adjustment Line must be blank or 1. Bundle price must be zero.
<b>Price Factor Effective</b>	Select this and enter an amount in the <b>Adjustment Amount</b> column. The amount you enter is multiplied with the Extended Price to calculate the new Net Price of the bundle or total so that the Net Adjustment % on the Bundle or Total is set to the user requested value. This adjustment type is applicable when the following requirements are fulfilled: Group Adjustment Spread is set to True. Max Adjustment Line must be blank or 1. Bundle price must be zero.



5. Click the **Details** tab. In this view, the price line items are further expanded to reflect pricing for any options associated to bundle products. You can make changes as per your requirement.
6. Click the **Totals** tab. This view shows all Totals by product category and a Grand Total sum of one time plus recurring charges. The Totals tab also allows for a discount or markup to applied to a category as a whole and rolled down to the individual line items in that category. The system distributes the adjustments uniformly across each line item. If any automatic summary adjustments have been configured, they will also appear in this view.
7. Do one of the following:
  - To reprice all the parameters such as a change in the quantity, term, frequency, and any other custom field, click **Reprice All**.
  - To apply all the adjustments you made on the shopping cart, click **Apply All Adjustments**.

All your selected products are priced with the desired parameters.

- i**
- On the configuration page, you can observe the **See Price in Cart** link for the option product. When you click on that link, you notice that for the free item, Included with bundle text is displayed as a price value.
  - For single or multiple price list items of the option products, the **See Price in Cart** link pops out well-aligned table for the prices of the corresponding products.
  - You can see the carrot icon when the option has multiple charges of multiple charge types.
  - You can see "Included in Price" when the option has a single charge, and it is included in the price of the bundle.
  - You can see the pop-up for the charge types when you click **See Price in Cart**.
  - On the product options screen during product configuration, you can see prices against the options and when you expand the arrow against the options a list of prices displays.
  - In the multi-adjustment pop-up, when you apply **% Discount**, Apttus CPQ applies the **Discount Amount** to the **Base Price** after multiplying it with **Quantity** and **Selling Term** of the bundle product.

You can review the products and prices configured for your quote one last time before returning to the Quote/Proposal page.

- [Creating a Price Ramp for a Product](#)

You can create a price ramp for a bundle product or for an option inside the bundle. You can create ramp lines to spread across time periods and add new ramp lines, create user ramps where from one period to the next the quantity (number of users) increases (user count/quantity ramp), and also create revenue ramps where from one period to the next the level of revenue commitment increases (total price/override ramp).

- [Defining Tiered Pricing](#)

Tiered pricing is used to establish rates for a future usage. There is no pricing until you know the future usage.

- [Editing a Price Agreement](#)

After product selection and configuration, you are redirected to the Shopping Cart page. The **Edit Price Agreement** button enables you to add and set prices for a product that is to be associated with your contract. When you renew your contract or regenerate a contract, the defined price agreement prices are applicable.


- [Contract Pricing](#)

Contract Pricing in CPQ enables you to store contracted prices in the system. When a quote is created in CPQ, the quote price is determined by looking up the price defined in the Contract.

## Bucket Adjustments

A **bucket** (field on **Adjustment Line Item** object) serves as a container for the adjustments that a sales representative applies on a line item in the cart. The final value after applying the adjustments within the same bucket is stored in a field called **Running Total**.

You can group the adjustments in buckets. Adjustments in the same buckets are applied to the same starting price and the results form the running total price points. With bucket adjustments, you support cascading pricing discounts by controlling if you want to apply the discounts on the previous or starting price of the Line Item. The adjustments that fall under the first bucket are applied to the starting price. Subsequent bucket adjustments are applied on the adjusted price in the previous bucket, which is Running Total (Adjusted Price).

 You can apply bucket adjustments when the Administrator has enabled the **Enable Adjustment Buckets** checkbox in Config System Properties.

If Bucket field value is null, a sales representative must choose between the starting price, from bucket 2 to the running total and the previous price. The pricing engine performs the following sequential tasks:

1. Applies the manual adjustments from bucket 1 to the starting price.
2. Applies the price from bucket 2 to the running total that is the result of calculating bucket 1 adjustments.
3. Applies bucket 3 to the running total of bucket 2 adjustments.

The same calculation logic applies to subsequent buckets. Numbered buckets are processed before null buckets.

## Use Case 1: Applying Bucket Adjustments

**Description:** This use case describes how you can apply adjustment buckets on a line item in the cart page. You might use this functionality differently, depending on your business case.

Bucket adjustments help you control at which point you want to apply the adjustments in a cascaded adjustment cycle.

Suppose you are a sales representative and you want to provide cascading price discounts to a product. You have three categories of discounts you can provide. The first category is called “Valued Customer Discounts”, the second category is called “Marketing Incentives”, and the third category is called “Seasonal Promotions”. For each of the category, you want to provide multiple discounts, being either % based or an amount based. This is also to incentivize the user to make an immediate purchase.

In this case, you can apply three buckets, each representing a category. In each bucket, you can define one or multiple % based discounts, one or multiple amount-based discounts.

### Bucket 1: Valued Customer Discounts (VCD)

1. 5% off

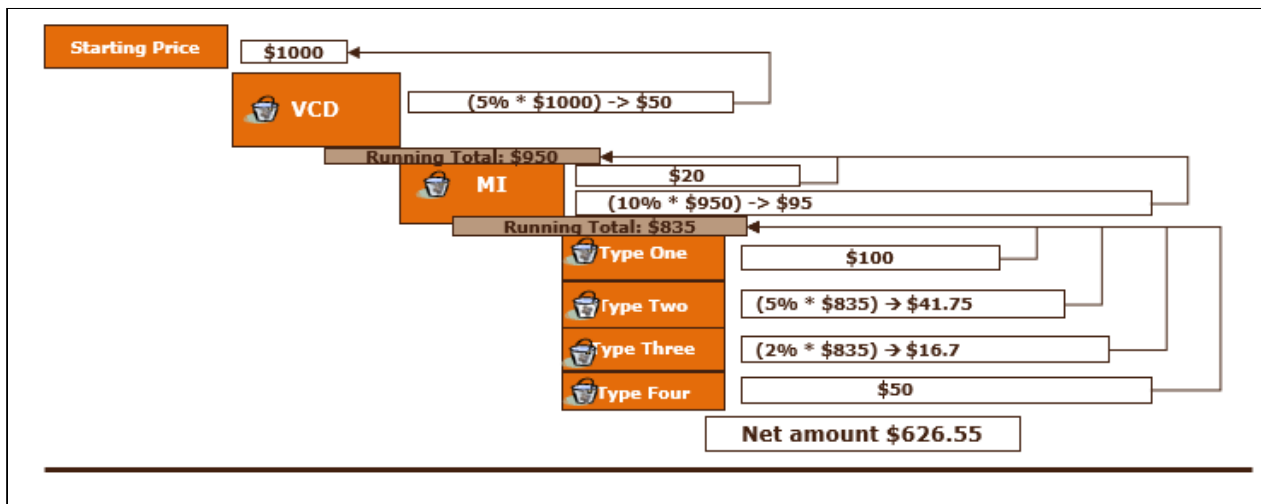
### Bucket 2: Marketing Incentives (MI)

1. \$20 off
2. 10% off

### Bucket 3: Seasonal Promotions (SP)


1. Type One: \$100 off
2. Type Two: 5% off
3. Type Three: 2% off
4. Type Four: \$50 off

If the starting price is \$1000, the calculation works as depicted in the graph below:



### To apply bucket adjustments on line items in the cart

**Prerequisite:** You must have selected **Enable Adjustment Buckets** custom setting and defined a numeric value in **Max Adjustment Lines** custom setting.

1. Navigate to the cart.
2. For any line item in the cart, click the dollar icon (). The Adjust Price for <Product Name> <Charge Type> dialog box is displayed.
3. Enter the following details.
  - a. **Type:** Select the type of adjustment.
  - b. **Bucket:** Select the adjustment bucket.
  - c. **Adjustment Applies To:** Select the price to which this adjustment applies.
    - **Starting Price:** Select this option to apply adjustments on the starting price.
    - **Previous Price:** Select this option to apply adjustments on the adjusted price of the previous bucket.

- **Bucket <number>**: Select this option to apply adjustments on the adjusted price of a specific bucket. Buckets configured by your administrator are listed here; by default, you are allowed to apply 10 buckets.
  - d. **Adjustment Type**: Select the type of adjustment.
  - e. **Adjustment Amount**: Enter the adjustment amount.
4. Click **Add another adjustment** to add one more adjustment and enter the details as in Step 3. Depending on your requirement, you can select a bucket for multiple adjustments.
  5. Click **Save**.

**Result:** Bucket Adjustments are applied for the selected line item in your cart.

**i** If you select a bucket that was not applied in any previous adjustments in the **Adjustment Applies To** column, the adjustment is automatically applied on the preceding bucket. If there is no preceding bucket then the adjustment is applied on the Starting Price.

## Use Case 2: Applying Unit Level Discounts

You can apply the unit level discount on the line item level, adjustment line item level, or adjustment line items with different UoM (Unit of Measure) level. For instance, case: 10 Each (Frequency/UoM). For details, refer to Unit of Measure (UoM) Setup and Conversion in *CPQ on Salesforce Administrator Guide*.

On the cart in the multi-adjustment pop-up, when you apply **% Discount**, Apttus CPQ applies the **Discount Amount** to the **Base Price** after multiplying it with **Quantity** and **Selling Term** of the bundle product.

**i** You must select the custom setting **Enable Base Price Adjustment** in the System Properties > Price Settings in order to reprice the line item.

### Scenario 1: On Line Item

List Price	Base Price	Quantity	UoM	Extended Price	Adjustment Type	Discount Amount (%)	Adjusted Price
\$100	\$100	5	Each	\$500	Base Price Discount	10	\$450


### Scenario 2: On Adjustment Line Item

List Price	Base Price	Quantity	UoM	Extended Price	Adjusted Price	Bucket	Adjustment Applies To	Adjustment Type	Amount	UoM	Net Price of Bundle	Unit Level Price
\$100	\$100	5	Each	\$500	\$350	Bucket 1	Starting Price	Discount %	10%	Each		\$50
						Bucket 1	Starting Price	Discount	\$50	Each	\$400	\$50
						Bucket 2	Bucket 1	Base Price Discount	\$10	Each	\$350	\$80

### Scenario 3: On Adjustment Line Item with Different UoM

List Price	Base Price	Quantity	UoM	Extended Price	Adjusted Price	Bucket	Adjustment Applies To	Adjustment Type	Amount	UoM	Net Price of Bundle	Unit Level Price
\$100	\$100	5	Each	\$500	\$395	Bucket 1	Starting Price	Discount %	10%	Each		\$50
						Bucket 1	Starting Price	Discount	\$50	Each	\$400	\$50
						Bucket 2	Bucket 1	Base Price Discount	\$10	Case	\$350	\$80
									\$1	Each	\$395	\$79

On the Bucket 2, Apttus CPQ calculates the price after discount based on the UoM for each unit. For instance, \$1 discount is applied for 5 option products, which in turn adjusted the net price of bundle to \$395 and unit level price \$79.

 If you have applied an adjustment on the promotion, an adjustment line is created and the discount is provided appropriately.

## Creating a Price Ramp for a Product

You can create a price ramp for a bundle product or for an option inside the bundle. You can create ramp lines to spread across time periods and add new ramp lines, create user ramps where from one period to the next the quantity (the number of users) increases (user count/quantity ramp), and also create revenue ramps where from one period to the next the level of revenue commitment increases (total price/override ramp).

While creating ramps the start date, end date and quantity are required fields. Ensure that the dates must not overlap between ramps.

 You cannot create ramps and tiers both for an option.

In this section:

- [Creating the Price Ramp on the Cart Page](#)

### Creating the Price Ramp on the Cart Page


On the Cart page, you can create price ramps for the products by following the steps mentioned below.

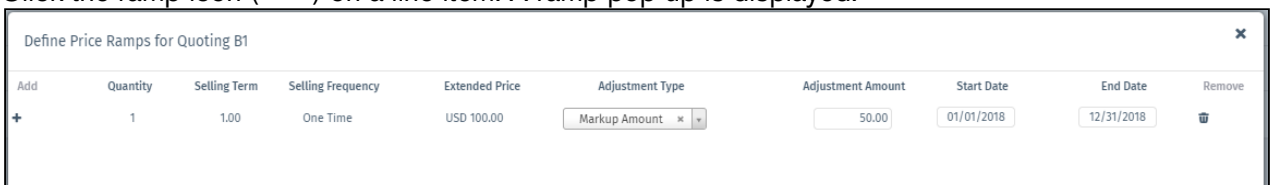
#### Before you Begin


The administrator must enable **Enable Price Ramp** setting in the price list item.

#### To create the price ramp on the pricing cart page

On the cart page.

1. Click the ramp icon (  ) on a line item. A ramp pop-up is displayed.




Add	Quantity	Selling Term	Selling Frequency	Extended Price	Adjustment Type	Adjustment Amount	Start Date	End Date	Remove
+	1	1.00	One Time	USD 100.00	Markup Amount	50.00	01/01/2018	12/31/2018	

2. Specify the price ramps for a product as described below. The options in the list depend upon the columns defined in "Display Column Settings" in *CPQ on Salesforce Administrator Guide*.

Option	Description
<b>Add</b>	Click the add icon to add new ramps.
<b>Quantity</b>	Displays and allows you to specify the quantity of the selected product for a level in the price ramp.
<b>Selling Term</b>	Displays and allows you to specify the selling term.
<b>Selling Frequency</b>	Displays or allows you to define the usage period for a level in the price ramp for the selected product by specifying its term and the type of period.
<b>Extended Price</b>	Displays the selected products extended price.
<b>Adjustment Type</b>	Displays or allows you to specify the adjustment type for a level in the price ramp for the selected product.
<b>Adjustment Amount</b>	Displays or allows you to specify the adjustment amount for a level in the price ramp for the selected product.
<b>Start Date</b>	Displays and allows you to specify the starting date of the usage period for a level in the price ramp for the selected product. Note: Start Date must be before Ending Date.
<b>End Date</b>	Displays and allows you to specify the ending date of the usage period for a level in the price ramp for the selected product.
<b>Status</b>	Displays the status. A red <b>X</b> icon is displayed to indicate an issue.
<b>Remove</b>	Click the remove icon to the remove the selected ramp.

3. Click **Save**.

 The Apttus CPQ automatically enables price ramp on the second charge type, when price ramp is enabled for the first charge type on the cart page. You will observe such behavior in case if your administrator has selected **Enable Auto Ramp Creation** while configuring the price list item for the product.

If the ramp is on a bundle or standalone product, each ramp line becomes a line in the cart.

In case you defined more than one ramp line for a bundle and its options, if you change the quantity of the bundle in the primary ramp line, the primary ramp line of the options is automatically updated. You need to update the non-primary ramp lines of the options manually. This is true when **Enable Auto Ramp** and **Auto Cascading** are enabled.

### Limitations

Please note that if you have selected a custom frequency, you see the following limitation:

- Option Price of Option ramp line is not added to the respective bundle.


- Selling Term is not calculated as per the Start Date and End Date.
- Canceling a ramp line during change operation creates multiple lines.
- A maximum of 50 ramp lines can be created in the current release.

## Defining Tiered Pricing


Tiered pricing is used to establish rates for a future usage. There is no pricing until you know the future usage.

Here is an example: In a cell phone plan, you are quoted possibly a tiered plan of \$/minute for various blocks of time that you agree to pay. At the end of the billing cycle, the carrier will use the tier to determine the actual rate to apply to the minutes consumed and present you the bill for payment. At the time of quoting, only the rate is established.

If you have defined price matrices, the tiered pricing for a product is inherited from there. If you make any adjustments on the line item that has a tiered rate defined, the adjustments apply to tiered rate and also affect the price matrices.

 You cannot create ramps and tiers both for an option.

### To define tiers

1. Select a product on the options/configuration page. The tiers table appears below the selected product.
2. Type a mandatory **Tier Start Value** and **Tier End Value**. Ensure that the start and end values do not overlap. For example, the range must be 0-100, 101-200, and so on.
3. Type a mandatory **Usage Rate**.
4. To add more tier lines, click the  icon, and select **Add**.

A new tier line is added in the tiers table.

## Sub totaling by group in the Cart

A product group is a high-level grouping of the products. Product groups enable you to categorize the products which are displayed on the cart page. When you select the group level check box, Apttus CPQ auto selects all the products in the group and allows you to select line items and perform actions such as *Copy*, *Remove From Cart*, and *Mass Update*. You must specify the API names in the **Config System Properties > Manage > System Properties > GroupBy Fields** in the admin guide. These line item fields can be of the Lookup, Text, and Formula types.

**Viewing subtotal at the group by cart level:** You can view the subtotals of the cart by a group, so that you can make decisions while applying adjustments at the group line item. When you view a cart by the group, you see the relevant sub totals as separate line items. Group by subtotal has the similar columns as Cart Line Item display columns.



## Applying Promotions on the Products in the Shopping Cart

Out of the 2 options available to apply promotions in the new release, you can either apply the promo code on the cart page or the system applies the promotion once your criteria is met.

**PULL promotion:** You can manually view the available promo codes and apply one or more promo codes to your line item (product level) and to the entire cart.

**PUSH promotion:** This type of promotion is applied to your line items (products) or to your entire cart when the entry criteria for the promotion is met for the selected products and the entire cart. The system automatically updates your pricing for respective products or cart, depending on the promotion applied.

### To manually apply a promo code on the Shopping Cart

You must have a cart that contains products for which you can apply promo codes. CPQ enables you to apply or remove promotions or coupons on line items individually or on multiple line items together (mass application). Promotions and coupon applications must be mutually exclusive.

After coupons are generated from a promotion, the Apply Promotions dialog box does not list the promotion. This forces the user to enter the coupon code to apply coupons instead. Only the coupons that have not reached the usage limits are displayed. When the user enters a coupon, it is stored on the Product Configuration object under the Coupon Code field.


**i** The **Apply Promotions** and **Remove Promotions** buttons are visible only when you select line items.

### Applying Promotions or Coupons

1. Navigate to the cart.
2. Select the required line items and click **Apply Promotions**. The Apply Promotions/Coupons window is displayed.
  - Select a single line item to apply one or more promotions or coupons on it.
  - Select multiple line items to apply promotions or coupons together (mass application).
  - Select all items to apply promotions or coupons at the cart level.
3. On the Promotions tab:
  - a. Select the required promotions. You can also search promotions.
  - b. To remove any existing promotion, deselect the checkbox next to the promotion. This is possible when only one promotion is applied on the line item.

**i** When you are applying a promotion to multiple lines, if the same promotion is already applied to a line, CPQ skips that line and applies the promotion to the remaining items. When you are applying a promotion to multiple lines, if a different promotion is already applied to a line, CPQ applies the new promotion to all items. When you are applying a promotion to multiple lines, if you deselect the same or different promotion already applied to a line on the Promotions tab, CPQ does not remove the promotion applied to the line.

4. On the Coupons tab:
  - a. Select the required coupons. You can also search coupons.
  - b. To remove any existing coupon, deselect the checkbox next to the coupon. This is possible when only one coupon is applied on the line item.
5. Click **Apply**.

 You can click **Apply Promotions on Totals** to apply promotions on the total amount on the cart.

## Removing Promotions or Coupons

1. Navigate to the cart.
2. Select the required line items and click **Remove Promotions**. The Remove Promotions/Coupons window is displayed.
  - Select a single line item to remove one or all promotions or coupons applied on it.
  - Select multiple line items to remove promotions or coupons together (mass removal). When you select multiple line items, only those promotions or coupons that are common can be removed.
  - Select all items to remove promotions or coupons at the cart level. When you all line items, only those promotions or coupons that are applied at the cart level can be removed.
3. On the Promotions tab, select the required promotions. You can also search promotions.
4. On the Coupons tab, select the required coupons. You can also search promotions.
5. Click **Remove**.

The pricing on the cart is updated automatically to include the benefits of the promotions you apply. The **Incentive Adjustment Amount** denotes the adjustment amount which is applied using the promo code.

After applying promotions on your cart, you can now proceed to add more products or save and finalize the cart.

## Editing a Price Agreement

After product selection and configuration, you are redirected to the Shopping Cart page. The **Edit Price Agreement** button enables you to add and set prices for a product that are to be associated with your contract. When you renew your contract or regenerate a contract the defined price agreement prices are applicable.

### To edit a price agreement

1. On the Shopping Cart page, click **Edit Price Agreement**.
2. Click **Add More Products** to add products the contract.
3. Select the products from the list and click **OK**. You can also search for the product using Product Name, Product Code, or Product family.
4. Specify the quantity range for the product in the **From** and **To** fields. To define product quantity ranges, such as 1-20, 21-50, click +.

5. Specify the **Start** and **End Date** ranges during which the product is valid.
6. Specify the **Unit Price**, **Flat Price**, and adjustments if any for a specific quantity range.
7. Click **Save**.

After you finalize the agreement and are redirected to your contract, the price agreement that you save will be associated with your contract as the new Price List.

## Contract Pricing

Contract Pricing in CPQ enables you to store contracted prices in the system. When a quote is created in CPQ, the quote price is determined by looking up the price defined in the Contract. Contract price list is a subset of the standard price list. This implies that when the same product is defined in multiple contract price lists, the former contract takes precedence. Contract Pricing is supported for standalone and bundles. Contract Pricing for Options is supported provided options are defined in the same contract price list as the bundle. Options cannot be in a different price list. Options inherit the contract price list from the bundle.

CPQ enables you (a sales representative) to know what adjustments were applied as part of a contract price list so that you can negotiate better with customers and convince them about the discounts they are getting as part of contracts. When a contract price list is generated, it holds the list price from the line item along with its negotiated contract price. When the contract price list is used in pricing a line item, you know the new contract price (used for price calculation, that is, Base Price onward) and the original list price when the contract was negotiated.

CPQ enables you (a sales representative) to quote the correct price to the customer even if none of the contract price lists are applicable. When there is no contract price available, CPQ falls back to the quote price list to verify if it has an applicable price list item. If the quote price list does not have the applicable price list item, CPQ falls back to the *Based on Price List* to derive the price.

### To select a contract pricing list

You must have an existing contract pricing list.

1. Navigate to the **Proposals** tab and select a proposal.
2. From Configure (Contract Pricing), click **Configure Products**.

You have selected to configure products having contract pricing.

# Finalizing Products

This is the final step before taking the finalized set of products and prices back to the Quote/Proposal.

You can review the cart and its pricing and if you are satisfied with the configuration and pricing, you can finalize the cart.

## To finalize the cart

You must click the **Reprice** button to accept any pending changes in pricing. You must also resolve any validation errors that may appear due to validation rules.

1. On the Cart page, click **Review and Finalize**.

**i** The **Review** and **Finalize** button on the Cart page keeps you on the same page without finalizing the configuration. This feature has been deprecated.

2. To confirm the product configuration and pricing, and return to the Quote/Proposal detail page, click **Finalize**.

The screenshot shows a Salesforce CPQ interface for a proposal titled "Proposal 3d printer Proposal 07-19". The cart contains several items with their respective quantities, net prices, base prices, and option prices. The total price is USD 118,116.00.

#	Product	Quant...	Net Price	Base Price	Option Price	Pricing Uom	Selling Uom	Start Date	End Date	Sellin...	Selling Frequency	Ext Cost	Adjusted Price	Collaboration	Adjustment
1	Cloud Server Solution	1	USD 96,516.00	USD 45,999.00	USD 50,517.00	Each	Each	07/31/2019	07/30/2020	1.0000X	1.00...	USD 48,939.00	USD 96,516.00		0.00%
	BL460c Gen8 Serve...	1	USD 2,939.00	USD 2,939.00		Each	Each	07/31/2019	07/30/2020	1.00...	1.00...	USD 1,450.00	USD 2,939.00		0.00%
	ADX100 (Base + SSL + ...	1	USD 395.00	USD 395.00		Each	Each	07/31/2019	07/30/2020	1.00...	1.00...	USD 195.00	USD 395.00		0.00%
	X2500 WAF	1	USD 799.00	USD 799.00		Each	Each	07/31/2019	07/30/2020	1.00...	1.00...	USD 399.00	USD 799.00		0.00%
	ASA 5520	1	USD 647.00	USD 647.00		Each	Each	07/31/2019	07/30/2020	1.00...	1.00...	USD 320.00	USD 647.00		0.00%
	10622 G2 Shock Rack	12	USD 22,548.00	USD 1,879.00		Each	Each	07/31/2019	07/30/2020	1.00...	1.00...	USD 11,100.00	USD 22,548.00		0.00%
	D2600 Disk Enclosure	1	USD 8,125.00	USD 8,125.00		Each	Each	07/31/2019	07/30/2020	1.00...	1.00...	USD 4,050.00	USD 8,125.00		0.00%
	DL380p Gen8 E-Mail ...	1	USD 8,090.00	USD 8,090.00		Each	Each	07/31/2019	07/30/2020	1.00...	1.00...	USD 4,000.00	USD 8,090.00		0.00%
	WS460c Gen8 Gra...	1	USD 4,954.00	USD 4,954.00		Each	Each	07/31/2019	07/30/2020	1.00...	1.00...	USD 2,425.00	USD 4,954.00		0.00%
2	Premier Support	1	USD 21,600.00	USD 1,800.00		Each	Each	07/31/2019	07/30/2020	12.000X	12.000X	USD 0.00	USD 21,600.00		0.00%

The Quote/Proposal page appears with all the product configuration and pricing information.

If your product contains Usage Tiers and Attributes, there might be a delay for the system to create these records while you land on the Quote/Proposal page. You must wait for the system to finalize the configurations before going for document generation or asset creation.

After the quote is finalized, the quote/proposal page appears. If any workflow processes have been setup to trigger approvals based on criteria, they will typically occur at this point, and the **Approval Stage** inside the Quote/Proposal record will be set to **Approval Required**. As soon as the Approval Stage changes, the **Submit for Approval** button becomes available and you can submit the Quote for approval to management if any approval processes have been configured. Once approved, the Quote/Proposal is **generated and presented**.


## Re-validating the Product Configuration

You can re-validate your saved quote for the product structure changes. Saved quote created in the past might have a product for which structure or rule has been changed. This can affect the validity of such quote when you re-open the configuration. Re-validation includes changes to the product structure, such as addition or deletion of options.

### To re-validate the cart

1. When you click **Revalidate** on the Cart page, a popup is displayed in which you see the products whose structure is changed.
2. Do one of the following:
  - Click **Apply** to accept the changes. Products whose structure is changed will be marked as *Pending Configuration* and you must reconfigure such product before proceeding.
  - Click **Cancel** to proceed with the previous structure of the product.

You see the **Revalidate** button on the previously saved Cart page when the Admin has made changes to the Product Configuration and has updated the Version field of the product.

 When you click Revalidate, Apttus CPQ shows *No records to display* a message in case if there is no change in the product structure.

### Displaying revalidation messages

When a price list item for the bundle or options is revalidated, the system warns you with the message that some items may get changed upon revalidation.

A system displays the following revalidation messages based on the business scenarios.

For example,

- When an optional product is removed from a bundle, the system shows the message:  
"Product Structure for the following product(s) has changed. Do you want to revalidate the product(s)?"
- When a line item is expired, the system shows the message:  
"The following line items have invalid price list items. During revalidation, some items in the cart may change or be removed."
- When a version is changed in the quote, the system shows the message:  
"Some items in the cart may have changed. Please revalidate the cart."

For more information, see "Field Set Settings" in *CPQ on Salesforce Administrator Guide*.

## Finalizing Quotes

- [Generating and Presenting a Quote/Proposal](#)
- [Accepting a Quote/Proposal](#)

## Generating and Presenting a Quote/Proposal

- [Auto-Synching Cart Line Items to a Quote](#)  
When Auto-sync is turned on, the system does validate for errors and auto-syncs the cart lines with the Proposal Lines.
- [Generating a Quote/Proposal](#)  
This scenario guides you to generate a Quote/Proposal document based on the information you provided.
- [Presenting a Quote/Proposal](#)  
After generating a proposal document, it is presented to the trading partner. The system sends an email with the generated Quote attached.
- [Reprice Quote](#)  
Use the Reprice Quote feature to reprice all the parameters with a single click from the Quote/Proposal page.
- [Analyse Quote](#)  
Use the Analyse Quote feature to examine the price waterfall chart and understand the product cost breakdown.

### Auto-Synching Cart Line Items to a Quote

When Auto-sync is turned on, the system does validate for errors and auto-syncs the cart lines with the Proposal Lines. You can view the synced line items in the Quote/Proposal detail page under the Line Items related list. Auto-sync is done when following conditions are satisfied:

- No error produced by validation callback
- No Constraint Rules error
- No line items in price pending state
- No Must Configure product is in configuration pending state

### Generating a Quote/Proposal

This scenario guides you to generate a Quote/Proposal document based on the information you provided.

After the quote is finalized, and if any approval processes have been configured in your organization, the **Approval Stage** changes to **Approval Required**. As soon as the Approval Stage changes, the **Submit for Approval** button becomes available and you can submit the Quote for approval to management. For an overview of the various Approval stages, see [Glossary of Apttus Approval Stages](#).

After the quote is approved by an approver, the Approval Stage changes to *Approved*. You can now generate a proposal document to present to a trading partner. When you initiate the **Generate** action, a

screen appears allowing you to select additional information about the document to be generated. Additionally, if document protection has been enabled, a document can be generated with the appropriate protection options.

### To generate a proposal document

You must ensure that the Approval Stage is *Approved*.

1. Click **Generate** to generate a Proposal document.
2. From Options > 1. Select Output Format, select one of the following formats:
  - DOC: To generate an MS Word document.
  - RTF: To generate a proposal document in Rich Text Format.
  - PDF: To generate a PDF protected proposal document.
3. To include a watermark across the document, select **Include Watermark**.
4. Select a template from the list, and click **Generate**.

The proposal document is generated and can be found in the **Notes and Attachments** related list. The proposal document is automatically attached to the Quote and can be viewed via the View action link. The Approval Stage changes to *Generated*.

You can now present the quote you generated.

### Presenting a Quote/Proposal

After generating a proposal document, it is presented to the trading partner. The system sends an email with the generated Quote attached.

If the email is sent, the Approval Stage will be automatically be set to *Presented*. If you prefer to print or present the Quote a different way, you can manually set the Approval Stage to *Presented*.

### To present a quote/proposal

The Approval Stage must be in *Generated* stage.

1. Click **Present**. The Present Proposal page appears.
2. Select the proposal document to be attached and click **Next**. The **Send an Email** page appears.
3. Enter details as you would for an email and click **Send**. A confirmation popup appears. For more information on email templates and defining custom email templates, see *Managing Email Templates*. You can select an email template, attach additional files, and perform a spell check before sending an email. The system will prompt whether the email was sent.
4. Click **Yes**.

The email is sent and the **Approval Stage** status changes to *Presented*. The **Accept** button is enabled.

After the quote has been accepted by the trading partner, click the **Accept** button.

## Reprice Quote

Use the Reprice Quote feature to reprice all the parameters with a single click from the Quote/Proposal page.

Pricing is determined by Quote header level parameters. Normally after the first time Quote configuration is completed, and you were to adjust the Quote level parameters, you had to go back to the shopping cart to Reprice. Doing this one by one and then repricing is time consuming and ineffective. With Reprice Quote button, there is no need to do this, you can change product pricing and/or rules, and click the Reprice Quote button to reprice all the parameters without going to the cart page.

### To reprice a quote from the Quote/Proposal page

You must complete a quote configuration at least once.

1. Navigate to the **Proposals** tab and select a proposal.
2. Click **Reprice Quote**.

All the quote level parameters are repriced on the Quote/Proposal page.

## Analyse Quote

Analyse Quote page helps you to view and manipulate the cost and profitability of each **Line Item** and **Summary Group Item**, one at a time.

### **i** Enhanced Analyze Quote Page for Angular and Cart Grid UI

Apttus CPQ shows the following UI improvements in the Analyze Quote page:

The column names or headers are available for the optional columns. If you configure a column from **Config Setting > Display Column Setting > Display Type : Option Cost & Profitability Cost**, then on clicking **Analyze Quote** from the cart shows **Optional Columns** on the page.

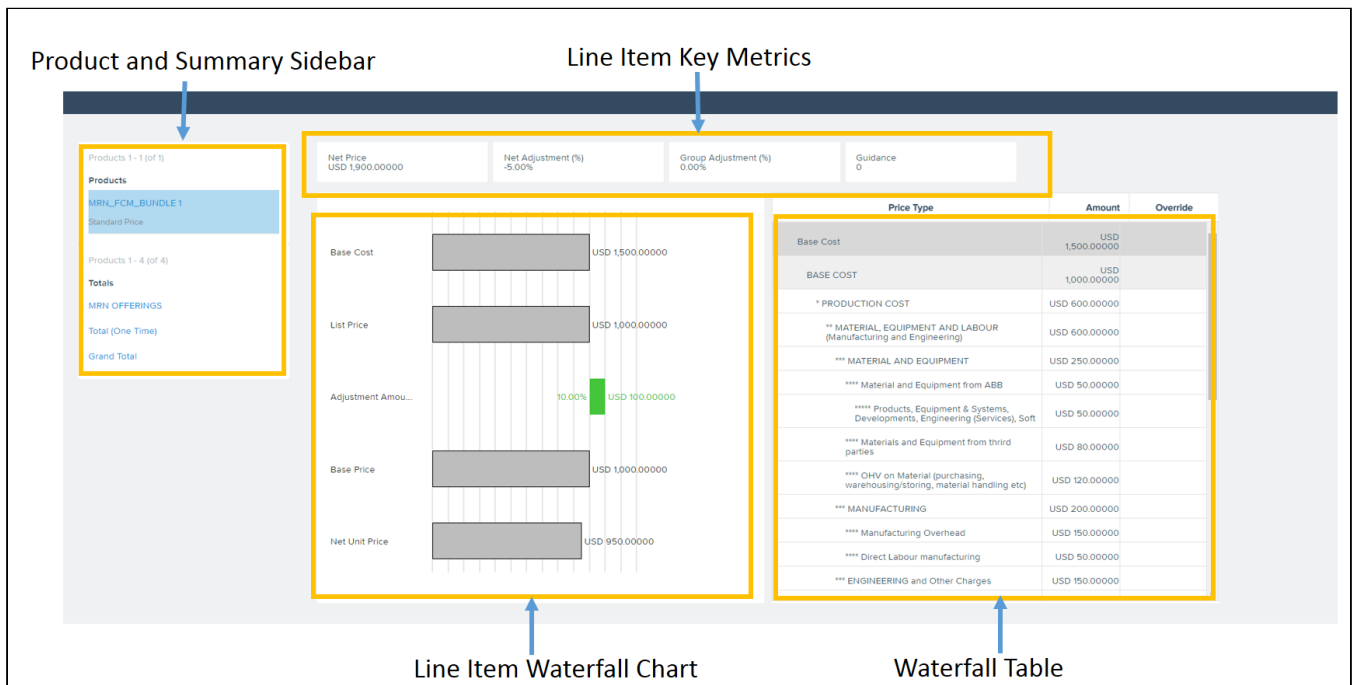
### Add Analyze Quote button on the Cart

Go to **Config Settings** from (All tabs) > **Display Action Settings** and setup an *action* button for **Analyze Quote**.

## Screen Elements

The following illustration shows the Analyze Quote page, calling out the key elements appearing on this page.





**Product and Summary Sidebar:** This section displays a list of Line items and Summary Group Items the way you would see it on the cart. You can select any of the line items or the summary groups to see its corresponding waterfall chart and cost breakdown.

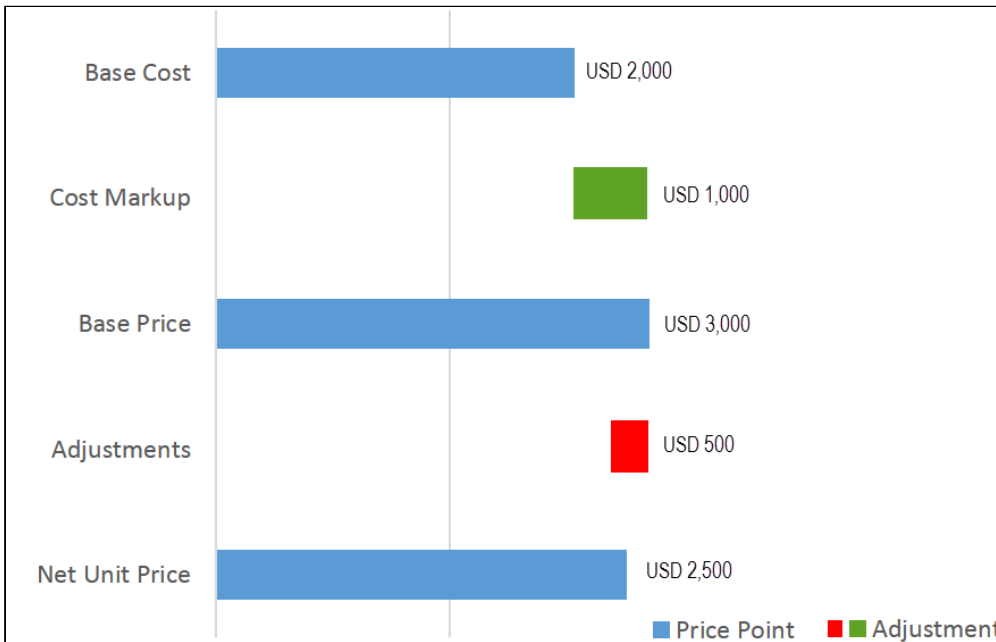
All information visible on this page is either for a single Line Item or a single Summary Group Item.

**Line Item Key Metrics:** Fields that are useful in deriving the costing profitability such as Margins, Discount etc. can be added to this Key Metrics.

**Line Item Waterfall Chart:** Various Line item Currency fields can be used to plot the Waterfall chart. It is basically a bar chart where Line Item Fields are plotted vertically and their values (Price) are plotted horizontally.

You can see two kinds of bars:

- **Price Point:** These bars begin from the base of the y-axis. Usually the Line Item fields such as List Price, Invoice Price etc. are the Price Points in the Waterfall chart.
- **Adjustment:** These bars are adjustments to the Price Point or Costs. These bars start from the endpoint of the previous bar and based on the type of adjustment, whether negative or positive, their end point is derived. As shown in the following illustration, Cost Markup is an addition to the Base Cost and hence the Adjustment bar starts from the point Base Cost ends. Similarly, Adjustment is a deduction from the Base Price which starts from where the Base Price ends but goes inward indicating a negative adjustment.



**Waterfall Table:** This table translates the Waterfall Chart with all cost breakups. You can override certain costs and click **Reprice** to see the Waterfall with revised cost. In the "Amount" field, the currency value is left aligned on the Analyze Quote UI page.

After analyzing the deal, you can also collaborate with multiple users to finalize the pricing. Please refer, [Quote Collaboration](#).

**i** Apttus CPQ uses the Base Price field of Line Item to determine what the Currency Code to be displayed in the Angular UI. As you do not want Base Cost to be seen by specific users for various reasons but Base Price to be made available to all users. Therefore, Apttus CPQ uses Base Price rather than Base Cost to determine the currency code to be used. The currency code as set in the user locale is displayed for all the currency fields.

## Accepting a Quote/Proposal

After a trading partner has accepted a proposal, you can finalize a quote/proposal by accepting the proposal, synchronizing products and prices with the related Opportunity and then create an Agreement.

After the quote/proposal has been presented to the trading partner either manually or via an email, the **Accept** button is enabled. Selecting Accept signifies that the trading partner has accepted the Quote. If the current Quote is not primary, clicking the **Accept** button will make all other quotes non-primary and the current one primary.

Simultaneously, the line items in the **Summary** related list is synchronized back to Opportunity Products for forecasting purposes.

**i** The related opportunity must have a Price List associated with it or else the summary items will not synchronize. The products do not need an entry in the Price List, but the Opportunity must be associated with a Price List.

Alternatively, if the synchronization is not required to happen automatically, you can choose when to synchronize with the Opportunity by using the **Make Primary** and **Synchronize with Opportunity** buttons.

## To accept a Quote/Proposal

The Approval Stage must be in *Presented* stage.

1. From Actions, click **Accept**. The Approval Stage changes to **Accepted**.
2. Do one of the following:
  - To create an agreement, click **Create Agreement**.
  - To create an agreement with line items, click **Create Agreement with Line Items**.
  - To synchronize the quote with an opportunity, click **Synchronize with Opportunity**.
  - Synchronizing Quote/Proposal With Opportunities  
Synchronization ensures that both the Quote/Proposal and Opportunity accurately reflect the current state of the Quote. A best practice for sales pipeline reports and forecasts in Salesforce is to display the amount of revenue and the products or services that are forecasted to be sold.

The contracting process begins with the creation of an agreement. For detailed information, see *Contract Management on Salesforce User Guide*.

## Synchronizing Quote/Proposal With Opportunities

Synchronization ensures that both the Quote/Proposal and Opportunity accurately reflect the current state of the Quote. A best practice for sales pipeline reports and forecasts in Salesforce is to display the amount of revenue and the products or services that are forecasted to be sold.

Salesforce provides forecast reports that drive off of the amount of the Opportunity and the associated Opportunity product records. Opportunity products are stored in a standard Salesforce object and represent the line items for an Opportunity. When using Salesforce without Apttus, products are added to the opportunity manually or by synching with a standard Salesforce Quote record.

Apttus CPQ can synchronize Proposal Line Items from a Quote Proposal to the related Opportunity.

This action updates the Opportunity Amount and maintains accuracy between the Apttus Quote/ Proposal and the Opportunity, both on the record and in reports.

This is especially important if you have configured sales reports using Opportunities with Products. With Apttus, they can continue to use these reports and the deep functionality that Apttus CPQ provides.

When a Quote/Proposal is synced with an Opportunity, the Proposal Line Item records are copied to the Opportunity Products related list. The Amount of the Opportunity will reflect the summed total of the opportunity products. The Sales Price field on the Opportunity Product record is populated by the Proposal Line Item.Net Price field.

While a quote/proposal and an opportunity are synced, any addition or change to the list of products in the quote/proposal syncs with the list of products in the Opportunity.

If a quote/proposal is re-configured and the shopping cart is finalized, the new proposal line items will be copied to the opportunity's product related list.

- [Assigning a Default Pricebook](#)

A Pricebook is the standard Salesforce version of a price list or container of products and pricing. In Apttus CPQ, we use the Apttus Price List object as the pricing container. Standard Salesforce synchronization requires that a Salesforce Pricebook is assigned to the Opportunity to enable synchronization between Quote and Opportunity.

- [Marking Quotes As Primary](#)

An opportunity can have multiple quotes, but it can only sync with one quote at a time. The sync process looks for Quote/Proposal records where the Primary field is marked as true.

- [Auto Sync and Manual Sync](#)

The Synchronize with Opportunity action button is visible on a Quote/Proposal that is marked as Primary.

## Assigning a Default Pricebook

A Pricebook is the standard Salesforce version of a price list, or container of products and pricing. In Apttus CPQ, we use the Apttus Price List object as the pricing container. Standard Salesforce synchronization requires that a Salesforce Pricebook is assigned to the Opportunity to enable synchronization between Quote and Opportunity. The Pricebook may be assigned to the Opportunity manually or automatically using a trigger. In either case, the Standard Price Book should be used.

## To assign a default pricebook

You must have an existing Quote/Proposal created from an Opportunity.

1. Go to the **Opportunities** tab and select an existing opportunity.
2. Scroll down to the Products related list, and click **Choose Price Book**.
3. From the Price Book picklist, select **Standard Price Book**.
4. Click **Save**.

A standard price book is assigned to the opportunity. Go to the Quote/Proposal and make it Primary.

## Marking Quotes As Primary

An opportunity can have multiple quotes, but it can only sync with one quote at a time. The sync process looks for Quote/Proposal records where the Primary field is marked as true.

To ensure that only one Quote/Proposal is marked as Primary at any time, Apttus provides a **Make Primary** action button. The button is conditionally displayed on a Quote/Proposal page if:

- There is an Opportunity related to the Quote/Proposal
- The Quote Proposal is not already marked as Primary

The first Quote/Proposal created on an Opportunity is automatically marked as Primary. When the Make Primary action is invoked with the button on a Quote/Proposal, the Primary checkbox on any other Quote/Proposal related to the same Opportunity is unchecked.

**i** When a second Quote/Proposal is related to an Opportunity, it must be made Primary before configuring and finalizing products.

## Auto Sync and Manual Sync

The **Synchronize with Opportunity** action button is visible on a Quote/Proposal that is marked as Primary.

To automatically synchronize Primary Quotes, update the **Proposal System Properties** setting called **Auto Sync with Opportunity**. This setting syncs Quote/Proposals that are marked as Primary each time the shopping cart is Finalized.

## Activating an Order

Once you have accepted the Quote/Proposal, an Order is created with the Status = *New*. All the Proposal Line Items are copied to the Asset Line Items and Order Line Items. To proceed further with creating Assets for the products/services listed in your Quote/Proposal, you must activate this Order.

You can activate an Order by following any of the below-mentioned procedures:

- By selecting **Auto-Activate Order** check box on the Quote/Proposal page:  
If you choose this option, once you accept a Quote/Proposal, the Order is created and activated simultaneously.
- By manually entering an **Order-Activation Date**:  
If you choose this option, you have to manually enter a Date and Time in the **Order Activation Date** field on the Quote/Proposal page.

Once activated, you can see the status of the Asset Line Items and Order Line Items is changed to *Activated*. See [Managing Assets](#) for more details.

## Managing Assets

Asset Management is based on the order information that you have already defined in your sales quote and the resulting contracts.

When your customers agree to purchase a product, the product changes from an agreement line item to an order line item in Apttus CPQ. The status of the agreement in this stage is *Accepted* and the order is now ready to be activated and realized as an asset for that customer. After you receive payments for an order is when the order line item changes to an Asset line item.

With Asset-based Ordering, you can

- create quotes for new products and services based on existing assets
- create quotes to modify existing products and services
- modify in-process orders that have been submitted for fulfillment
- renew, change, swap, and terminate an existing service
- have visibility into the asset transaction history during customer interactions

After being processed and fulfilled, new quotes and orders result in new assets that are listed on a customer's account and a line item from an asset becomes an Installed Product. You can access the Accounts page to see a customer's information and their purchase history.

The assets are created upon finalization of a Quote/Proposal and/or activation of an Agreement. If your product contains Usage Tiers and Attributes, there might be a delay for the system to create these records on the Proposal Line Items. You must refresh the Quote/Proposal or Agreement page and wait for the system to finalize the configurations before accepting a Quote or activating an Agreement.

In this Section:

- [Managing Views for Assets Grid](#)
- [Pricing Assets](#)
- [Accessing the Assets page](#)
- [Renewing an Asset](#)
- [Changing an Asset](#)
- [Swapping an Asset](#)
- [Terminating an Asset](#)
- [Viewing the Asset Transaction History](#)
- [Integrating Assets with Contracts](#)
- [Billing for Assets](#)
- [Viewing Installed Products Page](#)
- [Searching Assets](#)

## Viewing the Installed Products

An account with Assets has the Asset Manager button. Refer the configuration part and ensure that the **Asset Manager** button is configured correctly in your org.

**To view the installed products or assets for an account**

1. Click **Asset Manager**.

Account Detail		Edit	Delete	Sharing	Manage External Account	Create Quote
Account Owner	Apttus Technical Publications				Partner Account	<input type="checkbox"/>
Account Name	DigiTech LLC					Phone
Parent Account					Fax	
Type					Website	
Industry					Employees	
Annual Revenue						
Asset Manager	<b>Asset Manager</b>					

2. Verify the **Price List ID** in the URL. Click **Continue**.

Browser URL: <https://apttus-config2.cs10.visual.force.com/apex/AccountOrderCreate?method=csrfFlow&priceListId=a1210000003N1mNY&acctId=001J000001kSlu7&id=001J000001kSlu7&activateOrder=true&flow=csrfFlow&launchState=assets>

Account Name: DigiTech LLC

Buttons: Continue, Cancel

3. On the **Installed Products** page, select the assets that you want to manage.**Note**

If your administrators have disabled an asset action, the button is grayed out for that asset. For example, from the image above, if your administrator has not defined *Renew* as an allowed action for Advanced Analytics, the **Renew** button is grayed out and you cannot renew that asset for this customer. Also, if you select two or more assets from the list of installed products, the **Swap** button is automatically disabled.

The Installed Products page lists all installed assets for the account. Installed products can include both products and services. A line item from an order becomes an installed asset if it is marked as an asset in the product record.

With Asset-based ordering, you can create quotes and orders based on a customer's existing assets. Asset-based ordering is particularly useful when your business offers complex service products, such as phone services and equipment.

On the Installed Products page, you can [Renew](#), [Terminate](#), [Swap](#), and [Change](#) an existing standalone, fixed, or a configurable bundle asset. For each transaction involving ABO actions, the system creates a new order while you are navigating on the Cart. The status of the Asset Line Item is not changed until you finalize the Cart and activate the Order containing that Asset Line Item.

The permitted configurations for the Installed Products page can be found in the [Installed Product Settings](#) in *CPQ on Salesforce Administrator Guide*.

**Note**

Please ensure you add Allowable Actions for assets in order to perform Swap, Change, Renewal or Termination. Refer to [Defining Permitted Actions for Assets](#) in *CPQ on Salesforce Administrator Guide*.

**Use case**

For a sales-driven industry with products such as equipment (new purchase) and service (purchased for an equipment), you might want to achieve the following:

- As a manufacturing sales representative, for a service flow, you want to view the **Renew** and the **Terminate** button. For an equipment flow, you want to view the **Change** and the **Swap** button.
- As a subscription sales representative, you want to see the **Renew** button only when I make a purchase for a quote of type *renew*. For an add-on quote or an upgrade quote, you do not want to see the **Renew** button. For example, managing the renewal of a magazine subscription.

The **Swap** and **Renew** buttons are disabled for the superseded asset line items. Apttus CPQ checks for the **Status** field of related asset line item and disables these buttons for an asset line item on the Installed Products page. This is to prevent a sales rep from using the superseded asset line items in the renewed opportunities and Quote/Proposals.

For example, you have an Asset A and you perform **Change>Config** action to create an asset B. The relation between these two assets in the related asset line item object is displayed as follows:

From	Relation Type (From)	To	Relation Type (To)
Asset A	Is Superseded By	Asset B	
Asset B		Asset A	Is Superseded By

After this transaction, **Swap** and **Renew** buttons are disabled for Asset A.

## Managing Views for Assets Grid

This section provides information on managing user-level private views for the assets grid.

- Note** If your administrator has created any view in the Admin UI and shared it with you, you can select the view. However, you cannot edit or delete the view created by your administrator. For more information, see [Configuring Installed Products Settings](#).

### To create a view

1. Click **Installed Products**. The Installed Products Page is displayed.
2. Click the **Views** drop-down list and select **Create New View**. The Create New View dialog box is displayed.
3. Enter a name for the view in the **View Name** field.



4. Drag and drop the required columns from the **Available** list to **Viewing** list.
5. Select the **Set as Default** check box to make this view as the default view on the Installed Products Page.
6. Click **Save**.

### To edit an existing view

1. Click **Installed Products**. The Installed Products Page is displayed.
2. Click the **Views** drop-down list, select the required view, and click **Edit**. The Create New View dialog box is displayed.
3. Make the required changes and click **Save**.

### To delete a view

1. Click **Installed Products**. The Installed Products Page is displayed.
2. Click the **Views** drop-down list, select the required view, and click **Delete**. The view is deleted.

## Pricing Assets

Unless you override the **List Price**, the price of the asset depends on the values you enter for defined the Price List Item fields under the **Tax and Billing** tab. Before you make changes to an asset, consider the pricing settings done on the product PLI.

Please refer Defining Taxes and Billing for a product in the admin guide.

If you select the **Is Asset Pricing** checkbox on the Proposal Line Item detail page, when you Renew, Swap, Change, or Terminate the asset, Apttus CPQ accounts for any list price overrides on the original order to compute the price of the asset.

## Accessing the Assets page

Before you start using Asset-Based Ordering, you must understand how you, as a Sales and Customer Service Representatives in your organization, can use the ABO functionality.

There are total 3 flows that you can consider for using ABO. Ensure that you understand and choose one of the flows to implement error-free ABO.

1. **Quote/Proposal Flow**: This is one of the signature events in Asset-based Ordering involving Quote/Proposal. This is the normal flow of going through the Quote/Proposal to an Order and then to the Assets. Once you accept a Quote/Proposal, the Order is generated. Upon activation of the order, assets are created.
2. **CSR Flow**: This is the flow designed to enable the Sales Rep to skip the creation of a Quote/Proposal. No signature event, such as creation of an Agreement or a Quote/Proposal is involved. A new button called **Asset Manager** is configured on the Accounts page to help the Sales Rep navigate directly to the Installed Products page.

3. **Contract Flow:** This is one of the signature events in Asset-based Ordering involving Contracts/Agreements. The assets are created through Contracts/Agreements using the normal Contract lifecycle flow. Once you finalize a Contract (containing Agreement Line Items), the corresponding Asset Line Items are created.

### Quote/Proposal Flow

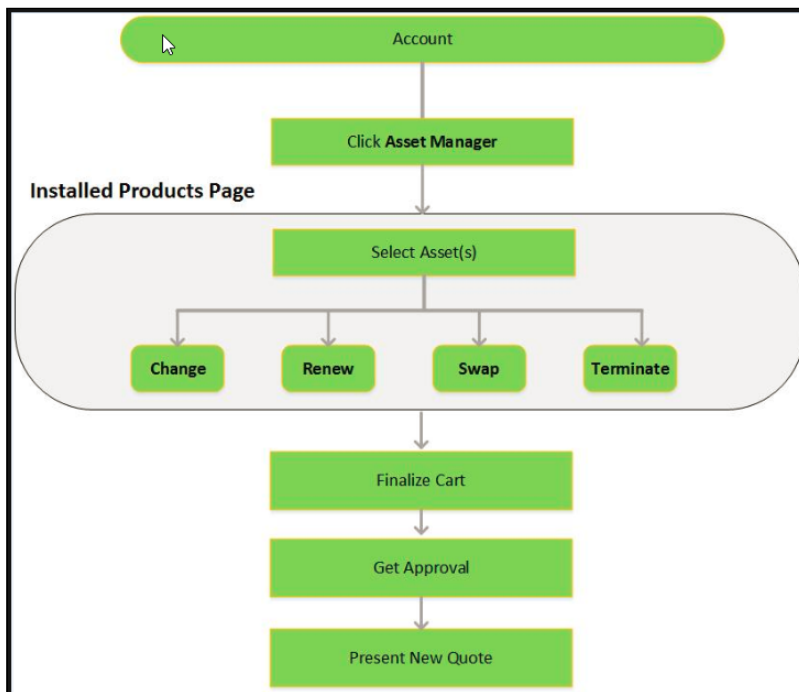
In this flow, you configure the Quote/Proposal and finalize a configuration. Once the configuration is finalized, you present the configuration to the customer. Upon acceptance from the customer, you click the **Accept** button on the Quote/Proposal. An order is created for this Quote/Proposal, which upon activation, creates the Asset Line Items with the *New* status. You can configure the Quote/Proposal again and navigate to the Installed Products page to view all the active assets. No custom triggers are required here.

Flow: Create **Quote/Proposal > Configure Products > Finalize > Accept > Activate Order > Installed Products** page.

### CSR Flow

There can be scenarios when you do not want to configure the Quote/Proposal again to land on the Installed Products page. For these type of scenarios, you can configure the **Asset Manager** button on your Account page. Clicking **Asset Manager** creates an Order and navigates you directly to the Installed Products page. In this flow, you skip the navigation of going to the Installed Products page through the **Quote/Proposal > Configure Products**.

The following image illustrates the CSR flow from the Sales and Customer Service perspective.



**i** An order remains in the Draft status in spite of the fact that Apttus CPQ displays ready for activation date, hence ABO operation does not get applied on the asset line items. If you keep the status of an order as Draft, you need to Accept the order before starting the CSR flow.

## Contract Flow

A contract contains Agreement Line Items, Asset Line Items or Order Line Items. In this flow, you follow the normal Contract Lifecycle flow of creating a Contract, presenting it to your customer and finalizing the Contract. Here, the Asset Line Items are created when you finalize and activate a Contract. Apttus CPQ provides the ability to synchronize the changes in Assets with the changes in a Contract (see details [here](#)). The changes you make inside a Contract (such as change in **Contract End Date**) will be reflected in the Assets contained in that Contract. Similarly, when you perform actions on your purchased Assets (such as changing the **Quantity** of an Asset), these changes will be reflected in the Contract.

Flow: Create **Agreement** > **Configure Products** > **Finalize** Quote/Proposal > **Accept** Quote/Proposal > **Activate** Agreement > **Installed Products** page.

## Renewing an Asset

Renewals are the most common and effective way to retain existing customers and drive growth and sales for your business. Asset renewals eliminate the scope of pricing errors by extending the agreement. Therefore when you renew an asset, you basically regenerate the asset life-cycle for a new duration.

An asset will be renewed till the date you select from one of the following options:

- [Using Proposal End Date](#)
- [Retaining the Asset End Date](#)
- [Using the Farthest End Date](#)
- [Entering a Renewal Date](#)

**Note**

Please note that for renewal transactions, **Asset Start Date** will always be the current **Asset End Date + 1**. The **Asset End Date** is derived from the selected renewal options.

Let us take an example to understand how an asset is renewed based on your selection of the Renewal options.

For an Account 'TierOne', you have created a proposal 'W3Courses' which has a Start Date '01/01/2016' and End Date '12/31/2017'. The proposal contains the following Assets:

Asset Name	Asset Status	Start Date	End Date	Selling Term
Programming with Python course	Activated	01/01/2016	06/30/2016	6 months
JAVA Learning	Activated	01/01/2016	12/31/2016	12 months
CSS Learning	Activated	01/01/2016	12/31/2017	24 months

Your subscriber wants to renew the subscription for the 'Programming with Python course' asset. Let us see how renewal works with each of the options:

### Using Proposal End Date

This option fetches the Proposal End Date from an active proposal which the selected asset is a part of. The Proposal End Date in this example is '12/31/2017' and so the asset will be renewed till this date. Since Asset Start Date will be the current Asset End Date + 1, in this case the Asset Start Date becomes '07/01/2016'.

Asset Name	Asset Status	Start Date	End Date	Selling Term
Programming with Python course	Activated	07/01/2016	12/31/2017	17 months

The asset is renewed for 17 months from a revised date of start. The 'Action' field on [Asset Transaction History](#) is set to Renew.

## Retaining the Asset End Date

The most common practice is to renew an asset immediately after it expires. This option renews an asset with the same term from its current End Date. For example, if the selling term for an asset is 24 months (2 years), the asset will be renewed for 2 further years after the asset expires.

In this scenario, the Asset is renewed for another 6 months (derived from the Selling Term) from its Start Date.

Asset Name	Asset Status	Start Date	End Date	Selling Term
Programming with Python course	Activated	07/01/2016	12/31/2016	6 months

## Farthest End Date

An account will have multiple proposals and assets with varying Start and End Dates and Term. This option picks the farthest end date of an Asset out of all Assets in the Account and sets this date as the End Date of the renewed Asset.

Let us assume that the farthest End Date is '12/31/2018' for an asset in this Account. Now your asset will be renewed as:

Asset Name	Asset Status	Start Date	End Date	Selling Term
Programming with Python course	Activated	07/01/2016	12/31/2018	29 months

## Renewal Date

Instead of pulling a renewal date from various sources, if you want to explicitly specify a Renewal End Date you can do so by selecting this option. If you enter '01/01/2018' as the renewal date, the Asset will be renewed as

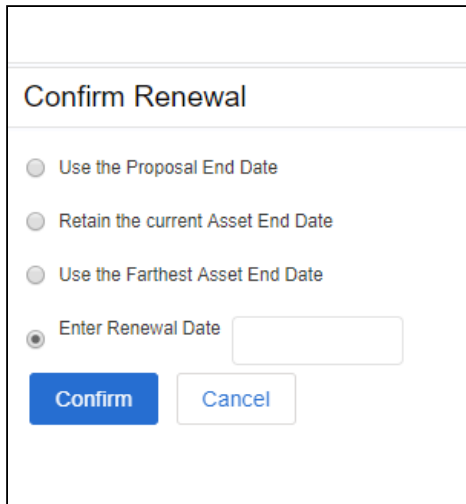
Asset Name	Asset Status	Start Date	End Date	Selling Term
Programming with Python course	Activated	07/01/2016	01/01/2018	18 months

Please ensure the Renewal Date entered here is greater than the Asset End Date.

## To renew an asset

1. On the Installed Products page, select the assets that you want to Renew.
2. Click **Renew**.
3. To define the **Renewal Date** on the Confirm Renewal page, select one from the following options:
  - **Proposal End Date** - To renew the asset till the date Quote/Proposal ends.  
The Proposal End Date is displayed next to the option.
  - **Asset End Date** - To renew the asset on the date the asset expires.
  - **Farthest End Date** - To choose the farthest end date out of all the Assets for renewal.

- **Renewal Date** - To pick a date from the calendar for renewal.



Confirm Renewal

Use the Proposal End Date

Retain the current Asset End Date

Use the Farthest Asset End Date

Enter Renewal Date

4. Click **Confirm** to proceed with the renewal. Asset Status is set to *Pending Renewal* on the Installed Products page.
5. Click **Go to Pricing** to apply and load the asset with revised dates on the cart page. While finalizing the original Quote/Proposal, if you have specified the **Renewal Uplift Amount**, you will see the change in the **Net Price**. Click **Confirm**.
6. **Finalize** the cart.

On the Accounts page, you can verify the updated status of the Asset.

Check out how renewal works with [Bundle](#) and [Standalone](#) Assets.

#### **Renewable products**

Apttus CPQ provides the ability to set aside the products that are renewable at the PLI level and control them at the cart or asset level.

- You can define a product as non-renewable at the PLI level and cascade it to the asset.
- If the asset is non-renewable, you must not pull the product into any renewal quote, namely auto or ondemand.
- If the asset is non-renewable, Apttus CPQ disables the renew action.
- If the flag is set to fixed, the product is renewable
- If the flag is set to fixed, you can pull the product into auto and ondemand renewal quote.
- If the flag is set to evergreen, you must not pull the product into auto and ondemand renewal quote.
- If the flag is set to evergreen, you are not allowed to renew the product manually.

## Impact of Renewal on Order Line Item and Asset Transaction History

On the **Asset Line Item**, you can trace the renewal activity and modifications from the **Order Line Items** and **Asset Transaction History** Related Lists.

Order Line Items						
Action	Line Item Id	Line Status	Status	Start Date	End Date	Ready for Activation Date
Edit   Del	OI-0000001109	New	Activated	7/26/2016	7/25/2017	7/26/2016 3:37 AM
Edit   Del	OI-0000001115	Renewed	Activated	1/26/2017	7/25/2018	7/26/2016 3:52 AM

Asset Transaction History (From)					
Action	Txn Id	Transaction Date	Action	Effective Start Date	Order
Edit   Del	ATH-000001109	7/26/2016	New	7/26/2016	O-00000020
Edit   Del	ATH-000001115	7/26/2016	Renew	1/26/2017	O-00000021

**Line Status** for one-time products will remain *Existing*.

## Renewing an Asset using Current Contract Value

The Contract Term feature is supported only through Proposal.

As a sales representative for a company that sells subscriptions, you may have to uplift and discount the subscription multiple times during its life cycle. Because of such change operations, the net price of the subscription changes, but the contract price remains the renewed value so there is a difference in the asset net unit price and contract net unit price. Due to such operations, sometimes you get higher asset net unit price and lower contract price, or lower asset net unit price and higher contract price. You can renew the subscription for the total contract value or its annual contract value depending on the business case. CPQ loads the asset line with base price as defined by the **Base Price Defaulting Method For Renewal** setting. For more information, see "Configuring Custom Settings" in *CPQ on Salesforce Summer 2019 Administrator Guide*.

You can provide discount on the subscription for a value greater than the current net price of the subscription (post a renewal and upgrade operation). CPQ can calculate the discount from the start date of the current contract term (not the original start date of the asset), if the **Apply Adj To Current Contract Term** setting is enabled. If **Apply Adj To Current Contract Term** is False, after deep discount, both asset and contract term will start from the original start date. If **Apply Adj To Current Contract Term** is False and if the customer has a deep discounting use case (discount an amount > net price but < asset TCV), the recommended best practice is to not expose the contract fields (Current Contract Start Date, Current Contract Term, Current Contract Value, Current Contract Unit Price) on the termination UI. These fields will reset to the original term after a deep discount and the values will be repetitive. **Apply Adj To Current Contract Term** is a global flag. The value of this flag must be either TRUE or FALSE throughout the cycle of asset. You should not switch this flag during asset operations.

**i** CPQ does not apply delta price adjustment on a subscription if the bundle price becomes the price from PLI after you change an attribute.  
 Delta price adjustment must be applied only on bundle line.  
 Delta price adjustment is not applied to a one-time bundle line (new or existing) even though the **Enable One Time Change** is set to True.

For more information, see "Configuring Custom Settings" in *CPQ on Salesforce Summer 2019 Administrator Guide*.

### Use Case: Renewing Bundle Assets

This section describes the renewal process for a bundle asset. The Asset 'ABO Budle1\_AS' with 3 different charge types has 2 Options- Option1 and Option2. On the cart, Option1 is selected with 6 months and 3 months of validity for corresponding charge types.

The cart is finalized and an order is generated. You can see the Asset Line Items on the Quote/Proposal or from the Account.

Let us see how this Asset is renewed based on the Renewal Option of **Retaining the Asset End Date**.

### Deriving Start and End Dates

For renewal transactions, **Asset Start Date** will always be the **Current Asset End Date + 1**.

In this renewal option, **Asset End Date** will be the date derived from adding the **Selling Term** to the new **Asset Start Date**.

#### Before Renewal

Asset	Start Date	End Date
ABO Bundle1_AS	07/26/2016	07/25/2017
Option1	07/26/2016	01/25/2017
Option1 (Different Charge Type)	07/26/2016	10/25/2016

The **Asset Status** on the Installed Products page is **Activated**.

#### After Renewal

Asset	Start Date	End Date
ABO Bundle1_AS	07/26/2017	07/25/2018
Option1	01/26/2017	07/25/2017



Asset	Start Date	End Date
Option1 (Different Charge Type)	10/26/2016	01/25/2017

The **Asset Status** on the Installed Products page is *Pending Renewal*. When you confirm and go to the Cart page, the **Status** changes to *Renewed*.

### Use Case: Renewing Standalone Assets

This section describes the renewal process for a standalone asset. The Asset 'ABO Standalone1\_AS' has 4 different charge types.

The cart is finalized and an order is generated. You can see the Asset Line Items on the Quote/Proposal or from the Account.

Let us see how this Asset is renewed based on the Renewal Option of **Retaining the Asset End Date**.

### Deriving Start and End Dates

For renewal transactions, **Asset Start Date** will always be current **Asset End Date + 1**. In this renewal option, **Asset End Date** will be the date derived from adding the Selling Term again.

#### Before Renewal

Asset	Start Date	End Date
ABO Standalone1_AS	07/26/2016	07/25/2017

#### After Renewal

Asset	Start Date	End Date
ABO Standalone1_AS	07/26/2017	07/25/2018

The **Asset Status** on the Installed Products page is **Pending Renewal**. When you confirm and go to the Cart page, the Status changes to **Renewed**.

## Changing an Asset

With the Change function, you can increase or decrease the quantity of assets according to your customer's requests. Change operation also allows you to change the Start Date, End Date, Selling Term, Billing Rule and other fields on the cart for both, Standalone and Bundle assets. You can update the value of several fields on your cart under a single Change action, for a given Asset.

Of the various parameters you can change, following are the most commonly updated fields:

- **Change Quantity:** If you update the quantity of an asset, this update will be reflected as an amendment in the current Asset Line Item. A new line item will not be created for this change. You should specify an absolute value for the **Quantity** field regardless of an increment or decrement

in the actual quantity. For example, if you want to increase the asset quantity from 100 to 120, you should enter 120 and not 20. Therefore you must enter the total quantity you want as a result of the change action.

- **Change Start Date:** Updating Start Dates indicates the date from which the change is effective. If you update both the Quantity and the Start Date, the updated quantity will come into effect from the given start date.

For example, an Asset with 100 Licenses has a **Start Date** of 01 January 2016 and **End Date** of 31 December 2016. As part of the **Change** action, Start Date is set to 01 March 2016 and Quantity is increased by 30. This means, from 01 January to 29 February customer has 100 Licences and starting from 01 March till the End Date, the number of Licenses is 130.

Please note that prior to the new date, the asset will remain in its previous state and will be billed accordingly. The older information will *not* be deleted or overwritten.

- **Change End Date:** You can update the End Date to extend or shorten the asset validity. On updating the Asset End Date, the existing Line item is amended.

**Note**


For any **Change** action on the asset, **Net Price** indicates the price of the Asset as seen from the **Start Date** to the **End Date** on the cart.

Let us take a look at the procedure to change an asset.

### To change an asset

To change the Quantity and Selling Term for a standalone asset.

1. On the **Installed Products** page, select the asset you want to update and click **Change**. On the cart page, **Line Status** changes to *Amended*.
2. You can change one or more of the following parameters:

Parameter	Description
Attribute Value	To change the Attribute value, click the wrench icon (  ) next to the asset. You will see the <b>Product Attributes</b> page. Select the new attribute value and click <b>Go to Pricing</b> to load the cart page.
Option	Expand the Show Options tree and select from the listing of the options to display all Product Options. From the resulting list, select the option with which you want to replace the original product option.

Parameter	Description
Quantity	Enter the number of units of the product your customer wants to purchase.
Adjustment Type	If you want to adjust the price of the asset, select an adjustment type.
Price	Enter a value that is the amount your customer is charged for the product without accounting for taxes and other charges.
Start Date	The date you want to start billing your customer for this purchase.
End Date	The date you want to stop billing your customer for this purchase.
Billing Frequency	Select one of the following options <b>Monthly</b> - To generate a bill once every month <b>Quarterly</b> - To generate a bill once every three months <b>Half-yearly</b> - To generate a bill once in the middle of a calendar or financial year <b>Yearly</b> - To generate a bill once every year <b>Usage</b> - To generate a bill based on usage For details, see <i>Billing Frequency</i> in the Billing Management Guides.
Billing Rule	Select one of the following options <b>Bill in Advance</b> - To bill your customer before the product is delivered <b>Bill in Arrears</b> - To bill your customer after the product is delivered <b>Bill on Ready for Billing Date</b> - To bill your customer with a consolidate invoice, on a day of their choice.
Billing Preference	Select a predefined billing preference. For details, see <i>Billing Preference</i> in the Billing Management Guides.
Payment Term	Lookup and select a predefined Payment Term so your customers know that they must pay outstanding charges within a stipulated time. For details, see <i>Payment Terms</i> in the Billing Management Guides.

3. Click **Reprice** to view the changed price and **Finalize** to go back to the Quote.
4. The status of the changed asset changes from *New* to *Amended*.

You can rename the **Change** button as per your business requirement. The functionality remains the same and only the label is renamed. Refer to [Customizing Display Actions](#) for more details.

### Impact of Changing the Asset on Order Line Items and Asset Transaction History

The status of the asset changes to *Amended* on the Order Line Item and a new entry for the **Change** action is added as to the Asset Transaction History as *Amend*.

Order Line Items						
Action	Line Item Id	Line Status	Status	Start Date	End Date	Ready for Activation Date
Edit   Del	OL-0000000131	Amended	Activated	7/26/2016	1/25/2017	8/1/2016 11:49 PM
Edit   Del	OL-0000000121	New	Activated	7/26/2016	7/25/2017	7/26/2016 7:05 AM

Asset Transaction History (From)					
Action	Txn Id	Transaction Date	Action	Effective Start Date	Order
Edit   Del	ATH-00000131	8/1/2016	Amend	7/26/2016	O-00000024
Edit   Del	ATH-00000121	7/26/2016	New	7/26/2016	O-00000022

To check the status of your assets, the Status Category of the proposal must be **Accepted**. To view the assets, select the account of the proposal and navigate to Asset Line Items (Sold To) related list.

Every change you make to an asset impacts its Billing Schedule. If the asset is usage-based, then it impacts the associated Usage Schedule as well.

**Note**

Even though you can extend your asset's validity using **Change**, it is recommended that you perform **Renewal** action for explicit renewal purposes.

**Renewing Ramp Lines after Change Operation**

The Asset Grid retains renew ramp line upon Change or Renew operation after you enable Renew One Ramp and Renew of Option.

When you click **Change** for an asset on the **Installed Products** page, Apttus CPQ shows one renewed option line. However, you must enable Renew One Ramp in the Installed Product settings along with Price Ramps for the bundle.

### Changing a Configurable Bundle Asset

You can change the parameters of a bundle asset, much like you do with a standalone. On the Installed Products page,

1. Select the Bundle asset that you want to change and click **Change**.
2. To view the Options, click the **Show Options** list below the product name.
3. From the list of displayed options, select the checkboxes for options you want to include and uncheck the selected option you want to remove.

**Note**

For Change: Configuration, note the following limitation:

- Terminating an asset from the original start date results in incorrect **Net Price** for the changed and upgraded asset line items.

4. Manually enter values for the fields described in the [Changing an Asset](#) page.
5. Click **Reprice** and then **Finalize**.

You have successfully created a new order with different product options.

**i** If the **Application Level** is *Bundle* while creating a price ruleset and the admin setting **APTS\_EnablePriceRuleForABOItem** is set to *True*, CPQ applies the bundle price ruleset when you amend a bundle and add a new option. For example, a bundle has an option and you accept the quote. Now when you amend the bundle and add a new option, CPQ applies the price rules on the newly-added option similarly how it applies the price rules on the existing option. However, **Is Asset Pricing** must be *True* at bundle and existing option level, and *False* at the newly-added option level.

## Changing the Attributes of an Asset

Similar to a Line Item (refer to [Assets and Asset Line Items](#) in *CPQ on Salesforce Administrator Guide*) in the Quote to Cash flow, that starts as a Cart Line Item, progresses to the Proposal, Agreement, Order, and finally the Asset Line Item, the Attribute values that you define for each Product, are copied to the Proposal Product Attribute values object, Order Product Attribute values object, and the Asset Product Attribute values object. You can view the Product Attribute values that the Asset Line Item inherits from the cart, on the Asset line item detail page.

You can customize the product configuration on your cart based on the Product Attribute values that you define. For more information, see [Attribute-based Configuration](#) in the admin guide.

### To change the Attribute values for an asset

1. On the Installed Products page, select an asset and click **Change**.
2. On the Product Attributes section, enter the values of the Attributes that you want to change.
3. Select the **Required** checkbox.
4. Select the Options page or click **Go to Pricing**.

**i** **Note**  
Only those Attributes for which you select the **Is Primary** check box on the Attribute Configuration page, are shown in the Product Attributes section of the Installed Products page. These attributes are called Critical Attributes.

## Performing Mass Update for Assets

As a Sales Rep, you can select a group of compatible assets and edit them together.

1. On the Installed Products page, select the required assets and click **Change > Mass Edit (Assets)**. The Mass Edit (Assets) window is displayed.
2. Modify the required fields and click **Apply**.

**w** You can leave any of the fields blank and the assets retain the data as it was before the mass update.

- Quantity (to make the quantity zero, you must explicitly enter 0)

- Start Date
- End Date
- Adjustment Type
- Adjustment Amount
- Billing Rule
- Billing Frequency

Amended Line Items are updated and Existing line items remain same. You can go to **View Cart** to verify the updates. You can do multiple iterations to edit your assets in various groups and add them to the same quote for processing.

### Increment Asset with Coterminate Lines

As a Sales Representative, you can increase the quantity of an asset and manage these incremental licenses independently as a separate asset or you can chose to update the existing asset to reflect the new state after adding the incremental licenses. You can sell the incremental quantity at the same price point as the original sale or at a different price point. During the sale of these incremental licenses, you can coterminate them with the existing licenses.

**i** In Winter 2018 release, CPQ on Salesforce does not support decreasing the quantity of an asset. If you decrease the quantity by clicking the minus icon (–), the **Go to Pricing** button is disabled.

1. Click Installed Products. The Installed Product page is displayed.
2. Select the check box for a product and click **Change > Quantity**. The Change Quantity page for the selected asset is displayed.
3. In the **Change quantity by** field, increase the quantity by clicking the + icon. The **New Quantity** field displays the updated quantity immediately.
4. From the **Cotermiation** drop-down list, select a cotermiation option for incremental licenses.

**i** During the sale of incremental licenses, you can decide whether you want to coterminate them with the existing licenses. At the time of renewal, the incremental licenses can be renewed independently. You can selectively coterminate all or some of the incremental streams, or you can selectively merge all or some of the incremental streams into one stream. The **End Date** field is editable only if you select the **Enter Custom Date** option. The options available depend on the settings defined by your Administrator. For more information, see Installed Product Settings in *CPQ on Salesforce Administrator Guide*.

- **Retain the current Asset End Date:** Select this option to retain the current asset end date for cotermiation.
  - **Enter Custom Date:** Select this option to enter a custom date for cotermiation. The **End Date** field is editable if you select this option.
  - **Use the Farthest Asset End Date:** Select this option for cotermiation to use the farthest asset end date.
  - **Use the Proposal End Date:** Select this option for cotermiation to use the proposal end date.
5. Modify the **Start Date** and **End Date** fields if you selected Enter Custom Date from the **Cotermiation** drop-down list.

6. Select the **Update Existing Assets** checkbox to enable these quantity changes to reflect in the existing asset.

**i** If you selected **Enter Custom Date** in the **Cotermination** drop-down and modified the **End Date**, you cannot select the **Update Existing Assets** checkbox.

- If you select this checkbox, on order activation, the incremental quantity updates into the existing asset. Line status is changed to Incremented and Merged. You can verify the quantity increment at Account > Asset Line Items list. The quantity increment is displayed under the Delta Quantity column.
  - When the price point, identifier and end date are the same, the existing quote line corresponding to the asset in the existing renewal quote is updated with the updated asset detail.
  - When the price point is a weighted average, and the identifier and end date are the same, the existing quote line corresponding to the asset in the existing renewal quote is updated with the updated asset detail.
- If you do not select this checkbox, on order activation, a new asset with the same name of the existing asset is created. Line status is changed to Incremented. You can verify the quantity increment at Account > Asset Line Items list. There are two assets with the same name, one with the original quantity and the other with the increment quantity. However, the Total Quantity column indicates the cumulative quantity, that is, original quantity plus increment quantity.

**i** In CPQ on Salesforce Winter 2018 release, CPQ does not support the calculation of total quantity and asset quantity, and renewal automation on the lines with the Incremented status.

- When the price point of the incremental asset is not the same as the existing asset (and you are not using the weighted average), but the identifier and the end date are the same, a new line is created in the existing renewal quote.
  - When the price point of the incremental asset is not the same as the existing asset (and you are not using the weighted average) and the end date is the same but the identifier is different, a new renewal quote is created.
  - When the end date of the incremental asset is not the same as the existing asset, a renewal quote is created.
7. To coterminate other asset streams with the current increment, in the Cotermination with Increment panel, select any or all assets.

**i** The Cotermination with Increment panel is visible only if your administrator has not enabled the Hide Co-Term setting. For more information, refer to *Configuring Installed Product Settings* in *CPQ on Salesforce Administrator Guide*.

If your administrator has configured Purchase Identification Criteria, you can see other assets that match the purchase identifier of the current increment, in the Cotermination with Increment section. For more information, refer to *Configuring Installed Product Settings* in *CPQ on Salesforce Administrator Guide*.

You can coterminate a few other assets that are related to the current asset. The related assets are the assets that are available under Related Purchases on the Installed Product page. However, you can only coterminate related assets with the same end date, but cannot increment the quantity of the related assets.

If you selected **Enter Custom Date** in the **Cotermination** drop-down and modified the **End Date**, the new date is updated in the New End Date field of the selected related assets, under the Cotermination with Increment section.

8. Click **Go to Pricing**. The Cart page is displayed.
9. Click the **i** icon on the Asset Line Column to understand the projected asset details. An API is called and the Project Asset Value window is displayed. You can see the current asset unit price, current asset net price, updated asset unit price, and updated asset net price.

### Billing Schedules for Incremented Assets

As a Sales rep, you can increase the quantity of an asset and bill your customer for the incremented asset as a separate asset. Separate billing schedules are created for the incremented asset.

#### Use Case: Creating Billing Schedules for an Incremented Asset

**Description:** This use case describes how billing schedules are created when you increase the quantity of an asset.

Suppose you are a customer service representative for a software company and you change the license quantity for an asset from 1 to 4. Before you change the asset quality, you see the following billing schedules:

Schedule	Period Start	Period End	Status	Fee Amount
BS1	1/1/2019	3/31/2019	Pending Billing	\$90.00
BS2	4/1/2019	6/30/2019	Pending Billing	\$90.00
BS3	7/1/2019	9/30/2019	Pending Billing	\$90.00
BS4	10/1/2019	12/31/2019	Pending Billing	\$90.00



### To create billing schedules for the incremented assets

1. From an ABO Quote, click **Configure Products**.
2. On the cart page, click **Installed Products**.
3. Select your asset and click **Change > Quantity**.
4. In the **Change quantity by** field, increase the quantity by 3 by clicking the + icon. The **New Quantity** field displays the updated quantity immediately.
5. Select the appropriate **Cotermination** option. For details on Cotermination option, see [Increment Asset with Coterminate Lines](#).
6. Enter the Start Date and End Date.
7. Click **Go to Pricing**. An asset line item with status Incremented and quantity as 3 is created.
8. Finalize the Cart.
9. Accept the Quote/Proposal and activate the order.

### Result:

- A new asset is created with Quantity as 3 and status as Incremented.
- 3 Billing Schedules are created as follows:

Schedule	Period Start	Period End	Status	Fee Amount
BS5	1/1/2019	3/31/2019	Pending Billing	\$270.00
BS6	4/1/2019	6/30/2019	Pending Billing	\$270.00
BS7	7/1/2019	9/30/2019	Pending Billing	\$270.00

### Splitting an Asset


As a Sales rep, you can divide an existing asset into multiple split lines to negotiate an upsell quote with customers. On each split line of the asset, you can perform various asset-based actions such as, split, split and swap, and split and renew.





### Prerequisites

A Product Replacement Constraint Rule must be configured by your administrator for the Swap asset action.


### To split an asset

1. Click **Installed Products**. The **Installed Product** page is displayed.
2. Select the check box for a product and click **Change > Split**. The **Define Split <asset name>** page is displayed. The original asset line item is in **Existing** status with the existing asset quantity, start date, and end date. One more split line is added with zero quantity, with the same asset start date and end date.
3. Select one of the following split asset actions.

 The split asset actions depend on what your administrator has configured. For more information, see "Installed products Settings" in the *CPQ on Salesforce Spring 2019 Administrator Guide*.


- **Split and Renew:** Click the more icon  and select **Renew** to split the asset into two split lines and renew the second split line.
- **Split and Swap:** Click the more icon  and select **Swap** to split the asset into two split lines and to exchange a split line of the existing asset with a predefined alternate asset. When you select **Swap**, the Swap Asset page is displayed. Click **Split** to return to the Define Split <asset name> page. You can now see the swapped asset for the Split and Swap split line. For more information, see [Swapping an Asset](#).
- Click the add icon  to add more split lines.
- Click the delete icon  to remove an split line.

4. Enter the following details:

Field	Description
<b>Quantity</b>	<p>Enter the desired quantity for the split lines. You can also change the quantity of the original asset. When you change the quantity of the original asset, the status of the asset changes to Amend.</p> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> <p> Until you enter the quantity for the split lines, the <b>Go to Pricing</b> button is disabled.</p> </div>
<b>Start Date</b>	<p>Modify the split line start date if required. All split lines fetch the original asset start date by default. For Split-Renew and Split-Swap actions, the split line will have the renewed start date on the cart page.</p>
<b>End Date</b>	<p>Modify the split line end date if required. All split lines fetch the original asset end date by default. For Split-Renew and Split-Swap actions, the split line will have the renewed end date on the cart page.</p>

5. Click **Go to Pricing**. The cart page is displayed where you can also change the quantity, start date, and end date.
- Existing asset: Unless you made any changes, the existing asset remains unchanged (with zero Delta Quantity). If you made any changes, the split line is in Amended status.
  - Split: The split line is in Split status. Unless you made any changes, the split split line retains the start date and end date of the original asset. The quantity of the split split line is the total quantity that includes original quantity and new quantity.
  - Split and Renew: The split line is in Split and Renewed status. The start date and end dates are renewed dates. The quantity of the renewed split line is the total quantity that includes original quantity and new quantity.

- **Split and Swap:** The split line is in Upgraded status. The start date and end dates are renewed dates. The quantity of the swapped split line is the total quantity that includes original quantity and new quantity.

 The Asset Lite Item column on the cart indicates that the new asset line items have references to the original asset line item.

6. Click **Reprice**. You can now finalize your cart.
7. Navigate to the account. After the quote is accepted and the order is activated, the account displays all split lines as new asset line items.
8. Click an asset line item link. The Asset Line Item page is displayed.
9. Click **Related Asset Line Items (From)** or **Related Asset Line Items (To)** link. The New Related Asset Line Item window displays the relation between the original asset line item and the new split asset line item.
10. Click **Related Transaction History (From)** or **Related Transaction History (To)** link. The New Asset Transaction History window displays the complete history of a specified asset line item.

## Swapping an Asset

The Swap feature allows you to exchange an existing asset with a predefined alternate asset. You can also upgrade one asset with the next version of the asset. You can swap a standalone, bundle, and an option product. Swapping of a product depends on the Product Replacement Constraint Rule that is set by your administrator.

From the example discussed earlier, your subscriber wants to upgrade from the Beginner level of the Business Intelligence course to the Advanced level.

### To swap an asset

1. On the **Installed Products** page, select the product that you want to swap.
2. Select the product from **Available Products** section.
3. Click **Purchase**.
4. Select the date from when you want the Swap to be effective, and click **Calculate**.

If the **Start Date** of the swapped asset is a future date, a validation message is displayed to enter a valid **Start Date**. For example, an asset A with **Start Date** = 1 Jan, 2017 and **End Date** = 31 Jan, 2017 is swapped with a product B on June 5, 2016. Instead of taking June 6, 2016, as **Start Date** for product B, the system shows a validation message that the **End Date** of product B should be after the **Start Date** of product A.

5. View the Description and the Difference in the Original and the New Product.
6. To proceed with the Swap, click **Confirm**. Click **Back to Selection** to go back to the last page.

**Note**

If you select multiple assets on the Installed Products page, the Swap button will be disabled.

- Click **Finalize** to go back to the quote.

Field	Description
From	The product that you want to swap for is displayed here.
To	The new product that you want to swap to is displayed here.

The status of the renewed asset changes from *New* to *Upgraded*. To check the status of your assets, the Status Category of the proposal must be **Accepted**. To view the assets, select the account of the proposal and navigate to Asset Line Items (Sold To) related list.

You can swap an Asset on the same day of its expiry. A new Line Item is created for the swapped product with the same term as the previous asset.

### Mass Update for Assets

From the **Allow Mass Change** setting on the **Installed Products Settings** under **Custom Settings** page, you can enable or disable mass changes for *must configure* assets on the Installed Products page.

Action	Allow Mass Change	Type of Asset	Selection	Behavior
Swap	Unchecked	not Must Configure	Single Select	Enable swap and land on an intermediate page
Swap	Unchecked	Must Configure	Single Select	Enable swap and land on an intermediate page
Swap	Checked	not Must Configure	Single Select	Enable swap and land on an intermediate page
Swap	Checked	Must Configure	Single Select	Enable swap and land on an intermediate page
Swap	Checked	Must Configure	Multi Select	Disable Swap
Swap	Checked	not Must Configure	Multi Select	Disable Swap
Swap	Unchecked	Must Configure	Multi Select	Disable Swap

Action	Allow Mass Change	Type of Asset	Selection	Behavior
Swap	Unchecked	not Must Configure	Multi Select	Disable Swap

## Terminating an Asset

Using the Terminate feature, you can cancel a standalone, fixed bundle, or a configurable bundle asset. You can terminate an asset midway through the selling term. When an asset is canceled, the system captures the Cancellation or Termination Date of an asset on the Line Item object in the **Contract Number** field. The **Contract Number** field captures the information in *CCYY-MM-DD* format which is used by the order and asset to store the Cancellation Date. The appropriate order line items are created and assets are also updated immediately. During billing, the system determines the refund value from the Cancellation Date captured in the asset and refunds accordingly to the customer.

From the example discussed earlier, your subscriber wants to cancel the subscription for the Programming with Python course.

### To terminate an asset

1. Click **Installed Products**.
2. Select the products that you want to cancel and click **Terminate**. The Confirm Termination pop-up is displayed.
3. Enter the **Termination Date**.  
The Termination Date can be in the past, the current date, or any date in the future. You can use custom logic to validate the date entered for the cancellation. If the validation fails, an error message is displayed.  
Once you terminate an Asset Line Item (ALI), the status changes to *Pending Cancellation* immediately. Only after you activate the Order containing this ALI, the status of the cancelled ALI changes to *Cancelled*.
4. Click **Calculate** to calculate the difference in billing amount.

The system shows values for different fields, such as the Pending Billing (Original = the amount you had paid, Projected = the amount to be credited/debited depending on the termination date, and Difference = the difference between the former field values).


If your product has different Charge Types, the system displays the amount divided among the different Charge Types also. If your product is a Bundle and contains multiple Options, the system displays the amount divided among the Option products. Also, terminating a bundle cancels all the associated options configured inside that bundle.

The Projected and Different amount is calculated simultaneously when you click **Calculate** using the Billing Schedules and Billing APIs. This gives you a quick overview of the difference you have to pay to or receive from an organization.

For example, if your Asset, priced at USD 1200, contains the **Start Date** as 01/01/2016, **End Date** as 12/31/2016, and **Termination Date** as 07/31/2016, the amount populated in the different fields are:

Original = USD 1200  
Projected = USD 300  
Difference = USD -900

In order to receive the complete amount as a refund for the entire period of an asset, you must select **Same Day Cancellation** custom setting. The system charges you for the period between the Start and End Date of an asset. For example, if your Asset, priced at USD 1200, contains the **Start Date** as 01/01/2016, **End Date** as 12/31/2016, and **Termination Date** as 01/02/2016, you are charged for the amount calculated for 01/01/2016 and 01/02/2016.

 The billing impact is shown only if you have ApttusBilling Management package installed in your org. Refer to [Billing User Guide](#) for details of each field. If Apttus Billing Management is not installed, the system calculates the different values based on the Calendar dates.

If you terminate an asset after renewing it, the billing amount is calculated for the renewal period (not from the inception of the asset). CPQ displays the net price of the current year asset (renewed asset) on the Termination window.

For example, you do a new sale of a product where:

- Start Date = 01/01/2019
- End Date = 12/31/2019
- Selling Term = 12
- Net Price = 1200

You renew the asset where:

- Start Date = 01/01/2020
- End Date = 10/31/2020
- Selling Term = 10
- Net Price = 1000

After order activation, the current net price of the asset is 1000 and the total net price of the asset is 2200. When you terminate the asset, CPQ displays the current net price of the asset as 1000 on

the termination window.

Current Asset Start Date	03/01/2019
Current Asset End Date	12/31/2019
Current Contract Start Date	
Current Asset Billing (Invoiced)	USD 0.00000
Current Asset Pending Billing	USD 800.00000
Current Contract Billing (Invoiced)	USD 0.00000
Current Contract Pending Billing	USD 1,020.00000
Current Contract TCV	USD 1,020.00000

- Click **Confirm**.  
The status of the cancelled ALIs shows *Pending Cancellation* on the Installed Products page.
- Go to the Cart and review the following fields and their values.

**Delta Price**  
**Delta Quantity**  
**Net Price**  
**LineStatus**

#	Group By   Product	Line Status	Collaboration	Base Price	Option Price	Billing Frequency	Billing Preference	Quantity	Guidance	Service Location	Selling Term
1	<input type="checkbox"/> Bundle-4778 <input type="checkbox"/> Standard Price  \$	Cancelled		USD 100		Monthly		1,000		--None--	1.06
	<input type="checkbox"/> License Fee  \$	Cancelled		USD 20		Monthly		1,000		--None--	1.03
	<input type="checkbox"/> Show Options										
	<input type="checkbox"/> Option2-4778	Cancelled		USD 20		Monthly		1,000			1.06

You can view the change in the **Delta Quantity** and **Delta Price** on the Cart only if you have Apttus Billing Management installed in your org. For the above example, **Delta Price** is shown as USD -900.

**Delta Quantity** and **Delta Price** is 0 for the following scenarios:

- Your Bundle or Standalone product has **Charge Type = One Time**.
- You do not have Apttus Billing Management installed in your org.

- Click **Review & Finalize > Finalize**.  
Once you finalize the Cart and activate the Order for the terminated assets, you can view the impact

on the following fields:

- For an Asset Line Item, **Asset Status** changes to *Cancelled*, **Delta Price** and **Delta Quantity** contain new values.

Asset Line Items											
Action	Asset Name	Asset Status	Quantity	Delta Quantity	Delta Price	Start Date	Is Primary Line	Billing Frequency	Billing Rule	Price Type	
<a href="#">Edit</a>   <a href="#">Del</a>	<a href="#">Bundle-4778</a>	Cancelled	1.00000	-1.00000	USD -1,313.18867	7/14/2016	<input checked="" type="checkbox"/>	Monthly	Bill In Advance	Recurring	
<a href="#">Edit</a>   <a href="#">Del</a>	<a href="#">Bundle-4778</a>	Cancelled	1.00000	-1.00000	USD -220.00000	7/15/2016	<input type="checkbox"/>	Monthly	Bill In Advance	Recurring	
<a href="#">Edit</a>   <a href="#">Del</a>	<a href="#">Option2-4778</a>	Cancelled	1.00000	-1.00000	USD -219.35488	7/14/2016	<input checked="" type="checkbox"/>	Monthly	Bill In Advance	Recurring	

- For an Order Line Item, **Line Status** changes to *Cancelled*, **Delta Price** and **Delta Quantity** contain new values.

Order Line Items										
Action	Record ID	Asset Line Item	Line Status	Quantity	Net Price	Delta Quantity	Delta Price	Is Primary Line	Start Date	Derived From
<a href="#">Edit</a>   <a href="#">Del</a>	a2kW0000000UP8l	<a href="#">Bundle-4778</a>	Cancelled	1.00000	USD -1,313.18867	-1.00000	USD -1,313.18867	<input checked="" type="checkbox"/>	7/14/2016	<a href="#">LI-0000132980</a>
<a href="#">Edit</a>   <a href="#">Del</a>	a2kW0000000UP8m	<a href="#">Bundle-4778</a>	Cancelled	1.00000	USD -220.00000	-1.00000	USD -220.00000	<input type="checkbox"/>	7/15/2016	<a href="#">LI-0000132981</a>
<a href="#">Edit</a>   <a href="#">Del</a>	a2kW0000000UP8n	<a href="#">Option2-4778</a>	Cancelled	1.00000	USD -219.35488	-1.00000	USD -219.35488	<input checked="" type="checkbox"/>	7/14/2016	<a href="#">LI-0000132982</a>

Once cancelled, the system selects the **Inactive** flag for the ALIs with *Cancelled* status so that these ALIs do not show on the Cart for the successive ABO actions.

The status of the cancelled asset changes from *Pending Cancellation* to *Cancelled*. The Billing Schedules for a cancelled asset are cancelled on the same day of cancellation. This is achieved using a flag called, **Same Day Cancellation**, available at **Setup > Develop > Custom Settings > Billing System Properties > System Properties**. When checked, the Billing Schedules for a cancelled asset are marked with *Cancelled* status on the same day of cancellation. If not checked, the Billing Schedules for a cancelled asset are marked as *Cancelled* on the day after an asset was cancelled.

Apart from the **Terminate** action, following are the scenarios when the status of the ALI changes to *Cancelled*:

- While using **Change** action, if you deselect an Option product (inside a Bundle product) and finalize the Cart containing this Bundle Product. The status of the ALI for Bundle product will show as *Amended* and that for the Option product will show as *Cancelled*.
- While using **Swap** action, if you replace a product with another product, the status of the ALI for the former will show as *Cancelled*.

To check the status of your assets, the **Approval Stage** of the Quote/Proposal must be *Accepted*. To view the assets, select the account of the proposal and navigate to Asset Line Items (Sold To) related list.

A new entry is also made in the Asset Transaction History related list. Refer to [Asset Transaction History](#) for more details.



## Viewing the Asset Transaction History

The **Asset Transaction History** related list on the Asset Line Item detail page displays information for every Asset-based Order. For every ABO action (Change, Renew, Swap or Terminate), a new transaction and order record is created inside the Asset Transaction History related list.

In the Asset Transaction History related list, click the transaction ID to view the details.

The **Asset Line Item History** denotes the list of transactions made on the same Asset Line Item.

## Integrating Assets with Contracts

Apttus CPQ now provides the ability to synchronize the changes in Assets with the changes in a Contract. The changes you make inside a Contract (such as a change in Contract End Date) will be reflected in the Assets contained in that Contract. Similarly, when you perform actions on your purchased Assets (such as changing the Quantity of an Asset), these changes will be reflected in the Contract.

For Contracts, the actions include: **Renew** and **Cancel**. For Assets, the actions include: **Change**, **Swap**, **Terminate**, and **Renew**.

Consider an example of a learning and publications company, selling products such as Java Learning, Python Learning, and CSS Learning.

Following are the use cases when the synchronization between a contract and assets is important:

### For assets,

- When you *change* the duration, price, billing parameters, or any such attributes of an asset, the corresponding changes must be reflected in the Contract.
- When you *cancel* multiple assets, the Asset or Order Line Items for these assets must be removed from the contract. Similarly, when you add a new asset, the contract must contain the details for the new asset. This could be the result of swapping an existing asset with another product. Example, purchasing CSS Learning product if Python Learning is discontinued by the company.
- When you *renew* the terms and end date of an asset, the renewal dates of a contract must be synchronized.
- When you *terminate* an existing asset and require the refunded amount back before the expiration date of the contract, the contract must reflect the new termination date.

### For Contracts,

- When you *cancel* or *terminate* a contract before the expiration date, the corresponding assets must also be cancelled.
- When you renew a contract, all its corresponding assets must also be renewed.

There are basically 3 process flows you must consider:

1. A contract contains Agreement Line Items, Asset Line Items or Order Line Items. These Line Items are created when a contract is finalized. In this case, only Contract and no Quote/Proposal is involved.

2. A contract contains Agreement Line Items, Asset Line Items or Order Line Items. These Line Items are created from the Proposal Line Items when a Quote is accepted. In this case, both, Contract and Quote/Proposal are involved.
3. Normal CSR Flow: A Quote/Proposal document contains Asset Line Items or Order Line Items and these are created when a Quote/Proposal is accepted.

With the normal CSR flow supported in the previous release, the new release involves an integration of Assets with Contracts (number 1 and 2).

## Integrating Assets with Contracts (with a Quote/Proposal)

### To integrate Assets with Contracts (with a Quote/Proposal)

Ensure that you have set the custom setting, **Auto Create Order** to True under **Setup > Develop > Custom Settings > Comply System Properties**.

1. Create a new Quote/Proposal record by clicking **All Tabs (+) > Proposals > New**.
2. Enter requisite details, such as Proposal Name, Proposal Start Date, and Proposal End Date.
3. Associate an Account, an Opportunity, and a Price List to your record.
4. Click **Configure Products** to navigate to the Catalog and configure the required products with options and attributes.
5. Once your configuration is finalized, click **Finalize** to navigate back to the Quote/Proposal detail page.
6. Click **Accept** to accept the finalized line items in your Quote/Proposal.  
Once you have accepted the Quote/Proposal, **Create Agreement with Line Items** is active.
7. Click **Create Agreement with Line Items** to copy all the Proposal Line Items to the Agreement Line Items.
8. After the negotiations are complete with your customer, click **Activate** to bring the contract in execution.  
Note that the Agreement Line Items related list now contains the finalized, activated line item records.
9. Hit refresh to see that the **Order, Order Line Items** and **Asset Line Items** related lists now contain records.
10. Go to your Order record and enter the **Ready for Activation Date** and click **Save**.

This will change the **Status** of all your **Order Line Items** and **Asset Line Items** to *Activated*.

Post activation, you may perform actions like **Amend, Renew, and Terminate**. For Amend and Renew, a new agreement record is created. The **Related Agreements** related list contains the records which indicate how these agreement records are related to each other.

For the amended or renewed agreement, notice that the status of the Asset Line Items is also changed. Click **Configure Products** on the new agreement to perform the ABO actions on the assets.

## Integrating Assets with Contracts (without a Quote/Proposal)

### To integrate Assets with Contracts (without a Quote/Proposal)

Ensure that you have set the custom setting, **Auto Create Order** to True under **Setup > Develop > Custom Settings > Comply System Properties**.

1. Create a new Agreement record by clicking **All Tabs (+) > Agreements > New**.
2. Enter requisite details, such as Agreement Name, Agreement Start Date, and Agreement End Date.
3. Associate an Account and a Price List to your agreement record.
4. Click **Configure Products** to navigate to the Catalog and configure the required products with options and attributes.
5. Once your configuration is finalized, click **Finalize** to navigate to your agreement record.
6. Now that your line items finalized, click **Generate** to generate an agreement document.
7. After the negotiations with your customer is complete, click **Activate** to put the agreement in effect. Note that the Agreement Line Items related list now contains the finalized, activated line item records.
8. Hit refresh to see that the **Order**, **Order Line Items** and **Asset Line Items** related lists now contain records.
9. Go to your Order record and enter the **Ready for Activation Date** and click **Save**.

This will change the **Status** of all your **Order Line Items** and **Asset Line Items** to *Activated*.

Post activation, you may perform actions like **Amend**, **Renew**, and **Terminate**. For Amend and Renew, a new agreement record is created. The **Related Agreements** related list contains the records which indicate how these agreement records are related to each other.

For the amended or renewed agreement, notice that the status of the Asset Line Items is also changed. Click **Configure Products** on the new agreement to perform the ABO actions on the assets.

## Billing for Assets

After you finalize a proposal and accept a customer's order, the products change from order line item to asset line item. Then, you create an Asset-based Order by creating a quote on the account that contains the installed products or assets. After you create the quote, go to product cart, click **Installed Products**, and select one of the following actions:

- Renew
- Terminate
- Swap
- Change

Every asset action on an asset line item on Installed Product page changes the existing **Billing Schedule**, **Invoice Status**, and the **Billing Cycle Start and End Date** for that asset line item or the Installed Product.

Renewal of an asset will impact the Billing Schedules because the asset **Start Date** and **End Date** will change. On renewal, the **Asset Status** will change to *Renewed* on the Asset Line Item. New Billing Schedules will be created based on the new **Start Date** and **End Date**.

When you change an asset, you can update values for fields such as the Net Price and Selling Term. Apttus Billing Management, by default assigns the Start Date of the Asset Line Item to the effective date of the change.

Every changed or amended order has a new set of Billing Schedules that Apttus Billing Management creates automatically and these new schedules depend on the Start and End dates that you define for the

changed asset line item. When you change an asset, it is critical to align the Bill Cycle Start Date with the Billing Preference of the asset line item.

Let us now understand the impact of each asset action on Billing Schedules and how you can manage this change.

In the following section:

- [Impact of Asset actions on Billing Schedules](#)
- [Billing Schedules for Renewed Assets](#)
- [Billing Schedules for Canceled Assets](#)
- [Usage Schedules for Canceled Assets](#)
- [Changing Billing Schedules when you Decrease the Net Price of an Asset](#)
- [Changing Billing Schedules when you change the Billing Frequency of an Asset](#)
- [Changing Billing Schedules when you Extend the End Date of an Asset](#)
- [Changing Billing Schedules when you Increase the Net Price of an Asset](#)
- [Changing Billing Schedules when you reduce the End Date of an Asset](#)

### Impact of Asset actions on Billing Schedules

If you use Apttus Billing Management, you must consider the impact of each asset action, **Renew**, **Change**, **Swap** or **Terminate** has on the Billing and Invoicing of the purchased products. While the impact of asset actions on Billing Schedules are detailed in this guide, you must also consider the following definitions before you make any changes to an asset.

Field	Definition
Period Start Date	The date you want to start billing your customer for this purchase.
Period End Date	The date you want to stop billing your customer for this purchase.
Billing Rule	The rule you defined to either <b>Bill in Advance</b> or <b>Bill in Arrears</b> .
Billing Plan	<ul style="list-style-type: none"> <li>• <b>Periodic</b> - to bill your customer on fixed billing dates that represent custom billing periods that may or may not have a regular frequency.</li> <li>• <b>Milestone</b> - to distribute the total amount to be billed over multiple billing dates. As each milestone is successfully reached, you can bill your customer either a percentage of the entire cost or a pre-defined amount.</li> </ul>
Billing Day of the Month	If you have configured <b>Billing Preference</b> with Account Billing Day of Month, select the day of the month when you want to generate the bill for this account.

Field	Definition
Billing Cycle Start	<p>Select one of the following options.</p> <ul style="list-style-type: none"> <li>• <b>Billing Day of the Month</b> - to start the billing cycle on the Billing day of the month</li> <li>• <b>Ready for Billing Date</b> - to start the billing cycle when the status of the proposal changes to Ready for Invoicing date</li> <li>• <b>Period Start Date</b> - Apttus Billing Management inherits this value from Apttus CPQ</li> <li>• <b>Order Date</b> - Apttus Billing Management inherits this value from Apttus CPQ</li> <li>• <b>Account Billing Day of the Month</b> - select this option if you want to define the Billing Preference to use the Billing Day of the Month that you have defined on the Accounts page</li> </ul>

Scroll down to the Billing Schedule section on the Asset Line Item detail page to view the Billing and Usage schedules for that asset.

### Billing Schedules for Renewed Assets

To define the **Renewal Date** on the Confirm Renewal page, select from one of the following options.

- **Contract End Date** - if you want to renew the asset on the date the contract expires.
- **Asset End Date** - if you want to renew the asset on the date the asset expires.
- **Farthest End Date** - if you want to choose the farthest end date out of all the selected Asset Line Items and apply this date to all the Asset Line Items.
- **Renewal Date** - use the calendar to define a custom date to renew the asset.

The date you enter here determines the billing period for the Renewed asset. The new Billing Schedules for a renewed asset are in the Pending Billing state by default. Each renewed asset has such Billing schedules that Apttus CPQ creates automatically when the asset is activated.

### Billing Schedules for Cancelled Assets

When you cancel an asset, the cancellation is effective only after one day's time.

#### Example 1.

You are a customer service representative for a telecommunications company and you cancel a customer's data subscription plan mid-cycle when the status of each Billing Schedule is **Pending Billing**.

Before you cancel the subscription, you see the following Billing Schedules.

Billing Schedule	Period Start	Period End	Status	Fee Amount	Superseded
BS1	1/1/2015	1/31/2015	Pending Billing	100.00	
BS2	2/1/2015	2/28/2015	Pending Billing	100.00	
BS3	3/1/2015	3/31/2015	Pending Billing	100.00	
BS4	4/1/2015	4/30/2015	Pending Billing	100.00	

After you cancel the subscription, you see that status of schedules changes.

Billing Schedule	Period Start	Period End	Status	Fee Amount	Superseded
BS1	1/1/2015	1/31/2015	Pending Billing	100.00	
BS2	2/1/2015	2/28/2015	<b>Superseded</b>	100.00	<b>Yes</b>
<b>BS5</b>	<b>2/1/2015</b>	<b>2/14/2015</b>	<b>Pending Billing</b>	<b>50.00</b>	
<b>BS6</b>	<b>2/15/2015</b>	<b>2/28/2015</b>	<b>Cancelled</b>	<b>50.00</b>	
BS3	3/1/2015	3/31/2015	<b>Cancelled</b>	100.00	
BS4	4/1/2015	4/30/2015	<b>Cancelled</b>	100.00	

In the above example, because the you cancelled the subscription mid-cycle, the original Billing Schedule is superseded and replaced by the following new Billing Schedules.

- BS1 is for the partial period that is still active and has not been billed.
- BS2 is for the partial period that has been cancelled.

Also, because the Billing Schedules for March and April are unbilled their status is set to *Cancelled*.

### Example 2.

Consider another example where you want to cancel a customer's data subscription plan mid-cycle when the status of some Billing Schedules is **Pending Billing** and others is **Invoiced**.

Before you cancel the subscription, you see the following Billing Schedules.

Billing Schedule	Period Start	Period End	Status	Fee Amount	Superseded
BS1	1/1/2015	1/31/2015	Invoiced	100.00	
BS2	2/1/2015	2/28/2015	Invoiced	100.00	
BS3	3/1/2015	3/31/2015	Invoiced	100.00	
BS4	4/1/2015	4/30/2015	Pending Invoiced	100.00	
BS5	5/1/2015	5/31/2015	Pending Billing	100.00	

After you cancel the subscription, you see that status of schedules changes.

Billing Schedule	Period Start	Period End	Status	Fee Amount	Superseded
BS1	1/1/2015	1/31/2015	Invoiced	100.00	
BS2	2/1/2015	2/28/2015	Invoiced	100.00	Yes
<b>BS6</b>	<b>2/15/2015</b>	<b>2/28/2015</b>	<b>Cancelled</b>	<b>50.00</b>	
<b>BS7</b>	<b>2/15/2015</b>	<b>2/28/2015</b>	<b>Pending Billing</b>	<b>-50.00</b>	
BS3	3/1/2015	3/31/2015	Invoiced	100.00	Yes
<b>BS8</b>	<b>3/1/2015</b>	<b>3/31/2015</b>	<b>Pending Billing</b>	<b>-100.00</b>	
BS4	4/1/2015	4/30/2015	<b>Cancelled</b>	100.00	
BS5	5/1/2015	5/31/2015	<b>Cancelled</b>	100.00	

In the second example, because you cancelled the subscription mid-cycle, the Billing Schedule for February is invoiced and is augmented with two new Billing Schedules.

- BS1 is for the partial period that was cancelled and is used to record that portion of the invoiced amount that was cancelled.

- BS2 is also for the partial period that was cancelled and it is used to generate an Invoice Line Item in order to reflect the credit for the portion of the invoiced amount that was cancelled.

Because the entire period for March is already *invoiced* it augments a single Billing Schedule that is used to generate an Invoice Line Item that then reflects the credit for the invoiced amount was cancelled.

The Billing Schedules for April and March are *unbilled* their status is changed to *Cancelled*.

## Usage Schedules for Cancelled Assets

### Example 1.

You are a customer service representative for a telecommunications company and you cancel a customer's usage based subscription plan mid-cycle when the status of each Usage Schedule is **Pending Billing**.

Before you cancel the subscription, the asset line item has the following Billing Schedules.

Billing Schedule	Period Start	Period End	Status	Usage Fee Amount	Superseded
BS1	1/1/2015	1/31/2015	Invoiced	88.00	
BS2	2/1/2015	2/28/2015	Pending Billing	72.00	
BS3	3/1/2015	3/31/2015	Pending Billing	0.00	
BS4	4/1/2015	4/30/2015	Pending Billing	0.00	

Before you cancel the subscription, the asset line item has the following Usage Schedules.

Usage Schedule	Period Start	Period End	Status	Billing Schedule ID	Quantity	Superseded
US1	1/1/2015	1/31/2015	Pending Billing	BS1	30	
US2	2/1/2015	2/28/2015	Pending Billing	BS2	26	
US3	3/1/2015	3/31/2015	Pending Billing	BS3	0	



Usage Schedule	Period Start	Period End	Status	Billing Schedule ID	Quantity	Superseded
US4	4/1/2015	4/30/2015	Pending Billing	BS4	0	

After you cancel the subscription, the status of Billing Schedules change.

Billing Schedule	Period Start	Period End	Status	Fee Amount	Superseded
BS1	1/1/2015	1/31/2015	Invoiced	100.00	
BS2	2/1/2015	2/28/2015	<b>Superseded</b>	72.00	<b>Yes</b>
<b>BS5</b>	<b>2/1/2015</b>	<b>2/21/2015</b>	<b>Pending Billing</b>	<b>52.50</b>	
<b>BS6</b>	<b>2/22/2015</b>	<b>2/28/2015</b>	<b>Cancelled</b>	<b>19.50</b>	
BS3	3/1/2015	3/31/2015	<b>Cancelled</b>	0.00	
BS4	4/1/2015	4/30/2015	<b>Cancelled</b>	0.00	

After you cancel the subscription, the status of Usage Schedules change.

Usage Schedule	Period Start	Period End	Status	Billing Schedule ID	Quantity	Superseded
US1	1/1/2015	1/31/2015	Pending Billing	BS1	30	
US2	2/1/2015	2/28/2015	<b>Superseded</b>	BS2	26	<b>Yes</b>
<b>US5</b>	<b>2/1/2015</b>	<b>2/21/2015</b>	<b>Pending Billing</b>	<b>BS5</b>	<b>17</b>	
<b>US6</b>	<b>2/22/2015</b>	<b>2/28/2015</b>	<b>Cancelled</b>	<b>BS6</b>	<b>9</b>	

Usage Schedule	Period Start	Period End	Status	Billing Schedule ID	Quantity	Superseded
US3	3/1/2015	3/31/2015	Cancelled	BS3	0	
US4	4/1/2015	4/30/2015	Cancelled	BS4	0	

In the above example, because you cancelled the subscription mid-cycle, and Usage Schedule for the February is unbilled, the status is marked as *Superseded* and augmented be with the following Usage Schedules.

- BS1 is for the partial period that is still active and has not been *billed*. It reflects the aggregate amount of the *rated* Usage Inputs that have a date greater than or equal to 2/1 and less than or equal 2/21.
- US1 is for the partial period that is still active and has not been *billed*. It reflects the aggregate quantity of the *rated* Usage Inputs that have a date greater than or equal to 2/1 and less than or equal 2/21.
- BS2 is for the partial period that has been cancelled. It reflects the aggregate amount of the *rated* Usage Inputs that have a date greater than or equal to 2/22 and less than or equal 2/28.
- US2 is for the partial period that you cancelled. It reflects the aggregate quantity of the *rated* Usage Inputs that have a date greater than or equal to 2/22 and less than or equal 2/28.

**Note**

Every usage based asset that you terminate or change, also has Billing Schedules associated with that asset. The Usage Schedules are updated in a manner similar to the Billing Schedules.

### Example 2.

Consider another example where you want to cancel a customer's subscription plan mid-cycle when the status of some Usage Schedules is **Pending Billing** and others is **Invoiced**.

Before you cancel the subscription, the asset line item has the following Billing Schedules.

Billing Schedule	Period Start	Period End	Status	Fee Amount	Superseded
BS1	1/1/2015	1/31/2015	Invoiced	88.00	

Billing Schedule	Period Start	Period End	Status	Fee Amount	Superseded
BS2	2/1/2015	2/28/2015	Invoiced	72.00	
BS3	3/1/2015	3/31/2015	Invoiced	78.00	
BS4	4/1/2015	4/30/2015	Pending Billing	66.00	

Before you cancel the subscription, the asset line item has the following Usage Schedules.

Usage Schedule	Period Start	Period End	Status	Billing Schedule ID	Quantity	Superseded
US1	1/1/2015	1/31/2015	Pending Billing	BS1	30	
US2	2/1/2015	2/28/2015	Pending Billing	BS2	26	
US3	3/1/2015	3/31/2015	Pending Billing	BS3	31	
US4	4/1/2015	4/30/2015	Pending Billing	BS4	24	

After you cancel the subscription, you see that status of Billing Schedules change.

Billing Schedule	Period Start	Period End	Status	Fee Amount	Superseded
BS1	1/1/2015	1/31/2015	Invoiced	100.00	
BS2	2/1/2015	2/28/2015	Invoiced	72.00	Yes
BS5	2/1/2015	2/28/2015	Pending Billing	-72.00	
BS6	2/1/2015	2/22/2015	Pending Billing	52.50	
BS7	2/22/2015	2/28/2015	Cancelled	19.50	
BS3	3/1/2015	3/31/2015	Invoiced	78.00	Yes

Billing Schedule	Period Start	Period End	Status	Fee Amount	Superseded
<b>BS8</b>	<b>3/1/2015</b>	<b>3/31/2015</b>	<b>Pending Billing</b>	<b>-78.00</b>	
BS4	4/1/2015	4/30/2015	<b>Cancelled</b>	66.00	

After you cancel the subscription, you see that status of Usage Schedules change.

Usage Schedule	Period Start	Period End	Status	Billing Schedule ID	Quantity	Superseded
US1	1/1/2015	1/31/2015	Pending Billing	BS1	30	
US2	2/1/2015	2/28/2015	<b>Invoiced</b>	BS2	26	<b>Yes</b>
<b>US5</b>	<b>2/1/2015</b>	<b>2/21/2015</b>	<b>Pending Billing</b>	<b>BS6</b>	<b>17</b>	
<b>US6</b>	<b>2/22/2015</b>	<b>2/28/2015</b>	<b>Cancelled</b>	<b>BS7</b>	<b>9</b>	
US3	3/1/2015	3/31/2015	<b>Invoiced</b>	BS3	31	<b>Yes</b>
US4	4/1/2015	4/30/2015	<b>Cancelled</b>	BS4	24	

In the second example, because you cancelled the subscription mid-cycle, the Billing Schedule for February is invoiced and is augmented with two new Billing Schedules.

- BS1 is a credit for the amount that was *invoiced*.
- BS2 is for the partial period that was not cancelled and is used to charge for the portion of the invoiced amount that was billed. It reflects the aggregate amount of the *rated* Usage Inputs that have a date greater than or equal to 2/1 and less than or equal to 2/21.
- US1 is for the partial period that was not cancelled and is used to record (audit) that portion of the quantity amount that was billed. It reflects the aggregate quantity of the *rated* Usage Inputs that have a date greater than or equal to 2/1 and less than or equal to 2/21.
- BS3 is for the partial period that was cancelled and the amount the Account will not be charged for. It reflects the aggregate amount of the *rated* Usage Inputs that have a date greater than or equal to 2/22 and less than or equal to 2/28.
- US2 is also for the partial period that has been cancelled. It reflects the aggregate quantity of the *rated* Usage Inputs that have a date greater than or equal to 2/22 and less than or equal to 2/28.

Because the entire period for March is already *invoiced* it augments a single Billing Schedule that is used to generate an Invoice Line Item that then reflects the credit for the invoiced amount was cancelled. The Billing Schedules for April and March are *unbilled* their status is changed to *Cancelled*.

## Changing Billing Schedules when you Decrease the Net Price of an Asset

### Example 1

You are a customer service representative for a software company and you decrease the Net Price of the customer's software subscription plan mid-cycle when the status of each Billing Schedule is **Pending Billing**.

Before you decrease the Net Price of the subscription, you see the following Billing Schedules.

Schedule	Period Start	Period End	Status	Fee Amount	Superseded
BS1	4/1/2015	4/30/2015	Pending Invoiced	100.00	
BS2	5/1/2015	5/31/2015	Pending Invoiced	100.00	
BS3	6/1/2015	6/30/2015	Pending Billing	100.00	

After you decrease the Net Price of the subscription, the number of and the status of each Billing Schedule changes.

Schedule	Period Start	Period End	Status	Fee Amount	Superseded
BS1	4/1/2015	4/30/2015	<b>Superseded</b>	100.00	<b>Yes</b>
<b>BS4</b>	<b>4/1/2015</b>	<b>4/15/2015</b>	<b>Pending Billing</b>	<b>50.00</b>	
<b>BS5</b>	<b>4/16/2015</b>	<b>4/30/2015</b>	<b>Pending Billing</b>	<b>25.00</b>	
BS2	5/1/2015	5/31/2015	<b>Superseded</b>	100.00	<b>Yes</b>
<b>BS6</b>	<b>5/1/2015</b>	<b>5/31/2015</b>	<b>Pending Billing</b>	<b>50.00</b>	
BS3	6/1/2015	6/30/2015	<b>Superseded</b>	100.00	<b>Yes</b>
<b>BS7</b>	<b>6/1/2015</b>	<b>6/30/2015</b>	<b>Pending Billing</b>	<b>50.00</b>	

Because the amendment is *mid-cycle* and the April Billing Schedule is unbilled it will be *superseded* and *augmented* with the following new Billing Schedules.

- BS1 reflects the amount (at the old rate) to charge for the partial period before the amendment date.
- BS2 reflects the decreased amount for the partial period that was amended.

Also, the Billing Schedules for May and June are *unbilled* and are *superseded* and replaced by Billing Schedules that reflect the decreased amount.

## Example 2

Consider another example where for a software company and you decrease the Net Price of the customer's software subscription plan mid-cycle when the status of some Billing Schedules is **Pending Billing** and others are **Invoiced**.

Before you decrease the Net Price of the subscription, you see the following Billing Schedules.

Schedule	Period Start	Period End	Status	Fee Amount	Superseded
BS1	4/1/2015	4/30/2015	Invoiced	100.00	
BS2	5/1/2015	5/31/2015	Invoiced	100.00	
BS3	6/1/2015	6/30/2015	Pending Billing	100.00	

After you decrease the Net Price of the subscription, the number of and the status of each Billing Schedule changes.

Schedule	Period Start	Period End	Status	Fee Amount	Superseded
BS1	4/1/2015	4/30/2015	Invoiced	100.00	<b>Yes</b>
<b>BS4</b>	<b>4/16/2015</b>	<b>4/30/2015</b>	<b>Pending Billing</b>	<b>-50.00</b>	
<b>BS5</b>	<b>4/16/2015</b>	<b>4/30/2015</b>	<b>Pending Billing</b>	<b>25.00</b>	
BS2	5/1/2015	5/31/2015	Invoiced	100.00	<b>Yes</b>
<b>BS6</b>	<b>5/1/2015</b>	<b>5/31/2015</b>	<b>Pending Billing</b>	<b>-50.00</b>	
BS3	6/1/2015	6/30/2015	<b>Superseded</b>	100.00	<b>Yes</b>

Schedule	Period Start	Period End	Status	Fee Amount	Superseded
BS7	6/1/2015	6/30/2015	Pending Billing	50.00	

Because the amendment is *mid-cycle* and the April Billing Schedule is already invoiced it remains as invoiced and is *augmented* with the following new Billing Schedules.

- BS1 reflects the amount (at the old rate) that was invoiced for the partial period at/after the amendment date and will appear as a *credit* when an Invoice is generated.
- BS2 reflects the decreased amount for the partial period that was amended and will appear as a *charge* when an Invoice is generated.

Also, the Billing Schedule for May has been invoiced it will remain as invoiced and will be augmented with one new Billing Schedule. This new Billing Schedule contains the new amount to charge for and appears on the next Invoice generated for that Asset. The Billing Schedule for June is then unbilled (in draft state) it is superseded and replaced by a Billing Schedule that reflects the decreased amount.

## Changing Billing Schedules when you change the Billing Frequency of an Asset

### Example 1

You are a customer service representative for a software company and you must change the Billing frequency from Quarterly to Monthly for a customer's software subscription plan, mid-cycle when the status of each Billing Schedule is **Pending Billing**.

Before you change the Billing frequency of the subscription from Quarterly to Monthly, you see the following Billing Schedules.

Schedule	Period Start	Period End	Status	Fee Amount	Superseded
BS1	7/1/2015	9/30/2015	Invoiced	90.00	
BS2	10/1/2015	12/31/2015	Invoiced	90.00	
BS3	1/1/2016	3/31/2016	Pending Billing	90.00	

After you extend the End Date of the subscription, the number of and the status of each Billing Schedule changes.

Schedule	Period Start	Period End	Status	Fee Amount	Superseded
BS1	7/1/2015	9/30/2015	Invoiced	90.00	Yes
BS4	8/1/2015	9/30/2015	Pending Billing	-60.00	

Schedule	Period Start	Period End	Status	Fee Amount	Superseded
BS5	8/1/2015	8/31/2015	Pending Billing	20.00	
BS6	9/1/2015	9/30/2015	Pending Billing	20.00	
BS2	10/1/2015	12/31/2015	Invoiced	90.00	Yes
BS7	10/1/2015	12/31/2015	Pending Billing	-90.00	
BS8	10/1/2015	10/31/2015	Pending Billing	20.00	
BS9	11/1/2015	11/30/2015	Pending Billing	20.00	
BS10	12/1/2015	12/31/2015	Pending Billing	20.00	
BS3	1/1/2016	3/30/2016	Superseded	90.00	Yes
BS11	1/1/2016	1/31/2016	Pending Billing	20.00	
BS12	2/1/2016	2/29/2016	Pending Billing	20.00	
BS13	3/1/2016	3/31/2016	Pending Billing	20.00	
BS14	4/1/2016	4/30/2016	Pending Billing	20.00	

**i** The new *Term* is now 8/1/2015 – 4/30/2016 (9 months) and the new Net Price is 180.00, the Fee amount is 20.00 per month. When you transition from a less frequent Billing Frequency (like quarterly) to more a frequent Billing Frequency (like monthly), a *credit* Billing Schedule is created for each *whole period* Billing Schedule that is invoiced.

Because the billing frequency change is mid-cycle and the July-September Billing Schedule has been invoiced it will remain as invoiced and will be *augmented* with the following new Billing Schedules.

- BS4 reflects the amount for the partial period that is being amended (at the original billing frequency and rate) and will appear as a *credit* when an Invoice is generated.
- BS5 reflects the amount to charge for the first month within the amended partial period of the quarter.
- BS6 reflects the amount to charge for the second month within the amended partial period of the quarter.



Also, the October-December Billing Schedule has been invoiced it will remain as invoiced and will be *augmented* with the following new Billing Schedules.

- BS7 is a credit for the amount that was invoiced.
- BS8 reflects the amount to charge for the first month within the 2<sup>nd</sup> quarter.
- BS9 reflects the amount to charge for the second month within the 2<sup>nd</sup> quarter.
- BS10 reflects the amount to charge for the third month within the 2<sup>nd</sup> quarter.

The January-March Billing Schedule is unbilled and is marked as *Superseded* and augmented with the following new Billing Schedules.

- BS11 reflects the amount to charge for the first month within the 3<sup>rd</sup> quarter.
- BS12 reflects the amount to charge for the second month within the 3<sup>rd</sup> quarter.
- BS13 reflects the amount to charge for the third month within the 3<sup>rd</sup> quarter.

The End Date of the Asset Line Item is extended by 1 month to 4/30/2016 an additional Billing Schedule, BS14 is created to accommodate the extension.

## Example 2

Consider another example where you must change the Billing frequency from Monthly to Quarterly, for a customer's software subscription plan, mid-cycle when the status of some Billing Schedules is **Pending Billing** and others is **Invoiced**.

Before you change the Billing frequency of the subscription from Monthly to Quarterly, you see the following Billing Schedules.

Schedule	Period Start	Period End	Status	Fee Amount	Superseded
BS1	3/1/2015	3/31/2015	Invoiced	100.00	
BS2	4/1/2015	4/30/2015	Invoiced	100.00	
BS3	5/1/2015	5/31/2015	Invoiced	100.00	
BS4	6/1/2015	6/30/2015	Invoiced	100.00	
BS5	7/1/2015	7/31/2015	Invoiced	100.00	
BS6	8/1/2015	8/31/2015	Pending Invoiced	100.00	

After you extend the End Date of the subscription, the number of and the status of each Billing Schedule changes.

Schedule	Period Start	Period End	Status	Fee Amount	Superseded
BS1	3/1/2015	3/31/2015	Invoiced	100.00	
BS2	4/1/2015	4/30/2015	Invoiced	100.00	Yes
<b>BS7</b>	<b>4/16/2015</b>	<b>4/30/2015</b>	<b>Pending Billing</b>	<b>-50.00</b>	
<b>BS8</b>	<b>4/16/2015</b>	<b>5/31/2015</b>	<b>Pending Billing</b>	<b>50.00</b>	
BS3	5/1/2015	5/31/2015	Invoiced	100.00	Yes
BS4	6/1/2015	6/30/2015	Invoiced	100.00	Yes
<b>BS9</b>	<b>6/1/2015</b>	<b>8/31/2015</b>	<b>Pending Billing</b>	<b>100.00</b>	
BS5	7/1/2015	7/31/2015	Invoiced	100.00	Yes
BS6	8/1/2015	8/31/2015	<b>Superseded</b>	100.00	Yes

**i** The new Term is now 4/16 – 8/31 (4 ½ months) and the new Net Price is 450.00, the Fee amount is 300.00 every quarter. The amendment was performed on 4/16 with the Billing Cycle Start defined as the Period Start Date and the Calendar Cycle Start is June, the 1st period is from 4/16 to 5/31. After this period the quarters is aligned with 6/1 so the next period is from 6/1 to 8/1.

Because the billing frequency change is mid-cycle and the April Billing Schedule has been invoiced it will remain as invoiced and will be augmented with one new Billing Schedule. The new Billing Schedule reflects the amount for the partial period that is being amended (at the original billing frequency and rate) and will appear as a credit when an Invoice is generated.

Because the billing frequency change goes into effect 4/16 and the 16th does not align with the Start Period Date (3/1) a partial period will be created for the 1st new quarter. The Billing Schedule for May has already been invoiced, remains as invoiced, and is superseded by BS8. BS9 is created with a quarterly billing frequency that is from 6/1/2015 - 8/31/2015. It supersedes the 3 Billing Schedules for the months of June, July, and August. The Fee Amount is 300.00 but, because you Invoiced the schedules for June and July, the Fee amount is reduced to 100.00.

## Changing Billing Schedules when you Extend the End Date of an Asset

### Example 1

You are a customer service representative for a software company and you extend the End Date of a customer's software subscription plan mid-cycle when the status of each Billing Schedule is **Pending Billing**.

Before you extend the End Date of the subscription, you see the following Billing Schedules.

Schedule	Period Start	Period End	Status	Fee Amount	Superseded
BS1	4/1/2015	4/30/2015	Invoiced	200.00	
BS2	5/1/2015	5/31/2015	Invoiced	200.00	
BS3	6/1/2015	6/30/2015	Pending Invoiced	200.00	

After you extend the End Date of the subscription, the number of and the status of each Billing Schedule changes.

Schedule	Period Start	Period End	Status	Fee Amount	Superseded
BS1	4/1/2015	4/30/2015	Invoiced	200.00	Yes
BS4	4/16/2015	4/30/2015	Pending Billing	-100.00	
BS5	4/16/2015	4/30/2015	Pending Billing	50.00	
BS2	5/1/2015	5/31/2015	Invoiced	200.00	Yes
BS6	5/1/2015	5/31/2015	Pending Billing	-100.00	
BS3	6/1/2015	6/30/2015	Superseded	200.00	Yes
BS7	6/1/2015	6/30/2015	Pending Billing	100.00	
BS8	7/1/2015	7/31/2015	Pending Billing	100.00	
BS9	8/1/2015	8/31/2015	Pending Billing	100.00	
BS10	9/1/2015	9/15/2015	Pending Billing	50.00	

Because the amendment is *mid-cycle* and the April Billing Schedule has been invoiced it will remain as invoiced and *augmented* with two new Billing Schedules.

- BS1 reflects the overpaid amount for the partial period that was amended and will appear as a *credit* when an Invoice is generated.
- BS2 reflects the new amount for the partial period that was amended and will appear as a *debit* when an Invoice is generated.

Also, the Billing Schedule for May has been invoiced it will be augmented with one new Billing Schedule. This new Billing Schedule contains a credit for the overpaid amount that was invoiced and will appear on the next Invoice generated for the corresponding Asset. The Billing Schedule for June is unbilled it will be superseded and replaced by a Billing Schedule that reflects the new amount. The **End Date** was extended by 2.5 months and 3 new Billing Schedules are created with the appropriate *fee amount*. The last Schedule created is only for half a month.

## Example 2

Consider another example where you extend the End Date of the customer's software subscription plan mid-cycle when the status of some Billing Schedules is **Pending Billing** and others is **Invoiced**.

Before you extend the End Date of the subscription, you see the following Billing Schedules.

Schedule	Period Start	Period End	Status	Fee Amount	Superseded
BS1	4/1/2015	4/30/2015	Invoiced	100.00	
BS2	5/1/2015	5/31/2015	Invoiced	100.00	
BS3	6/1/2015	6/30/2015	Pending Billing	100.00	

After you extend the End Date of the subscription, the number of and the status of each Billing Schedule changes.

Schedule	Period Start	Period End	Status	Fee Amount	Superseded
BS1	4/1/2015	4/30/2015	Invoiced	200.00	
BS2	5/1/2015	5/31/2015	Invoiced	200.00	<b>Yes</b>
<b>BS4</b>	<b>5/1/2015</b>	<b>5/31/2015</b>	<b>Pending Billing</b>	<b>-100.00</b>	

Schedule	Period Start	Period End	Status	Fee Amount	Superseded
BS3	6/1/2015	6/15/2015	Superseded	100.00	Yes
BS5	6/1/2015	6/30/2015	Pending Invoiced	100.00	
BS6	7/1/2015	7/31/2015	Pending Invoiced	100.00	

**Note**

The End Date of the Asset Line Item was extended by 1.5 months and Net Price was set to 300.00 for the new Term (5/1/2015 – 7/31/2015). This reduces the Fee from \$200 per month to \$100.00 per month.

Because the amendment is at the period start and the May Billing Schedule has been invoiced it will remain as invoiced and will be augmented with one new Billing Schedule. The new Billing Schedule reflects the overpaid amount for the whole period that was amended and will appear as a credit when an Invoice is generated. The Billing Schedule for June is unbilled it will be superseded and replaced by a Billing Schedule that reflects the new amount.

Because the original Schedule for June was for a partial period and the End Date of the Asset Line Item is extended by 1.5 months, the replacement Billing Schedule period is extended to a full period. Extending the End date by a period of 1.5 months results in the following changes.

The partial period for June is extended to a full period and the fee amount is updated accordingly. A new Billing Schedule is created for July with the appropriate fee amount.

## Changing Billing Schedules when you Increase the Net Price of an Asset

### Example 1

You are a customer service representative for a software company and you increase the Net Price of the customer's software subscription plan mid-cycle when the status of each Billing Schedule is **Pending Billing**.

Before you increase the Net Price of the subscription, you see the following Billing Schedules.

Schedule	Period Start	Period End	Status	Fee Amount	Superseded
BS1	3/1/2015	3/31/2015	Pending Invoiced	100.00	

Schedule	Period Start	Period End	Status	Fee Amount	Superseded
BS2	4/1/2015	4/30/2015	Pending Invoiced	100.00	
BS3	5/1/2015	5/31/2015	Pending Billing	100.00	
BS4	6/1/2015	6/30/2015	Pending Billing	100.00	

After you increase the Net Price of the subscription, the number of and the status of each Billing Schedule changes.

Schedule	Period Start	Period End	Status	Fee Amount	Superseded
BS1	3/1/2015	3/31/2015	Pending Invoiced	100.00	
BS2	4/1/2015	4/30/2015	<b>Superseded</b>	100.00	<b>Yes</b>
<b>BS5</b>	<b>4/1/2015</b>	<b>4/15/2015</b>	<b>Pending Billing</b>	<b>50.00</b>	
<b>BS6</b>	<b>4/16/2015</b>	<b>4/30/2015</b>	<b>Pending Billing</b>	<b>100.00</b>	
BS3	5/1/2015	5/31/2015	<b>Superseded</b>	100.00	<b>Yes</b>
<b>BS7</b>	<b>5/1/2015</b>	<b>5/31/2015</b>	<b>Pending Billing</b>	<b>200.00</b>	
BS4	6/1/2015	6/30/2015	<b>Superseded</b>	100.00	<b>Yes</b>
<b>BS8</b>	<b>6/1/2015</b>	<b>6/30/2015</b>	<b>Pending Billing</b>	<b>200.00</b>	

Because the amendment is *mid-cycle* and the April Billing Schedule is unbilled it will be *superseded* and *augmented* with the following new Billing Schedules.

- BS1 reflects the amount (at the old rate) to charge for the partial period before the amendment date.
- BS2 reflects the increased amount for the partial period that was amended.

Also, the Billing Schedules for May and June are *unbilled* and are *superseded* and replaced by Billing Schedules that reflect the increased amount.

## Example 2

Consider another example where for a software company and you increase the Net Price of the customer's software subscription plan mid-cycle when the status of some Billing Schedules is **Pending Billing** and others is **Invoiced**.

Before you increase the Net Price of the subscription, you see the following Billing Schedules.

Schedule	Period Start	Period End	Status	Fee Amount	Superseded
BS1	4/1/2015	4/30/2015	Invoiced	100.00	
BS2	5/1/2015	5/31/2015	Invoiced	100.00	
BS3	6/1/2015	6/30/2015	Pending Invoiced	100.00	

After you increase the Net Price of the subscription, the number of and the status of each Billing Schedule changes.

Schedule	Period Start	Period End	Status	Fee Amount	Superseded
BS1	4/1/2015	4/30/2015	Invoiced	100.00	Yes
<b>BS4</b>	<b>4/16/2015</b>	<b>4/30/2015</b>	<b>Pending Billing</b>	<b>-50.00</b>	
<b>BS5</b>	<b>4/16/2015</b>	<b>4/30/2015</b>	<b>Pending Billing</b>	<b>100.00</b>	
BS2	5/1/2015	5/31/2015	Invoiced	100.00	Yes
<b>BS6</b>	<b>5/1/2015</b>	<b>5/31/2015</b>	<b>Pending Billing</b>	<b>100.00</b>	
BS3	6/1/2015	6/30/2015	<b>Superseded</b>	100.00	Yes
<b>BS7</b>	<b>6/1/2015</b>	<b>6/30/2015</b>	<b>Pending Billing</b>	<b>200.00</b>	

Because the amendment is *mid-cycle* and the April Billing Schedule is already invoiced it remains as invoiced and is *augmented* with the following new Billing Schedules.

- BS1 reflects the amount (at the old rate) that was invoiced for the partial period at/after the amendment date and will appear as a *credit* when an Invoice is generated.
- BS2 reflects the increased amount for the partial period that was amended and will appear as a *charge* when an Invoice is generated.

Also, the Billing Schedule for May has been invoiced it will remain as invoiced and will be augmented with one new Billing Schedule. This new Billing Schedule contains the new amount to charge for and appears on the next Invoice generated for that Asset. The Billing Schedule for June is then unbilled (in draft state) it is superseded and replaced by a Billing Schedule that reflects the increased amount.

### Changing Billing Schedules when you reduce the End Date of an Asset

#### Example 1

You are a customer service representative for a software company and you shorten the End Date of a customer's software subscription plan mid-cycle when the status of each Billing Schedule is **Pending Billing**.

Before you shorten the End Date of the subscription, you see the following Billing Schedules.

Schedule	Period Start	Period End	Status	Fee Amount	Superseded
BS1	4/1/2015	4/30/2015	Pending Invoiced	100.00	
BS2	5/1/2015	5/31/2015	Pending Invoiced	100.00	
BS3	6/1/2015	6/30/2015	Pending Invoiced	100.00	
BS4	7/1/2015	7/31/2015	Pending Billing	100.00	
BS5	8/1/2015	8/31/2015	Pending Billing	100.00	

After you shorten the End Date of the subscription, the number of and the status of each Billing Schedule changes.

Schedule	Period Start	Period End	Status	Fee Amount	Superseded
BS1	4/1/2015	4/30/2015	<b>Superseded</b>	100.00	<b>Yes</b>
<b>BS6</b>	<b>4/1/2015</b>	<b>4/15/2015</b>	<b>Pending Billing</b>	<b>50.00</b>	
<b>BS7</b>	<b>4/16/2015</b>	<b>4/30/2015</b>	<b>Pending Billing</b>	<b>112.50</b>	
BS2	5/1/2015	5/31/2015	<b>Superseded</b>	100.00	<b>Yes</b>



<b>BS8</b>	<b>5/1/2015</b>	<b>5/31/2015</b>	<b>Pending Billing</b>	<b>225.00</b>	
BS3	6/1/2015	6/30/2015	<b>Superseded</b>	100.00	<b>Yes</b>
<b>BS9</b>	<b>6/1/2015</b>	<b>6/15/2015</b>	<b>Pending Billing</b>	<b>112.50</b>	
<b>BS10</b>	<b>6/15/2015</b>	<b>6/30/2015</b>	<b>Cancelled</b>	<b>50.00</b>	
BS4	7/1/2015	7/31/2015	<b>Cancelled</b>	100.00	
BS5	8/1/2015	8/31/2015	<b>Cancelled</b>	100.00	

Because the **End Date** of the Asset Line Item is reduced by 2.5 months and the **Net Price** is set to 450.00, the monthly fee for the amended Term(4/15 – 6/15) is increased from 100 per month to 225 per month.

Because the amendment is mid-cycle and the April Billing Schedule is unbilled, it is then superseded and replaced with two new Billing Schedules.

- BS1 reflects the amount at the old rate for the partial period prior to the amendment date and is calculated as a *debit* when an Invoice is generated.
- BS2 reflects the new amount for the partial period that was amended and is calculated as a *debit* when an Invoice is generated.

Also, the Billing Schedule for May is unbilled and is superseded with one new Billing Schedule. This new Billing Schedule reflects the new monthly rate and is calculated in the next Invoice that you generate for the corresponding Asset. The Billing Schedule for June is unbilled and its period is shortened, it is superseded and replaced with the following new Billing Schedules.

- The 1st new Billing Schedule reflects the new amount for the partial period that was amended and is calculated as a *debit* when you generate an Invoice.
- The period in June is shortened and the 2nd new Billing Schedule reflects the amount for the partial period of June that is *dropped* because the End Date is shortened.

The Billing Schedules for July and August are unbilled and they are *dropped* because the End Date is shortened they are marked as *Cancelled*.

## Example 2

Consider another example where you shorten the **End Date** of the customer's software subscription plan, mid-cycle when the status of some Billing Schedules is **Pending Billing** and others is **Invoiced**.

Before you shorten the **End Date** of the subscription, you see the following Billing Schedules.

Schedule	Period Start	Period End	Status	Fee Amount	Superseded
BS1	4/1/2015	4/30/2015	Invoiced	100.00	

BS2	5/1/2015	5/31/2015	Invoiced	100.00	
BS3	6/1/2015	6/30/2015	Invoiced	100.00	
BS4	7/1/2015	7/31/2015	Invoiced	100.00	
BS5	8/1/2015	8/31/2015	Pending Invoiced	100.00	

After you shorten the End Date of the subscription, the number of and the status of each Billing Schedule changes.

Schedule	Period Start	Period End	Status	Fee Amount	Superseded
BS1	4/1/2015	4/30/2015	Invoiced	100.00	Yes
<b>BS6</b>	<b>4/16/2015</b>	<b>4/30/2015</b>	<b>Pending Billing</b>	<b>-50.00</b>	
<b>BS7</b>	<b>4/16/2015</b>	<b>4/30/2015</b>	<b>Pending Billing</b>	<b>112.50</b>	
BS2	5/1/2015	5/31/2015	Invoiced	100.00	Yes
<b>BS8</b>	<b>5/1/2015</b>	<b>5/31/2015</b>	<b>Pending Billing</b>	<b>125.00</b>	
BS3	6/1/2015	6/30/2015	Invoiced	100.00	Yes
<b>BS9</b>	<b>6/1/2015</b>	<b>6/15/2015</b>	<b>Pending Billing</b>	<b>-50.00</b>	
<b>BS10</b>	<b>6/1/2015</b>	<b>6/15/2015</b>	<b>Pending Billing</b>	<b>112.50</b>	
<b>BS11</b>	<b>6/15/2015</b>	<b>6/30/2015</b>	<b>Pending Billing</b>	<b>-50.00</b>	
BS4	7/1/2015	7/31/2015	Invoiced	100.00	Yes
<b>BS12</b>	<b>7/1/2015</b>	<b>7/31/2015</b>	<b>Pending Billing</b>	<b>-100.00</b>	
BS5	8/1/2015	8/31/2015	<b>Cancelled</b>	100.00	

**Note**

The End Date of the Asset Line Item is reduced by 2.5 months and the Net Price is set to 450.00, the monthly fee for the amended Term(4/15 – 6/15) is increased from 100 per month to 225 per month.

Because the amendment is mid-cycle and the April Billing Schedule has been invoiced it will remain as invoiced and will be augmented with the following new Billing Schedules.

- BS1 reflects the amount already paid for the partial period that was amended and will appear as a *credit* when an Invoice is generated.
- BS2 reflects the new amount for the partial period that was amended and will appear as a *debit* when an Invoice is generated.

Because the period in June is shortened, the 3rd new Billing Schedule reflects a credit for the partial period of June after the End Date is shortened.

**Example 3**

Consider another example where you shorten the **End Date** make it the same as the **Start Date** of the customer's software subscription plan mid-cycle to the same as the **Start Date**, when the status of some Billing Schedules is **Pending Billing** and others is **Invoiced**.

Before you shorten the **End Date** and make it the same as the **Start Date** of the subscription, you see the following Billing Schedules.

Schedule	Period Start	Period End	Status	Fee Amount	Superseded
BS1	1/1/2015	1/31/2015	Invoiced	100.00	
BS2	2/1/2015	2/28/2015	Invoiced	100.00	
BS3	3/1/2015	3/31/2015	Invoiced	100.00	
BS4	4/1/2015	4/30/2015	Pending Invoiced	100.00	

After you shorten the End Date of the subscription, the number of and the status of each Billing Schedule changes.

Schedule	Period Start	Period End	Status	Fee Amount	Superseded
BS1	1/1/2015	1/31/2015	Invoiced	100.00	
BS2	2/1/2015	2/28/2015	Invoiced	100.00	<b>Yes</b>

<b>BS5</b>	<b>2/8/2015</b>	<b>2/21/2015</b>	<b>Pending Billing</b>	<b>-50.00</b>	
<b>BS6</b>	<b>2/8/2015</b>	<b>2/21/2015</b>	<b>Pending Billing</b>	<b>80.00</b>	
<b>BS7</b>	<b>2/22/2015</b>	<b>2/28/2015</b>	<b>Pending Billing</b>	<b>-25.00</b>	
BS3	3/1/2015	3/31/2015	Invoiced	100.00	<b>Yes</b>
<b>BS8</b>	<b>3/1/2015</b>	<b>3/31/2015</b>	<b>Pending Billing</b>	<b>-100.00</b>	
BS4	4/1/2015	4/30/2015	<b>Cancelled</b>	100.00	

The new Term in this scenario is from 2/8/2015 to 2/21/2015 and the Net Price will be 80.00.

Because the amendment is *mid-cycle* and the February Billing Schedule has been invoiced it will remain as invoiced and because the *end date* of the Asset has been reduced to February it will be *augmented* with the following new Billing Schedules.


- BS1 reflects the amount already paid for the partial period that was amended and will appear as a *credit* when an Invoice is generated.
- BS2 reflects the new amount for the partial period that was amended and will appear as a *debit* when an Invoice is generated.
- BS3 is to account for the end of the period that is being *dropped* and will appear as a *credit* when an Invoice is generated.

The Billing Schedule for March is invoiced and is *removed* because the End Date is shortened.

A new Billing Schedule is created to credit the amount that was already invoiced. Because the End Date is shortened and the period for August is unbilled, the Billing Schedule is marked as *Cancelled*.

## Viewing Installed Products Page

Installed Products page is redesigned for quick search of assets and better control of column visibility. The Grid UI for Installed Products gives better performance in terms of page load time and intuitive navigation.

 Only the Asset Grid UI is supported on the Installed Products Page.

### **i** Styling for Installed Products Page

You can apply column settings to the Installed Products page. You can change coloring, formatting, and styling of the angular and the asset grid pages. This helps you customize the look and feel of the Installed Products page for better readability.

You can see the **Search** bar adjacent to the installed products header area on the right corner on both Asset and Assets Grid pages.

You can see a floating menu for the Asset Grid page similar to the Cart Grid page.

You can see pagination at the top of the Asset Grid page, which helps proper page alignment.

Also, notice that the left side search filter section gets collapsed by default.

On the Installed Products page, Primary Service columns are available for Equipment type assets only. From the new user interface, you can

- Expand or Collapse the product attributes
- Use Pagination to control the display of assets on a single page and to extreme left or right of the view as chosen from the options
- Search using a product or option (with a full or a partial string)
- Perform a basic search or an advanced search
- Create asset views
- View assets across account hierarchy

To enable the new interface, append *grid* at the end of the Installed Products URL.

For example,

```
https://apptus-config2.cs13.visual.force.com/apex/Cart?
cartStatus=New&oldConfigId=a1IW0000000gybHMAQ&configRequestId=a1cW000000044MrIAI&id=a1IW
0000000gyt7MAA&flow=LAngFlow&launchState=cart#/assets
```

should be changed to

```
https://apptus-config2.cs13.visual.force.com/apex/Cart?
cartStatus=New&oldConfigId=a1IW0000000gybHMAQ&configRequestId
=a1cW000000044MrIAI&id=a1IW0000000gyt7MAA&flow=LAngFlow&launchState=cart#/assetsgrid
```

Similarly, you can switch back from the grid UI to the classic interface by removing *grid* from the URL.

You can use the following features to navigate the Installed Products homepage if you are using the Assetsgrid (New UI):

**Product Search:** Enables you to search existing assets. Enter the name of the product and click the magnifier icon. All products that are relevant to the search string (full name of the product or partial name ) are displayed. Click the **+** icon to use the **Basic** and **Advanced Search** options. You can also search an option product, all bundles with their options are displayed.



**Account Hierarchy icon**: Click the **Accounts Hierarchy** icon and select one or more a displays accounts hierarchy as per show assets settings. By default, the app will display all assets of the current account of the proposal.

**Items per Page**: You can select the number of assets that must be displayed on the home page of the Installed products page. You can select a maximum number of 200 items that must display on a page.

## Searching Assets

Apttus CPQ provides the **Search Products** feature on the Installed Products Asset Grid page only and lets you search by option as well.

You can search the install base with a full or partial search on the option name and then you get all the bundles with that particular option including nested bundle options. You can apply other filters on the install base in addition to the search based on the option name. If the product catalog does not have bundles with that option, it presents a message that bundles with that option could not be found in the install base. Option-based search works in accordance with existing features such as Asset Source, Account Hierarchy, and Pagination.

In this global search, you can specify a keyword, option, option name, or partial name in order to search assets.

On top of global search, you can narrow down your search using **Account Hierarchy** and **Filter By** functions.

The Filter By function provides **Basic** and **Advanced** search to further drill down your search.

When you clear the search criteria from a secondary or tertiary level search, it does not impact the search criteria of higher level search. For example, clearing the search criteria of Filter By fields does not reset the search criteria of Account Hierarchy.

### Sorting Product Items Per Page

By default you can sort the product items per page for 10, 25, 50, 100, 200 records. In addition, you can set the custom value in the Config User Preferences page.

This feature works in association with Search functionality in order to display search records per page.

## Managing Services

Service CPQ feature caters to customer requirements that are related to services for existing or newly purchased products from Apttus. A sales rep owns an equipment that is sold to customer and associates a service product with an equipment or asset. A sales rep has the visibility to the end to end cycle through the following pages for service management:


- [Installed Products page](#)
- [Service Catalog page](#)
- [Service Config page](#)
- [Service Cart page](#)

For an existing asset which is not being serviced yet, the system administrator (admin) can classify it under equipment or service product type. To see how services are loaded on Installed products page, refer to [Viewing Service Products on the Installed Products page](#).

All the service products and the assets are associated based on the eligibility rules that is the framework for service eligibility at large. For defining the eligibility constraint rule criteria you as an admin have to use `Match in Related Lines` option for the OEM product, for instance. This criteria hides all other OEM products on the Service Catalog page through Exclusion type constraint rule that you must set. The constraint rule action intent is scoped to other OEM products under a product family or product group to make them ineligible (block them) when the rule is triggered. To see how services are configured, refer to [Configuring Service Products](#), [Creating Constraint Rule Conditions](#), and [Creating Constraint Rule Actions](#) in *CPQ on Salesforce Administrator Guide*.

The service catalog page displays only the eligible service products for the selected assets or equipments. As a sales rep, you can configure the bundle product for setting the entitlements or offerings for the customer. For example, 24x7 support under a bundle product of annual maintenance contract. To see the new Service Catalog page, refer to [Configuring Service Products](#).

When you go to the cart page, you can see the service line items and the related asset line items along with weightage details for each asset. The weightage amount or percentage value drives the service allocation for the customer. For example, you can set 60:40 service allocation amongst two service products depending upon service implementation needs. To see the cart grid actions, refer to [Viewing the Service Cart](#) and [Viewing the Cart in Grid View](#).

 Service pricing for the selected assets is available only on the Angular Cart Grid UI but not on the Angular Cart UI. Also, you can see the Related Line Items menu option for the service product only after the System Administrator configures the Flow Setting for the Angular Cart Grid.

### Viewing Service Products on the Installed Products page

For the Service CPQ functionality, the Installed Products page is enhanced to include the following two tabs:

- [Purchased Products](#)
- [Related Purchases](#)

 Apttus CPQ supports only the Asset Grid UI.

## Purchased Products

This tab displays the existing assets for an Account. This is similar to the old Installed Products page.

### Validating Service Assets based on Criteria

You can select multiple service assets on the Installed Products Asset Grid page based on the criteria. Based on the selection criteria of service assets, Apttus CPQ displays the validation messages in order to ensure that the mass edit of purchased products happens accurately. For example, you can select assets based on the location criterion and then edit them together. You need to set the **custom settings > Installed Product Settings > Mass Edit Action Criteria Fields**. This custom setting shows all the fields of Asset line item and Price Dimensions defined on asset line item. When you select two or more assets and click **Mass Edit**, Apttus CPQ validates the selected asset line items against the Relate action criteria fields. In case of any discrepancies, a validation error message shows up in the console.

## Related Purchases

This tab displays the relevant services configured for an asset (equipment) for an Account. All these service products are loaded into the Service Catalog. From the Service Catalog, all the service products are configured as a normal product in Apttus CPQ system. The columns in this tab are configured using **Display Column Settings > Display Type = Related Purchases** for your flow name.

A new button named **Relate** is introduced on the Installed Products page. Clicking **Relate** button associates your asset products with the available services. You can change the label and alignment of **Relate** button from **Display Action Settings > Display Type = Installed Products** for your flow name.

The relate flow is used when you want to sell services on the equipment (bundle or Standalone). You are able to see only the related line item for the bundle or Standalone that is selected, however, you do not see the related line items for the component of Bundle.

The Relate Component flow is used when you want to sell services for the component of bundle. You are able to see the related line item for the component selected, and will not see the related line items for the bundle.

### Support for Related Line Items at the Option Level

- You can view the related lines associated with the component in the cart from an icon at the option level.
- You can add or delete components using the **Add** or **Remove** buttons.

This allows you to select and sell services at the component level and view the details in the cart.




## Coverage Status of Assets

Apttus CPQ provides a Boolean field **Is Primary Service** on Asset Line Item object, which is disabled by default.

You can enable it to view the coverage status of your assets:

- Installed Product (Asset Grid) page shows Service Product columns if Show Coverage for Primary Service is set to true and you have added all the columns to column settings.
- You need to mark the service as a Primary Service in asset line item manually or by any custom setting. Apttus CPQ does not have provision on the UI to mark the service as Primary.
- Only one primary service is associated to an equipment. In case of more than one primary service associated with an equipment, Apttus CPQ shows the coverage status data for the first available service.
- You can see the service along with its start and end dates along side the equipment asset without any clicks.
- Primary Service: Product shows proper name of service product.
- Primary Service: Start Date shows a start date of service product.
- Primary Service: End Date shows an end date of service product.
- Primary Service: Weighted Net Price shows Net price of weightage that is distributed among equipment.
- You can see the dynamically generated coverage status of the asset on the page as follows:
  - If the equipment has a service of type warranty and if the end date of the warranty is less than the day of the analysis, the status is Out of warranty.
  - If the equipment has a service of type warranty and if the end date of the warranty is greater than or equal to as opposed to the day of analysis, the status is In warranty.
  - If the equipment has a service of type contract and if the end date of the contract is less than the day of analysis, the status is Out of contract.
  - If the equipment has a service of type contract and if the end date of the contract is greater than or equal to the day of analysis, the status is In contract.
- You can also search your assets by using the coverage status on the Installed Products page.

 You need to enable **Show Service Coverage** custom setting in order to view the coverage status columns on the Installed Products (Asset Grid) page.

### Enabled Match in Options support for Related Asset Lines

When you relate a bundle (asset), the eligibility rule is triggered at the option and bundle level and based on the eligible purchases for the option of a service, you can do the following:

- Sell services for a bundle or option
- Select the options for which you want to add a service coverage

When a service catalog launches after relating the assets with options, eligibility rules check "Match in Options" for related lines condition and accordingly disables or enables valid services.

### **i** ABO Support for Renewals on Services

During service renewal, you can update equipment items for the service. You can terminate the equipment line items or you can add them to additional services or extend coverage to the quote. While renewing a service, on the cart grid you can see all related equipment in the Related Items pop-up and when you click Add or Remove, on the Installed Products page only services get selected. It has been observed that the relationship between a service and an equipment is established, however, currently you may not be able to add or remove related line items from the equipment.

## Displaying Assets from the Account Hierarchy

You can view all the assets of either the parent or the child on the **Installed Products** asset grid page and search them using various criteria.

To set the account hierarchy

1. Under **Custom Settings > Installed Product Settings > Show Assets**, specify **Parents, Children**.


- i**
- If **Show Assets** is blank, on the asset grid page you cannot see an icon for **Account Hierarchy** and Apttus CPQ shows only assets from the current account.
  - If **Show Assets** set to **Parents, Children**, on the asset grid page you can see an icon for **Account Hierarchy** and Apttus CPQ shows assets from the current account as well as from Parent and Children.

2. Add or update the Accounts that you want to be displayed in the **Account Hierarchy** screen on the asset grid page.
3. Execute the batch job in CPQ Console > Maintenance Console > Account Hierarchy, whenever you add or update account's parent or create a new account with parent.
4. Click **Account Hierarchy** icon on the asset grid page. The **Account Hierarchy** pop-up opens.
5. Select the account for which you want to view the list of assets. The default account is always marked in bold in the **Account Hierarchy** pop-up.
6. Click **Apply** in the pop-up to see the list of asset for a particular account in the right pane. You can see the hierarchy of assets under **Account Hierarchy** icon in the left pane.

## Configuring Service Products

You can configure a service product from the catalog after you set the product type as a Service or an Equipment. When you go to the Service Catalog page, you can see all the service products that are associated with your assets or equipments for a new service. For a service product you have to follow the same procedures that are given in the topic, [Configuring a Product from the Catalog](#).

- Displaying the eligible services on catalog: The Service Catalog page displays the eligible service products that you can associate with the assets.

- Displaying the assets on catalog: On the Service Catalog page, click the **Selected Assets** link to view the assets and their corresponding details. Selected options of an Equipment bundle from the **Assets** page appear on the **Selected Assets** pop-up both in Catalog and Configuration page.
- Displaying the custom fields for assets: On the Service Catalog page when you open the **Selected Assets** pop up, it displays the custom fields that you configured for your asset. You can populate the desired fields of asset line items in the **Selected Assets** pop-up.
- Supporting the entitlements non-exclusive to all assets: You can select a service offering (entitlement) on the service catalog and configure it for one or more purchased products (assets). For example, you can select 24x7 support for the Order Management product.
- Applying the eligible entitlements to assets: You can see and configure the service offerings (entitlements) that are applicable to your assets. The Apttus CPQ disables the non-eligible entitlements for selection on the service catalog. If you select an entitlement that is not applicable to any purchases products, Apttus CPQ displays an error message.
- Supporting the catalog actions on the service catalog: An Apttus CPQ supports the catalog actions on the service catalog as well. For example, searching for services, display charge types beside services, configure a service bundle, add service to the cart, and so on.
- Displaying three columns for the attributes: On the configuration page you can see three columns for the product attributes. This behavior is governed by the Three Column Attribute Display checkbox from the Product Attribute Group page.
- On options, Apttus CPQ displays an icon next to options with **Related Assets** on the configuration page. This helps you to see which assets are related to the options of a bundle by invoking the pop-up on the right side.
- On the cart page, you can clone the configured service lines. Select one or more service lines and click copy icon (  ). Only the service line and its configuration are cloned so that you can to associate different assets with the service line. Click **Add/Remove** button on the Related Line Items pop-up, to relate assests with the service line.

## Use Case: Configuring a service product

**Description :** This use case describes how to configure a service product that improves the user experience of the customer post purchase.

Suppose ABC is the OEM manufacturer of the selected asset, **Bundled ABC Software and Hardware**. Apttus CPQ provides the following Service Offerings or Entitlements:

- 24x7 Same Day Onsite Response
- 24x7 Support for Sev 1
- Proactive Support Services
- Remote Account Manager
- XYZ Specialist Service = This product option is not available (greyed out) to sales rep because this is not eligible for the selected asset.

In the following example, the sales rep configures the product.

**Prerequisite:** Make sure that system administrator has configured the product type and the eligibility rules. For more information, see [Managing Services](#).

## To configure a service product

1. You can select a product by doing any of the following:
  - From the Browse Catalog list, select a category hierarchy you want to view.
  - From the Browse section, navigate to the category hierarchy for **Bundled ABC Software and Hardware**.
  - In the Search bar, type a category or product name and click **Search**.
2. From the Service Catalog section, to configure options for a product, click **Configure** next to it. The selected product is displayed in the Selected Products section on the right and the options page is displayed.
3. Select the options for your bundle, and do any of the following:
  - Click **Add More Products**, to add additional products.
  - Click **Remove Item**, to remove a product.
  - Click **Go to Pricing** to price the product.
  - Click **Save** to save your selected product for that quote.
  - Select **Optional** to consider a particular line item as an optional one.

The values in the **Quantity** field for options can be driven by the numeric expression builder configured for the selected option.

The **Save** button is used in case you want to save your configuration before proceeding to the attributes and cart page. For example, if you change the **Quantity** of the options associated with your bundle product, you might want to save the configuration before moving to the cart page.

**Result:** Bundled ABC Software and Hardware is configured and ready to be added to the cart.

**Next Step:** On the cart page, a sales rep can verify the following details and then finalize the cart.

- Weightage of the each service product
- Pricing and quantity
- Association between the service product and the selected asset
- Related asset line items and service line items

## Viewing the Service Cart

After you configure a product on the Service Catalog and add it to the cart, the following user actions are available on the Service Cart:

- Apttus CPQ supports the cart grid actions on the service cart as well.
- On the cart page, you can see the service lines for the bundle options as well as for the standalone product.
- On the cart page, when you go to more button for a product, you can see the Related Line Items menu option. The related line items are nothing but your assets that are associated with the service line.
- You can modify the related line items that are associated with the service line. Select the product (asset) from the Related Line Items pop up and click change to relate the desired product with a service product. On the Service Catalog page, click Update to confirm the service product association with the new asset.

- You can edit the weightage for your assets based on the business requirements. You can set the percentage or amount as the Weightage Type, however, ensure that the total weightage must add up to 100 (For details, see [Field Set Settings](#) in the admin guide).
- You can clone a configured service line on the Service Cart page. For more information refer to [Configuring Service Products](#).

For more information on the Service CPQ feature, see [Managing Services](#).

For more information on the cart grid actions, see [Viewing the Cart in Grid View](#).

For more information on the Installed Products, see [Configuring Installed Products Settings](#) in *CPQ on Salesforce Administrator Guide*.

## Service Pricing

This section covers use cases for service pricing.


Various scenarios and the behavior changes are mentioned as follows:

- User selected an Equipment Bundle and related it to a Service Bundle (assuming user didn't pick any options on the service –so only bundle header is in the cart ). Related line items for Service Bundle will have only Equipment Bundle
- User selected an Equipment Bundle and related it to a Service Bundle & it's Service Option.
  - Related line items for Service Option will have only Equipment Bundle
  - Related line items for Service Bundle will have only Equipment Bundle
- User selected few Equipment Options using Relate Component and associated/related them to a Service Bundle SL (assuming no service options were selected ). Related line items for Service Bundle will have only selected Equipment Options
- User selected few Equipment Options using relate component and associated/related them to a Service Bundle and it's Service Option.
  - Related line items for Service Bundle will have only selected Equipment Options
  - Related line items for Service Option will have only selected Equipment Options

The navigation to the service pricing scenarios is as follows:

### Bundle to Bundle

To be able to sell services for the components of equipment by selecting them explicitly:

1. Navigate to the **Installed Products** page.
2. Select an asset bundle. Bundle and its components are displayed.
3. Click **Relate**. The Service Catalog page is displayed.
4. Select a service bundle and click **Add to Cart**.
5. View the cart.
6. Hover the mouse on the bundle name, click the more icon (  ) and select **Related Line Items**. All asset bundles that you had selected on the Installed Products page is displayed.


## Bundle to Component

To be able to sell a service entitlement for more than one special component of one or more of a component:

1. Navigate to the **Installed Products** page.
2. Select an asset bundle. Bundle and its components are displayed.
3. Click **Relate Component**. The relate component page displays components of the asset.
4. Click **Relate**. The service catalog page is displayed.
5. Select a service bundle and Click **Configure**.
6. Select a service option and click **Go to Pricing**. The Cart page is displayed.
7. Hover the mouse on the bundle name, click the more icon (⋮) and select **Related Line Items**. All asset bundle components and service options are displayed.

## Bundle to Bundle and Components

To be able to sell general entitlements (24x7, 99% uptime) that cover the equipment(s) ( Ultrasound Scanners, MRI's ). Also, you want to be able to maximize the revenue on a service contract by selling specialized service entitlements ( eg probe coverage, magnet coverage ) for more than one special component of the equipment items ( S-probe, T-Probe, Magnet ):

1. Navigate to the **Installed products** page.
2. Select two asset bundle. Bundle and its components are displayed.
3. Click Relate. The relate component page displays components of the asset.
4. Click Relate. The service catalog page is displayed.
5. Select a service bundle and click **Configure**.
6. Select a service option and click the  icon. Asset bundles and its components are displayed. Select specific asset options and click **Save**.
7. Click **Go to Pricing**. The Cart page is displayed.
8. Hover the mouse on the option name, click the more icon (⋮) and select **Related Line Items**. Asset options are displayed.

## Service pricing

Enable the following properties in **Custom Settings -> Proposal System Properties** to define the mode used for service pricing.

- **Rollup** – Used when the customer has a need to pool and price related equipment with different service prices
- **Allocate** – Used when the customer has a need to create a service line only for similarly priced related equipment line items. In this case, the dimensions from the first set of the related line items are used to price the service

The service pricing flow is as follows:

- Create as many dimensions in the matrix as the number of your asset dimensions Set up the matrix pricing for the service bundle and the service component individually Use component name as a matrix dimension to price for individual component (refer to the S-Probe, T-Probe entries in the matrix)  
The system relies on the first match for the service price. Specify entries with less ambiguity (wild card) at the beginning of the matrix.
- Configure the **Config System Properties > Service Price Distribution Method**.
- For **Relate Component - Bundle to Bundle scenario**: Related line items created only at the bundle level for the equipment items selected. Service is priced individually at the service bundle level and the at the service option level for each related line item Individual service prices are then averaged to obtain the base price of the service line item and are then further rolled up to arrive at the price for the service line.
- For **Relate Component - Bundle to Component scenario**: Related line items created only at the component level for the selected components of the equipment  
(Note the behavior change from the previous releases – no related line items are created for the equipment bundles – you can see bundle associated with the component as an associated column on the same related line item). Service is priced individually at the service bundle level and the at the service option level for each related line item. Individual service prices are then averaged to obtain the base price of the service line item and are then further rolled to arrive at the price for the service line.
- If there is no matching entry in the price matrix then it will take price as zero.
- Weightage of the service line is derived from its contribution.
- The option of splitting a service line using a button click based on the flow level settings. (Refer to [Splitting the Related Line Items from Service Line](#))

## Splitting the Related Line Items from Service Line

The Split feature allows you to clone services with some or all related line items using in the service cart. You must clone the service line to discount or negotiate various equipment items differently. In many scenarios, sales reps belonging to a specific region have identical needs for negotiation. However, there may be scenarios where the sales rep may not want to break the service line. You can split the service line on the Service Cart. This feature splits the related line items based on the split criteria defined in Config System Properties.

### Prerequisites

Split Criteria must be defined in the **Service Line Split Criteria** setting in Config System Properties. You can define split criteria that apply globally or create split criteria for the specific flow. In case the split criteria is defined for a specific flow, the **Split** button is not displayed in other flows. For more information, see [Defining Split Criteria](#).

Perform the following steps to split the service line.

1. Click **Related Line Items** on the Service Cart page.
2. Click **Split**. Select one or more criteria and Click **Split**.

After you click **Split**, the service line is cloned. The related line items are removed from the original service line and associated to the cloned service line based on the split criteria. The price is recalculated based on the related line items associated with the service line.



## Using Catalog

The following features are available on the product catalog page.

- [Using Guided Selling](#)
- [Using Refine your Search](#)
- [Using the Product Comparison Feature](#)
- [Using Deal Guidance](#)
- [Using Proposal Document Generation](#)

### Using Guided Selling

Guided Selling is a process that helps you to choose the product best fulfilling your customer's needs. The goal of guided selling is to provide you a way to figure out which product to sell to a customer. You need to answer a set of questions around your customer's needs and based on your answers, the system recommends products. This way, you can quickly select the right product to meet your customer's needs.

#### To use guided selling

Prerequisite: You must be on the product catalog page.

1. Select a category and click **Guided Selling**. A set of questions appears (one or more pages of questions).
2. Select an answer from the available choices for the questions and click **Next**.


After you have finished answering the questionnaire, the system retrieves and displays the products matching your customer's needs in the **Recommended Products** section.

You can either configure a product from the recommended products section, by clicking **Configure** or add a product to the shopping cart by clicking **Add to Cart**.

### Using Refine your Search

When you are selecting items from the Product Catalog, **Refine Your Search** enables you to narrow the list of products to those that match your search filter questions.

Search filters are associated with categories, so that the *Refine Your Search* questions may change when you select different product categories. The questions are also found in the product record, which is how the Product list gets refined. When you select an answer to a question and that answer matches the answer on the product record, that product is included in the filtered Product list.

 For a product to be displayed on the Catalog page, it must match all of the selected Refine Your Search criteria.

To configure your system to use Refine Your Search you must complete the following:

Configure the custom fields	Two custom fields need to be created. The field for Search Attribute Values is used to provide the search question and answers, which will be associated with a category. The field for Products is used to have the same search question and answer values available on the product record.
Configure Search Filter Fields	This makes the custom field available from the <i>Search Filter Fields</i> list in the Hierarchy Manager . This must be completed so that the custom field can be associated with a specific category.
Configure refine search options	This task associates the custom field with a specific category and adds it to the Refine Your Search window in the Product Selection page.
Select a search field value for a product	So that using <i>Refine Your Search</i> provides useful and relevant filtering, you should select a value for each search field on a product record.

The following configuration tasks, will use a refine search question example in the screenshots (How many seats will you need?) to help show how the feature is built.

### To refine your Search

You must have configured Custom fields for each search question.

1. Select a Quote/Proposal and click **Configure Products**.
2. On the Catalog page, search for a product. Based on your selected category, all the products are listed in the Product Catalog section.
3. The **Refine Your Search** window displays the search filter questions. Select a value to answer the questions that best match your requirements, and based on your selection, the list of products are further filtered to narrow down the list.

The displayed products list will refresh to only display those products which match the search criteria. Products must match all criteria to be displayed.

Additional selections you make in the Refine Your Search window will further filter the products list.


## Using the Product Comparison Feature

Product comparison allows you to compare features of multiple products on the catalog page enabling you to narrow down to products that best fit your customer's needs.

### To compare multiple products

1. On the Catalog page, select more than one product to compare.
2. Click **Compare Products**.

A Product Compare page appears listing the selected products and its features in the tabular form. You can show/hide the products to display on the comparison page.

- The system indicates the number of products that you have chosen to compare inside parenthesis on the **Compare** button. This helps you keep a counter of the number of products chosen for comparison on different pages on the catalog page. After product selection, the system also indicates how many products you have chosen for comparison, as *'n' selected*. The products can be chosen from different categories also.
- You can remove a product from the selection by clicking  icon adjacent to each product.
- The products are listed in the Compare Products selection dialog box based on the order of your selection and not in an alphabetical order.

To go back to the catalog page, click **Return to Catalog**.

The **Return to Catalog** button now takes you back to the last category that you had browsed for product selection. For example, you had selected Product 1 from Category A and Product 2 from Category B. Once you are on the Product Comparison page, clicking **Return to Catalog** takes you to Category B and the catalog page (containing all the categories).

## Using Deal Guidance

With Apttus Deal Maximizer, sales reps can easily view the current rating of a deal at any time alongside suggested recommendations to improve it. You can create rules that define the various criteria of a good deal. This deal rating is available to sales reps at the time of negotiation. The sales reps can see the rating of their current deal and gain visibility into approval requirements ahead of time. Deal Maximizer guides the sales reps towards proposing good deals.

Apttus Deal Maximizer boosts revenue by guiding sales reps towards optimal deals that align with organization's objectives.

Deal Maximizer is a set of rules that displays a deal color band based on the previous constraints that you have set. The deal color band is displayed to the end-user right in the shopping cart so any changes can be in real-time.

With Deal Maximizer, your Rule can be set up based on Opportunity, Agreement, Agreement Line Item, Deal, Deal Line Item, Line Item, or Product Configuration. The Rule Criteria Measure Options can be set as Unit Price, Annual Price per Unit, % Discount, Discount Amount, and % Margin. You have the option to set the criteria rules as either a discrete value or a range.

Before implementing Deal Maximizer, you must talk to your customer and gather data on what defines a good, medium, and bad deal for their business. Business requirements will identify which specific parameters (Discount %, Price Override) should trigger that a deal is moving to a risky stage. Deal Maximizer uses data stored on the Line Item to determine deal acceptability. It can be configured in multiple ways and can be set with one parameter or set as a combination of parameters.

From the Shopping Cart, you can view Meta Data from these objects, in order to display the validity of the specific deal.

Once the rules have kicked in and the Deal Color Band appears, the End-user has a few options. If the Deal Color Band shows the deal as below average, the End-user can still technically approve the deal. However, this is not the best practice as it is very unlikely that the deal will be approved.

Instead, the End-user should reconfigure the deal and structure it in a way that moves the Deal Color Band from below average to average or above average.

The following packages must be installed in order to use Deal Maximizer

- Apttus Deal Manager
- Apttus Deal Maximizer
- Apttus Deal Approvals Management

**Use Case:**

Below is an example of the color band matrix used for ACME CSD.

In this case, the Discount % and Quantity fields are used to determine the color bands and Acceptance level for ACME CSD deals. These fields are located in the Line Item object and displayed on the shopping cart. When identifying the color band triggers for your client, be sure to track where the data is held in Salesforce and determine if it is accessible by the DealMaximizer dimension records.

Deal Color Band:		Green	Yellow	Orange	Red
Acceptance Level:		Target	Acceptable	Below Average	Not Acceptable
Quantity	Discount % - Target	Discount % - Acceptable	Discount % - Below Average	Discount % - Not Acceptable	
1	0	5	8	99999	
20	0	8	11	99999	
40	0	11	14	99999	
60	0	14	17	99999	
80	0	17	20	99999	
9999	0	20	23	99999	

For more information about how to configure the deal guidance, refer to *Deal Maximizer Administrator Guide*.

## Using Proposal Document Generation

Generating a Quote/Proposal and sending the Quote/Proposal to the customer should be easy and intuitive. Proposal Doc Gen provides the ability to select a template, select the output format, merge the Quote/Proposal document with additional documents and sequence them, email the collated file with attachments and preview the different versions of documents. As a Sales Rep, you can invoke the new wizard from the cart as well as from the Quote/Proposal header page.

This reduces the number of clicks and provides an integrated experience from the shopping cart as well as the Quote/Proposal header. All the functionality resides in a single page application that is smooth and easy to use.

Consider the following scenarios where this feature can be very useful:

**Use case 1:** After confirming the product selection and pricing, as a Sales Rep, you would like to instantly generate a Quote/Proposal from the Shopping Cart, merge some marketing material and product data sheets with my generated Quote/Proposal and send the document in an email to the customer.

**User case 2:** After receiving the email that my quote (that I had submitted earlier for approval) has been approved, you want to quickly generate the Quote/Proposal document, merge some marketing material and product data sheets with my generated proposal and send the document in an email to the customer.

- i** During the proposal workflow, the system detects the acceptable file type (For instance, .docx, .doc, .pdf) and displays a distinct icon for the file format. Also, when you try to merge a file with an unsupported format or the file size is more than 4 MB, the system alerts you with an error message.

### Process flow:

- **Accessing the Doc Gen Wizard**

You can access the Doc Gen Wizard from the Quote/Proposal header by clicking **Send Proposal** button, which is available with the proposal management package.

- i** If you do not find the **Send Proposal** button on the Quote header page, use **Edit Layout** to bring the button to your page layout.

You can also access this wizard from the cart by clicking **Send Proposal**. The major two differences in accessing the Doc Gen Wizard from the cart are that you must choose a proposal template to generate a proposal document and you get quick access to action buttons, such as **Go to Pricing**, **Add More Products**, **Installed Products**, and **Go to Proposal** below the Quote/Proposal name.

- **Generating a Quote/Proposal document**

When you click **New Proposal Document**, a new dialog box appears where you can choose the default template or search for any queried templates for your Quote/Proposal document (filtered using Query Templates). You can also choose the Output Format for your document. Only *doc*, *docx* and *pdf* formats are supported, depending on the format your admin has configured, using Proposal Document Output Format. Using Proposal Document Output Format, if you've chosen *docx* and *pdf*,

the drop-down list here shows both. If you do not define any format, the system takes *pdf* as the default output format. Use the **Generate** button to generate a new Quote/Proposal document. The **Generate** button is disabled until you choose a template. As soon as the Quote/Proposal document is generated, the system displays the document in the Preview mode on the right pane.

The screenshot shows the 'Options' panel for generating a Quote/Proposal document. It includes three main sections:

- 1. Select Output Format:** Radio buttons for DOC, DOCX, RTF, and PDF. PDF is selected.
- 2. Include Watermark:** A checkbox that is currently unchecked.
- 3. Select template from the list below and click Generate:** A table of templates.

Below the options are 'Generate' and 'Cancel' buttons. The table below is a reproduction of the 'Templates' table shown in the screenshot:

Select	Name	Guidance	Category	Subcategory
<input type="radio"/>	PR1	PR1 fx2	Default	Default
<input type="radio"/>	PR1 Copy	PR1 fx2	Default	Default
<input type="radio"/>	rQuoteData1_(fx1) EnglishUS	rQuoteData1_(fx1) EnglishUS by 8.6.0109	Default	Default
<input type="radio"/>	rQuoteData1_(fx2) EnglishUS	rQuoteData1_(fx2) EnglishUS by 8.6.0109 mode - not localized	Default	Default
<input type="radio"/>	xcopy1Proposal_CS by 6.5.1025	OLDI System fx template no Currency/isoCode MF in the template - no ISO code can be saved to the template record; the custom formula field (Cornerstone, Inc. use case) for the symbol is added from teh clause	Default	Default
<input type="radio"/>	xProposal_CS	OLDI System fx template no Currency/isoCode MF in the template - no ISO code can be saved to the template record; the custom formula field (Cornerstone, Inc. use case) for the symbol is added from teh clause	Default	Default
<input type="radio"/>	xProposal_DataCurrency MFs	OLDI System fx template with Currency/isoCode MF in the template - no ISO code can be saved to the template record; the custom formula field (Cornerstone, Inc. use case) for the symbol is added	Default	Default
<input type="radio"/>	xSC_saba template new 1	OLDI System fx template	Default	Default
<input type="radio"/>	xSC_saba template new 2	OLDI System fx template	Default	Default

The Quote/Proposal document generated using the Doc Gen Wizard follows the naming convention as: *Quote/Proposal Name + Template Name + Date stamp*. Such documents appear in the left pane of Proposal Doc Gen wizard and as attachments in the **Notes & Attachments** related list.

- **(Optional) Previewing generated documents and merging with additional documents**

Once generated, the system automatically previews the generated document on the right pane of the window. In case of multiple documents, you can also preview such documents by clicking the name of the generated document. Note that Preview is available only for documents created in *PDF* format.

### Add from Quote

You can also attach additional documents to the Quote/Proposal by clicking **Add from Quote**. This button fetches all the documents (that are not generated using Proposal Doc Gen) from the **Notes & Attachments** related list of a Quote/Proposal. Select a document and click **Add to Merge Docs** to allow the system to consider this document for merge with the generated Quote/Proposal document. The merging happens only after you click **Merge Documents** on the right pane.

Use **Browse to documents on your computer** to attach any offline documents from your local storage. You can simply drag and drop an offline document to the Doc Gen wizard and the system considers it for merging with the Quote/Proposal document.

### Add URL

You can add document hyperlinks from external sources and merge them with the Proposal. Click **Add URL** to launch a pop-up that gives you the ability to enter valid document hyperlinks and its corresponding Title. You can add multiple URLs by clicking **Add Another** link at the bottom of the pop-up.

- i** Ensure that you have added the endpoint for the document URL that you want to list on the Proposal Doc Gen from **Setup > Security Controls > Remote Site Settings**.

As soon as you attach more than one document to your Quote/Proposal (apart from the generated Quote/Proposal), the right pane of the window grays out and enables a single button called **Merge Documents**. You can choose to merge all the generated and offline documents in the **Documents to be Merged** section and turn them into a single document.

After your documents are merged, the system displays the collated document in the Preview pane on the right. The merged document appears as a record under the **Document Collate Infos** related list on the Quote/Proposal.

- **Sending the generated document to the customer**

After the sales rep has reviewed, merged and finalized the content in the final Quote/Proposal document, he can send the collated document to the customer for further actions. Buttons like **Email** and **Download** are available for the following purposes:

Action button	Usage
Email	Use this button to send the Quote/Proposal (or merged) document to your customer for review. The new dialog box allows you to enter information like, email addresses for To, CC, BCC fields, Subject, choose an Email Template and Email Folder, and add any additional documents. The system by default populates the email information of the <b>Primary Contact</b> field in the <b>To</b> field. The <b>Mark Proposal as Presented</b> ensures that the status of the Quote/Proposal is changed to <i>Presented</i> as soon as you send the Email.
Download	Use this button if you want to download a local copy of the generated Quote/Proposal (or merged) document.

## Working with Cart


Apttus CPQ supports the following two user interfaces.

- [AngularJS based UI](#)
- [Cart Grid UI](#)

### AngularJS based UI

AngularJS based user interface allows you to select products, configure their attributes and options, define pricing and make adjustments, select installed products, Change, Swap and Cancel orders on one single, user friendly page.

#### To create a quote using the AngularJS based user interface

1. Go to the product catalog page.
2. You can search for a product or use the Refine your Search feature to filter products, and select the product you want to order. The system displays the products you search using the Search box, Refine Your Search, and Browse Catalog feature collectively. The small indicator, with the label "Installed", next to each product on the Catalog page is used to differentiate between the products which have already been purchased and which products are new for a configure quote.
3. To configure a bundle, click **Configure**. If you select an option product, **Add To Cart** and **Configure** buttons will be disabled, because the option product has to be sold along with the bundle product. Once selected, you can view the exact number of products added in your mini cart on the top-right corner.
4. Configure the attributes of the product.
5. Click **Product Options** and select the option you want to order.  
In case of sub-bundle products, containing options and its attributes, you can also use the clone icon, available next to your option product to replicate your configuration.
6. Click **Go to Pricing** and define the price of the product on the Cart page. You can also click  to define the pricing at the line item level.  
You can reorder the line items for a bundle and standalone product on the Shopping Cart using the drag and drop functionality. Use the number column to achieve this. You can either reorder the line items on the same page or even move the line items to an another page if there are more number of products.  
You can also view the products grouped by specific Locations by selecting *Location* from the **Group By** drop-down list.
7. Click **Submit for Approval** to have your line manager review the order or click **Finalize** to save and go back to the quote.



## Managing Assets

You can also manage assets on the new CPQ interface. Click **Installed Products** to view all the installed products on a single page.

You can even filter you search. Select one or more parameters from the search criteria on the left work pane and click **Apply**.

To manage an asset


1. Select an asset, and click one of the following buttons.
  - **Terminate** - to cancel a subscription
  - **Swap** - to change one product with another
  - **Change** - to change the subscription dates
2. Define the values for the fields described in the following table.

Field	Description
<b>Start Date</b>	Enter the date that your customers want the new subscription term to begin.
<b>End Date</b>	Enter the date that subscription term ends.
<b>Quantity</b>	Enter the number of units you want to renew the contract for.

3. Click **Confirm > Go to Pricing > Finalize**.

## Applying Multiple Adjustments at the Line Item

You can apply multiple adjustments at the line level either by applying the adjustments in the corresponding columns or clicking \$ icon next to the line item from the cart page. This enhances the functionality when you want to apply multiple adjustments to get to the final price for a particular line item.

 Before you apply multiple adjustments to your line item in the pop-up dialog box, ensure that you have not given any manual adjustments against the line item on the cart.

You can apply the adjustments in the following manner:

- Adjustments on the previous price
- Adjustments on the starting price
- Bucket Adjustments (refer to [Bucket Adjustments](#) for details)

Here is an example of the difference between the previous and starting price types:

Extended Price = \$100

SR No	Adjustment Applies to	Adjustment Type	Adjustment Amount	Net Price on Cart	Description
1	Starting Price	% Discount	10	90	Create an adjustment line with adjustment applies to as either starting price or previous price (it doesn't matter because it is the first adjustment). The new net price will be \$90
2	Starting Price	% Discount	10	80	Now create another adjustment line with adjustment applies to as starting price that applies a 10% discount.  The new total adjustment amount will be $100 * (10\% + 10\%) = \$20$ . The new net price will be \$80.


SR No	Adjustment Applies to	Adjustment Type	Adjustment Amount	Net Price on Cart	Description
1	Starting Price	% Discount	10	90	Create an adjustment line with adjustment applies to as either starting price or previous price (it doesn't matter because it is the first adjustment). The new net price will be \$90
2	Previous Price	% Discount	10	81	<p>Create another adjustment line with adjustment applies to as previous price that applies a 10% discount.</p> <p>The new total adjustment amount will be <math>100 * 10\% * 10\% = \\$19</math>. The new net price will be \$81.</p> <p>This is because the previous price would be 100 plus the 10% discount.</p>



- When you save the adjustments, Apttus CPQ triggers a Reprice action.
- The number of adjustments applicable for a line item is defined in the **Max Adjustment Lines** custom setting, available under Config System Properties in the admin guide.
- You can restrict adjustment types using Product Attribute Rule (PAR) at the line item level on the Cart Grid UI. This capability is supported for Adjustment Type picklist.

## Cart Locking for Concurrent Access

Cart locking helps prevent data loss while a sales rep is working on a configuration. When a sales rep is working on a configuration (in edit mode), any other user who tries to access the cart at the same time will get redirected to a read-only view of the cart. The user in read-only mode can gain edit access only after the sales rep saves or finalizes or abandons or closes the cart.


 Ensure that your administrator has configured the necessary custom setting before using Cart Locking.

While a user is in edit mode, if another user requests control by clicking **Request Edit Access**, the user currently in edit mode gets notified through an email with the message: “<<user in read-only mode>> has requested to edit the cart. Would you like to grant access?”

In an edit mode, after the user saves, closes, finalizes, or abandons the current cart, an email notification is sent to the user who was waiting to get the edit access of the cart.

The email notifications are sent in the following format:

Action on the cart	Email notification content
Claim Edit Access	User <<name in read-only mode>> has requested edit access to <<proposal name>>. To grant this user with access, please either: save, close, finalize, or abandon your configuration.
Save or Close	<<User name - edit mode user>> is done configuring. You can claim edit access to the cart by clicking the <b>Claim Edit Access</b> button on the cart.
Finalize	<<User name - edit mode user>> has finalized the configuration. You can now view and edit this finalized version by clicking the <b>Claim Edit Access</b> button on the cart.
Abandon	<<User name - edit mode user>> is done configuring. You can claim edit access to the cart now by navigating to the quote header page and clicking <b>Configure Products</b> .

 Cart locking is available only in the Angular UI. Enabling it for the classic UI may result in unexpected issues.

## Mass update product fields

Mass update allows you to bulk update fields, such as quantity, adjustment type, and adjustment amount for one or more than one products at a time.

### To mass update product fields

1. From the cart page, select the desired product(s) and click **Mass Update**.
2. In the Mass Update popup, specify the desired value for the fields and click **Apply**.

By default, you see the following fields in the Mass Update popup.

- Quantity
- Adjustment Type
- Adjustment Amount

You can either specify the value for a field or select the **Reset** check box. Mass Update will override any existing user entered value. If you keep a specific field blank and click **Apply**, no action is taken on that field. When you select the **Reset** check box, system updates the field to its default value. Using Mass Update, you can update any line item field, including a custom field which is editable. You need to ensure that **Allow Manual Adjustment** for the corresponding PLI is set to *True*.



- To customize the fields displayed in the Mass Update popup, admin can navigate to **Config Settings > Display Column Settings**. Select *Mass Update* from the **Display Type**, and *ngFlow* from **Flow** drop down.
- You should not use Mass Update along with Multiple Adjustments.

## Cart Grid UI

- [Managing Cart Views](#)
- [Viewing the Cart in Grid View](#)

### Managing Cart Views

Similar to Salesforce views, the new cart grid supports Cart Views containing predefined filter values on the cart. These views help you filter and display cart line items as per your configurations. You can create new views, edit the **Group By** field and the list of columns to be displayed for a particular view of the cart.

By default, you can create a new view, edit and delete views. When you delete a view, the record is deleted from your flow but does not get removed from the list of views. This means that your view is still visible to other flows.

### **i** Setting Custom View as Default

You can choose one of your custom views to set as default, which then overrides the administrator view. If you do not set the custom view as "Default", then the administrator view becomes the default. The system retains and displays the custom view next time you login. You can set the custom views based on many parameters such as product, color, and location, using the **Create New View** pop up. After you save the created or updated custom cart view, the system loads it instantaneously. Under Choose Cart Columns section, you can select and move the field values to be displayed or removed using the hand icon.

Note that Search function does not work on Cart Grid UI while using custom views.

## Required Configuration

For each view that you create, you must ensure that your administrator has listed your flow name as a picklist value in **Config Settings object > Flow picklist field**. If your administrator has not listed the flow name in this picklist field, you would be allowed to create a new view but would not be able to save the view. Also, after your administrator has listed the flow name in this picklist field, you can view and use all the views created by different users, provided the flow names are listed in the Flow picklist.

The columns displayed in your view are mapped with your flow. You can edit the columns using Display Column Settings in the admin guide. You can modify the group-by fields by listing the API names of the desired fields in the **Group field** available at **Setup > App Setup > Develop > Custom Settings > Config System Properties > Manage > System Properties**.

## Viewing the Cart in Grid View




The shopping cart has been redesigned to provide better usability and accessibility to the sales representative.

Following are the key changes that you can see in the shopping cart:

- **Displaying cart level actions on top-right corner:** A system displays the primary cart level actions on the top right corner of the page with **Finalize** action as a default. The other user actions such as **Reprice, Apply Promotion, Analyze Quote, Submit for Approvals** and so on are made available based on the user scenarios. The user actions that are grayed out show an info icon next to them, providing a reason for non-availability for selection. You can customize the primary and secondary buttons using the Display Action Settings in the admin guide.
- Action buttons, such as **Add More Products, Installed Products, Reprice, Finalize, Submit for Approval**, and more are available as picklist values.
- Mass actions, such as **Delete Product, Copy Product, Save as Favorite, Mass Update, Product Collaboration**, at the line item level are available as picklist values. Any change using Mass Update performs the calculation on the client side for faster execution.
- Easy and type-ahead search functionality on the top of line item table.
- A Quick view of the **Grand Total** amount on the top-right corner. Also, **Show Totals, Total Adjustments** are displayed on the page header. The right arrow next to Grand Total shows you the detailed calculations at the line item level.

- Bundle cart line items with expand/collapse functionality.
- A spinner on the cart header to indicate the progress of any rules/adjustments that are being executed in the background.
- Infinite scrolling for line items avoiding the need for pagination.
- Column headers: Always available on the top while scrolling. Non-numeric fields are center aligned and numeric fields are right aligned.
- Editable fields and actions on hover.
- Support for different data types for columns, such as Text, Picklist, Lookup, Date, Hyperlink Formula, Hyperlink Image Formula, Image, Formula, and more.
- **Support for Deal Guidance:** On the Angular UI, for a product that you configured on the cart page, the system displays a Pricing Guidance pop-up for a customer deal. On the Guidance column when you hover your mouse on a green circle, it pops up a screen with some guidance parameters.
- **Ability to apply mass adjustments for options without applying adjustments on bundle:** You can apply the mass update on the option and bundle products separately. A new check box design has been implemented that depicts how you can choose to apply the mass adjustments on bundle, option or both.

On the bundle level, when you click for the consequent times and click **Mass Update**, you see the following behavior:

Click number	Check box design	Behavior
First	Solid square box 	The mass updates are applied only to the bundle product. Sub-bundle products also behave as bundle products.
Second	Minus sign 	The mass updates are applied only to the option products.
Third	Checked sign 	The mass updates are applied to both, the bundle and option products.
Fourth	Empty check boxes	The mass updates are not applied.

- Support for long Product Name, Column text, and charge names
- **Providing client-side computation facility:**
  - On Cart Grid with custom setting **Enable Auto Reprice** set to ON, when you change any Quantity on cart line item, system updates the pricing fields such as Extended Price, Net Price for the specific row.
  - Calculate totals (by charges and frequency) and grand totals
  - Calculate subtotals for category
- **Providing bundle roll-up for cost and price:** Roll up line gets updated when individual line's price gets changed and any discount is applied on the summary line when any individual lines get updated.
- **Support for removal of price list items for the existing quotes:** Whenever you have a PLI removed from an active quote, the system notifies you and removes the item automatically.

- **Eliminating the additional pricing spinner:** When the pricing has been completed on the catalog or config page, the system does not show spinner on angular UI or the cart grid page.
- **Recalculating the end date of one-time fee:** Based on the start date and the selling term, the end date for one-time price type is re-computed when you delete it in the cart.
- **Showing sub totals and totals sections:** The Cart Grid UI shows sub totals and totals section at the bottom of the cart page based on a new setting called `EnableContextualTotals`. For more information, see `Config System Properties` in the Admin Guide.
- **Providing an indicator for line item approval:** If you make updates to a quote/proposal, the system displays an indicator "Approval Required" for the line item on the cart page.
- **Reordering of primary lines on the cart:** You can drag and drop the primary line items on the cart using the hand icon that helps you sort the products.
- **Cancelling the order line items:** While amending an in-flight order, you can cancel one or more order line items from the cart that are not yet fulfilled (orders with pending and in-fulfillment status).
- **Improved User Experience for Adjustment Amount field:**

Apttus CPQ displays a blue bar when you click or hover over the **Adjustment Amount** field on the line item or **Totals** section in the cart page. This feature improves the user experience by highlighting the **Adjustment Amount** field in order to make it noticeable during an edit mode.

- **Three Columns in the left section of the Cart Grid**
  - The left side of cart grid is limited to three line items fields.
  - When you create a new cart view and try to drag a fourth field into the third section, it moves that field to the middle section.
  - When you create a new cart view as an admin, you can see the same behavior as a general user creating a cart view.
- **Hiding Secondary Action Buttons upon Hard Revalidate:** Upon hard revalidation of the quote by changing the product version, Apttus CPQ hides the secondary action buttons on the cart that are part of Display Action Settings. For example, Add More Products, Installed Products, Add Miscellaneous Items, Reprice, Finalize, and so on.
- On the configuration page at the **Summary** section, the **Hide Option Groups** link is disabled when no product option is selected.

For example, while you are configuring a quote, you do not want to include option groups that are associated with the product. In that case you want to finalize the quote and add the product on the cart without any options. Hence, the Product Summary section need to hide or disable the Hide Option Groups link, which is irrelevant in this scenario.

Suppose you are providing a quote of an internet plan to a customer which has no installation fee and router charges for the festival season. In that case, you can configure this product without the options, namely Installation Fee and Router Charges.

You can resize the first column and change the sequence of the columns (by dragging the line items vertically). This is controlled through Display Column Settings in the admin guide.


Please keep in mind the following pointers for icons/action buttons when using the new grid view:



- Copy, Remove and Product Collaboration – these icons/action buttons are available when all the selected line items are primary line items. Else the icons are grayed out.
- Mass Update – this is available for both, primary and secondary line items, except you have separate configurations such as **Quantity = Read Only**.

## Required Configuration

This functionality can be achieved by a simple configuration of creating a new flow with the Cart page name as *Apttus\_Config2\_\_Cart#cartgrid*. You must then specify the flow name in your **Configure Products** button to view the new UI for the shopping cart. See [Configuring Flow Settings and Creating Custom button pages](#) for details in the admin guide.

 For details about service cart, see [Viewing the Service Cart](#).  
For details about cart views, see [Managing Cart Views](#).


## Glossary of Apttus Approval Stages

This section describes the purpose of the different Approval Stages.

Field Value	Description
<b>Draft</b>	New Quote Created.
<b>Approval Required</b>	Changes to the Quote or Quote Line Items have triggered a need for approval.
<b>In Review</b>	Quote is in the process of being Approved or Denied.
<b>Approved</b>	Quote has been approved by management.
<b>Generated</b>	Quote document has been generated.
<b>Presented</b>	Quote document was presented to the end customer, either via email or manually.
<b>Accepted</b>	Quote was accepted by the end customer.
<b>Denied</b>	Quote has been denied by management.

## Glossary of Proposal Actions

This section describes the actions available at various stages of the proposal and their significance.

 These actions are fields and they are configurable by the System Administrator per your business process requirements.

### Configure Products

<b>Action</b>	
<b>Description</b>	Starts a new configuration process for the Quote, or reconfigure an existing set of products on the Quote.
<b>Availability</b>	If approval stage is <i>Draft</i> .

### Generate Proposal

<b>Action</b>	
<b>Description</b>	Generates a Proposal document and attaches it to the Quote/Proposal record.
<b>Availability</b>	Always Available if Ready to Generate is set to <i>true</i> .

### Present Proposal

<b>Action</b>	
<b>Description</b>	Presents the attached document to the Quote to the end customer through an email.
<b>Availability</b>	Always Available if Ready to Present is set to <i>true</i> .

### Accept Proposal

<b>Action</b>	
<b>Description</b>	Accept refers to an end customer <i>Accepting</i> the final proposal. This button synchronizes all Summary lines with the Opportunity Products for the Related Opportunity.
<b>Availability</b>	If approval stage is <i>Presented</i> .

### Make Primary

<b>Action</b>	
<b>Description</b>	Sets this Quote to primary and all other Quotes for the Opportunity non Primary. Also enables the Synchronize with Opportunity button.
<b>Availability</b>	If Primary flag is <i>false</i> .

### Synchronize with Opportunity

<b>Action</b>	
<b>Description</b>	Synchronizes the finalized quote with the Opportunity, each time the cart is Finalized. If you are using automatic synchronization, you should remove this from the page layout.
<b>Availability</b>	If Primary flag is <i>true</i> .

### Create Agreement with Line Items

<b>Action</b>	
<b>Description</b>	Once accepted, the final step is to create the contract.
<b>Availability</b>	If approval stage is <i>Accepted</i> .

## Glossary of New Related Lists

This section describes the various related lists enabled after the draft proposal record is created.

Name	Description
<b>Actions</b>	Lists the various actions you can execute for this stage of the quoting process. A list of actions with the description of their function is available in <a href="#">Proposal Actions</a> .
<b>Line Items</b>	Contains the detailed line items (bundles, options, and standalone) of a finalized configuration. This corresponds to the Detail tab in configuration.
<b>Summary</b>	Contains the summary view (standalone and bundles) of a finalized configuration. This corresponds to the Summary tab in configuration.
<b>Summary Groups</b>	Contains the totals for the finalized configuration according to the product hierarchy including a Grand Total.
<b>Notes &amp; Attachments</b>	Enables you to attach any reference document or file relevant to a quote/proposal. The proposal document when generated from the template is stored by the application in this section.
<b>Open Activities</b>	Enables you to create and assign new task corresponding to a quote.
<b>Approval History</b>	Initiate and track approvals corresponding to the quote. Note: Approvals can be initiated only if the corresponding approval processes have been set up by the System Administrator.
<b>Activity History</b>	Lists an Audit history of significant changes during the life of the quote.

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