

CPQ Connector for Subscription Management Implementation Guide

Fall '23/September 2023

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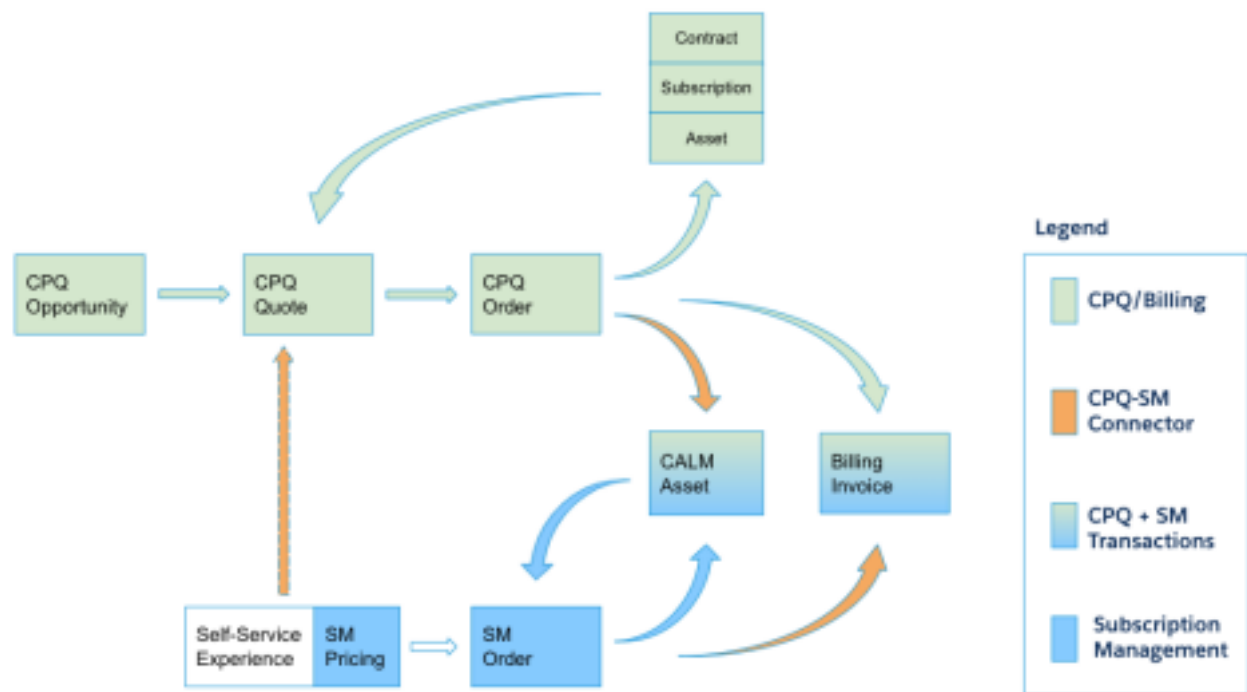
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Product Introduction

The CPQ Connector for Subscription Management is a CPQ add-on package that enables customers to create lifecycle managed assets when assets are contracted. For customers who have an SM license, the connector allows customers to use CPQ and Subscription Management together in the same org. The connector creates and updates Customer Asset Lifecycle Managed (CALM) asset records for simple subscriptions and one-time products sold through CPQ, providing a consolidated list of assets sold through either CPQ or Subscription Management.

The connector enables transactions from Subscription Management to be included in invoices generated by Salesforce Billing. The connector provides a setting which indicates the preferred billing channel for Subscription Management transactions, which allows the connector to route transactions through either Salesforce Billing or Subscription Management invoicing. When using Salesforce Billing for invoicing Subscription Management orders, consolidated finance transactions can be generated for both CPQ and Subscription Management transactions.

Process Flow



Standard Use Cases

Create a CALM Asset with CPQ

- 1) Create an Opportunity with any number of Products.
- 2) Create a primary Quote linked to that Opportunity
- 3) Create the Quote Line Items
- 4) From the primary Quote, create an Order. This will also create the related Order Products
- 5) Activate and Contract the Order.
- 6) This will create a new entry in Subscription Management, with an associated CALM Asset.

Amend a CALM Asset via CPQ

- 1) Navigate to an existing Contract.
- 2) Click “Amend” in the upper-right Quick Action menu
- 3) This will bring up the “Edit Quote” screen. On this screen you may amend Start Dates, End Dates, and unit Quantity.
- 4) Save this. This will create an Amendment Opportunity and related Quote.
- 5) Create an Order from the Quote
- 6) Activate and Contract the Order
- 7) This will amend the Contract and create a second Subscription related to the Contract.
- 8) This will change the forward-looking quantity on the CALM Asset.

Renew a CALM Asset via CPQ

- 1) Navigate to a Contract and Renew (check “Renewal Forecast and “Renewal Quoted”)
- 2) This will create a Renewal Quote and Renewal Opportunity
- 3) Create an Order from the Quote.
- 4) Activate and Contract the Order
- 5) This will create a new Contract
- 6) On the Contract, this will create a new Subscription
- 7) On the related CALM Asset, this will extend the lifecycle

Invoicing - Single Invoice

The Connector allows you to see Invoiced amounts as a part of the Asset Lifecycle. Start with any Order as generated above.

- 1) Go to an Order and check the “Bill Now” checkbox to create an Invoice
- 2) This will generate a new Invoice and Invoice Line Item
- 3) Post the Invoice by changing the Invoice Status to “Posted”
- 4) From the Invoice Line Item Detail, click through to the related CALM Asset
- 5) This will update the Invoice Line Balance on the individual Asset

CPQ Cancellations

- 1) Navigate to a Contract and create a new Amendment by using the Amend Quick Action. This will create a new Quote.
- 2) On the new Quote, make the Quantity 0. Note that the Quote *will* accept negative Quantities. Do not do this.
- 3) Create an Order from the new Quote.
- 4) Activate and Contract the new Order.
- 5) This will create a new Subscription and related CALM Asset
- 6) This will update the Quantity and MRR graphs on the CALM Asset.

Consolidated Asset view

The Connector allows you to see all Assets related to an Account, regardless of where the Assets were originally generated (CPQ or Subscription Management-side)

- 1) Navigate to any Account
- 2) In the Account Related List, scroll down to Assets. All Assets will show here.

Consolidated Invoice

The Connector allows you to send one Invoice for any number of Assets, regardless of where the Assets were originally generated (CPQ or Subscription Management-side)

- 1) Navigate to any Order.
- 2) Add a PO Number
- 3) Add the Account Name to the Billing Account field (in the Billing Information section)
- 4) Set the Invoice Batch to
- 5) For any other Order you would like to include on the Invoice, repeat steps 2-4.
- 6) Create an Invoice Scheduler - make sure you set the Invoice Batch correctly.
- 7) Run the Scheduler.
- 8) The created Invoice will have Invoice Line Items for each Order Product referenced on the included Orders.

Considerations

There are important considerations to understand before implementing the CPQ Connector for Subscription Management.

- You can utilize this connector without Subscription Management. While it was designed to connect Salesforce CPQ, Billing and Subscription Management, the package can be installed regardless of whether Subscription Management is enabled to create CALM Assets.
- CPQ only supports products containing a single Product Selling Model. Products sold through *both* CPQ and Subscription Management should be configured with a single Product Selling Model.
- Subscription Management now supports monthly and annual pricing, along with monthly and annual billing. Products sold through *both* CPQ and Subscription Management can use either an annual or monthly Billing Frequency.
- Subscription Management invoicing only supports Subscription Management transactions. Subscription Management invoicing cannot be used to invoice CPQ transactions.
- CALM Assets can be created for simple subscriptions (fixed-price subscriptions) and one-time products. The following types of Products are not supported in Subscription Management or as CALM Assets:
 - Bundles
 - Derived Pricing / Percent of Total
 - Usage
 - Multi-Dimensional Quoting
- The connector only creates CALM Assets from CPQ for simple subscriptions and one-time products (ex: A one-time product is a product that is purchased outright in a single transaction. The subscription type on the product = One-Time).
- The connector supports CPQ contract-based renewals. CPQ asset-based renewals are not supported.
- Standard Subscription Management processes should be used to Cancel, Renew, or Amend Assets sourced from Subscription Management.
 - CPQ Amendment or Renewal Quotes cannot be created from a CALM Asset sourced from Subscription Management.
- Standard CPQ processes should be used to generate CPQ Amendment or Renewal Quotes for CPQ Assets or Subscriptions.
 - Subscription Management cannot be used to renew or cancel a CALM Asset sourced from CPQ.
- The connector does not support invoicing Subscription Management transactions through Salesforce Billing for LIFO cancellations.
- The connector does not support asset upgrades or swaps for CPQ Amendments.
- The connector does not support CPQ renewals containing a different renewal product.
- Subscription Management pricing uses SM Proration Policy while Salesforce Billing uses

the Billing proration settings. This is applicable when Salesforce Billing is used for Subscription Management sourced transactions. *Learn more about aligning SM and Salesforce Billing Proration Policies [here](#).*

- The connector calculates Monthly Recurring Revenue (MRR) on CALM Assets when the Subscription Term unit is set to Month.

Prerequisites

Prerequisites for installing the CPQ Connector for SM package:

1. The Salesforce org is an Enterprise Edition, Unlimited Edition, or Developer Edition org.
2. Salesforce CPQ+ is installed in the org
3. Subscription Management may be enabled in the org, but is optional.
4. If using Salesforce Billing to bill transactions sourced from Subscription Management, verify that Salesforce Billing package is installed in the org
5. A Salesforce Admin user (**System Administrator** profile or with similar permissions) is available to perform the below operations within the customer org

Install Managed Package

A Salesforce Administrator can install the CPQ Connector for SM package using the steps below:

1. Log into the Salesforce instance where you want to install the package
2. In a new browser tab, paste the link to the version of the CPQ Connector for SM package you want to install
3. Alternatively, you can download the package from AppExchange
4. Choose **Install for all users** radio button
5. Click **Install**
6. The installation of the package takes a few minutes; Salesforce sends a confirmation email when the installation is complete, informing the success (or failure) of the installation
7. Verify that the package is installed successfully by navigating to **Setup | Installed Packages**

Package link here:

<https://login.salesforce.com/packaging/installPackage.apexp?p0=04t8c000001lvSK>

Post-Install Configuration

Permission Set Licenses

- 1) Salesforce CPQ License
- 2) Subscription Management User (if using an org with Subscription Management enabled)

Assign Permission Sets

CPQ Connector for SM provides a permission set called **CPQ-SM Connector** that provides basic read access to the objects needed by the connector. To extend the access, you may clone this permission set and provide more access.

1. To open a permission set page, go to Setup Home
2. Enter Permission Sets in the Quick Find box
3. Select **Permission Sets**
4. Click **CPQ-SM Connector**
5. Click **Manage Assignments**
6. Ensure that this permission set is assigned to the users performing CPQ and SM functions

Object	Object Permission	Field permission
Asset	None	Edit on 'CPQ Subscription' and 'CPQ Asset' fields
Subscription	None	Read on 'CALM Asset'
Queue Item	Read, Edit, View All, Modify All	Edit access to Status , Process After and Owner , Read access to all other fields
Log	Read, View all	Read access on all fields

Note:

Apart from the permission set above, the user also needs access to permission sets associated with CPQ, Subscription Management and optionally, Billing. Please ensure that those are assigned to the users. Your org may have cloned permission sets from the packaged permission sets; reference the standard CPQ, Subscription Management, and Billing permissions to make sure you are covered.

Annual Billing Permissions

- Annual Pricing is available via:
 - **SubscriptionManagementProductAndPricingAdmin** permission set group
 - OR the **Subscription Management: CalculatePrices API** permission set and the **Subscription Management: ProductAndPriceConfiguration API** permission set
- To Bill, Users also need either:
 - The **SubscriptionManagementBillingAdmin** permission set group
 - OR the **SubscriptionManagementBillingOperations** permission set group

Custom Metadata Setting

CPQ Connector for SM provides custom metadata that controls the behavior of the CPQ Connector for SM. To change the behavior of the connector, change the values of the fields mentioned in the table below.

1. To open a custom metadata record, go to Setup Home
2. Enter Custom Metadata in the Quick Find box
3. Select **Custom Metadata Types**
4. Scroll down and click Manage Records next to **CPQ-SM Connector Setting** 5. Locate **Default Settings** and click **Edit** next to it to edit the fields mentioned in the table below

Field	Data Type	Default Value	Description
CALM Assets for CPQ Orders (Simple Sub)	Checkbox	TRUE	Determines whether corresponding CALM assets are automatically created when CPQ orders for simple subscriptions are created. Note : This field setting should be set to TRUE for Amendment, Renewal and Cancellation
CALM Assets for CPQ Orders (1-Time-Prod)	Checkbox	TRUE	Determines whether corresponding CALM assets are automatically created when CPQ orders for one-time products are created.

Use Salesforce Billing for SM Orders	Checkbox	FALSE	Determines whether Subscription Management sourced transactions should be invoiced through Salesforce Billing Note: This field should be set to TRUE to use Salesforce billing for SM orders and FALSE for Subscription Management invoicing.
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Configure Flows

The **Order to Assets and Billing CPQ+SM (DEPRECATED)** flow was once part of the Connector package. However, it is now deprecated. Ensure that this Flow has no active versions present in the org. This is especially important if the package has been previously installed and upgraded in your org.

To deactivate this flow, do the following steps:

1. From the gear icon on the top right side of the page, click **Setup**
2. Enter Flows in the Quick Find box
3. Select **Flows** under **Process Automation**
5. Now find **Order to Assets and Billing CPQ+SM (DEPRECATED)** flow in the list
6. Select the action dropdown to the far left of this Flow's record row, and select **View Details and Versions**
7. In the **Flow Versions** section, verify the **Status** of all Flow versions present in the org is Inactive. If you see an Active version, select the **Deactivate** Action for that version

If using Subscription Management, be sure to clone and activate a version of the **Create Billing Schedule and Asset Flow from Order** Flow.

1. From the gear icon on the top right side of the page, click **Setup**
2. Enter Flows in the Quick Find box
3. Select **Flows** under **Process Automation**
4. Find the **Create Billing Schedule and Asset Flow from Order** flow in the list and select it
5. Make any desired changes. Select **Save As**
6. Enter the **Flow Label** and ensure the **Flow API Name** populates. **Save** the new flow
7. From the new flow's page, select **Activate** to ensure the flow is active

Configure Page Layouts

The following page layout changes are recommended when using the CPQ Connector for SM:

Account

- Add the following fields to the Asset related list:
 - Initial CPQ Subscription
 - CPQ Asset
- **CALM Metrics**

The connector provides metrics and integrated lists of CALM Assets under an Account that lets customers track the asset trends on Accounts. To set these up on the page layout, follow the steps below:

 - From the gear icon on the top right side of the page, click Setup → Object Manager
 - Click Account
 - Navigate to Lightning Record Pages from the vertical menu
 - Click on the layout that you're currently using or create a new one
 - Click Edit
 - Now add the metrics to the Asset UI tab
 - Drag and drop the 'CALM Asset UI' custom component onto the Asset UI tab
 - Click Save
 - Navigate to the Account record detail page and verify that the metrics are available

Asset

- • Add the following fields to the Asset detail page:
 - CPQ Asset
 - Initial CPQ Subscription
 - Quantity Increase Pricing Type
- The following fields need to be added and filled out if you will be renewing Subscription-generated Assets:
 - Renewal Term
 - Renewal Term Unit
 - Renewal Pricing Type
 - Add the Subscriptions related list
 - Note: Assets has an existing CPQ related list labeled Subscriptions, which represents subscriptions related to a subscribed asset
- If creating CALM Assets for one-time products, add the CALM Asset related list to view the CALM Asset related to the one-time Asset created by CPQ

Subscription

- Add the following fields to the Subscription detail page:
 - CALM Asset

Data Configuration

Make sure records are present for the following data:

- Products
- Pricebook Entries
- Product Selling Models
 - If using Annual billing, be sure to create a Product Selling Model with a Pricing Term Unit of Annual, along with any other desired pricing terms
- Default Proration Policy
- Default Billing Treatment
- Default Billing Rule
- Default Finance Book
- Default Invoice Plan
- Default Tax Rule
- Default Revenue Recognition Rule

System Configuration

1. In the browser, navigate to Setup > Installed Package > Configure (Salesforce CPQ)
 - a. In the Pricing and Calculation tab (prior to Winter '23 / 240)
 - i. Click "Authorize new calculation service" link
 - ii. Click to allow access on the popup window
 - iii. Click Allow when the popup comes up
 - b. In the Pricing and Calculation tab (new to Winter '23 / 240)
 - i. Check Use Legacy Calculator
 - c. In the Subscriptions and Renewals tab
 - i. Turn on Evergreen Subscriptions
 - ii. Check Legacy Amend/Renew Service (new to Winter '23 / 240)
 - d. In the Order tab
 - i. Set Default Order Start Date to Quote Start Date
 - e. Save

How-To Guide

Useful Resources

[Subscription Management Overview](#)

[Getting Started with Salesforce CPQ](#)

CPQ and Subscription Management can be accessed via the REST API. In order to access this functionality, you will need to configure Workbench or Postman. Workbench is the recommended tool for this, as you can connect directly to your Salesforce instance.

Setting Up Workbench

1. Navigate to [Workbench](#)
2. Select your Environment (will likely be Production, but if you are using a test.salesforce.com org, then select Sandbox)
3. You can leave the API version as the default
4. Check the box "I agree to the terms of service"
5. Click "Login with Salesforce"
6. Log in with your desired org credentials
7. You should now be connected to Workbench!

How To Generate a CPQ Quote

The CPQ Connector for SM provides an Apex REST API that generates a CPQ Quote. This API can be invoked from a custom self-service buying experience to transform a Subscription Management cart into a CPQ Quote. This may be useful if you want to offer your self-service buyer the option of engaging with a sales rep for more complex deals.

To create a CPQ Quote, gather the following required information:

1. AccountId
2. Pricebook Name if not default
3. Currency if not default
4. List of product information with the following attributes for each one
 1. ProductId
 2. Quantity
 3. Start Date & End Date if not evergreen -or- number of months
 4. PricebookEntryId
5. Format the gathered information as a JSON payload (see sample below)
6. In Workbench (follow Setting Up Workbench steps above for your Salesforce org), navigate to Utilities > REST Explorer
7. Select POST
8. Replace the endpoint in Workbench with the following endpoint

1. API endpoint: /services/apexrest/cpq-quotes/
9. Paste your formatted JSON payload into the Request Body section
10. Click “Execute” and verify that the CPQ quote was created successfully
 1. You should see a quoteld noted underneath the Request Body input

Sample Payload

```
{
  "accountId": "0018c00002DcAjDAAV",
  "pricebookId": "01s8c000006kt2xAAA",
  "products": [
    {
      "productId": "01t8c00000LeKSRAA3",
      "pricebookEntryId": "01u8c00000F3c20AAB",
      "quantity": 1,
      "startDate": "2022-03-11"
    },
    {
      "productId": "01t8c00000LeKSbAAN",
      "pricebookEntryId": "01u8c00000F3c25AAB",
      "quantity": 12,
      "startDate": "2022-03-11",
      "endDate": "2023-03-01"
    }
  ]
}
```

How To Create CALM Assets For Existing CPQ Subscriptions and One-Time Products

The CALM Asset generation process for CPQ-sourced Subscriptions and One-Time Products kicks off when those records are created. However, if you wish to create CALM Asset records for existing CPQ-sourced Subscriptions and One-Time Products, follow the steps below:

For One-Time Products

1. Ensure your org has existing One-Time Products you wish to create CALM Asset records for. The One-Time Products should have associated Asset records that have the following criteria in order to create CALM Assets:
 1. Bundle is false (unchecked)
 2. Parent Product is null
 3. Pricing Method is not equal to ‘Percent of Total’
 4. Charge Type is equal to ‘One Time’
 5. Has Lifecycle Management is false (unchecked)

2. Open the Execute Anonymous window from Dev Console
3. Run the script below:

```
1. Database.executeBatch(new  
    CPQSM.CreateCALMAssetsFromOneTimeProducts());
```

For Simple Subscriptions

1. Ensure your org has existing Subscription records you wish to create CALM Asset records for. The Subscription records should have the following criteria in order to create CALM Assets:

1. Bundle is false (unchecked)
 2. Charge Type is equal to 'Recurring'
 3. Price Dimension Name is null
 4. Pricing Method is not equal to 'Percent of Total'
 5. Parent Product is null
 6. Related Product's Has Consumption Schedules is false (unchecked)
2. Open the Execute Anonymous window from Dev Console
 3. Run the script below:

```
1. Database.executeBatch(new  
    CPQSM.CreateCALMAssetsFromSimpleSubscriptions());
```

Unlocked Demo Package Guide

This unlocked package is a reference for developers. It contains a sample CPQ - SM storefront, to help with creating Orders from the Subscription Management side. This is meant as a reference for store/Subscription creation, and is not a shipped product.

Latest Version: ver 0.2

Version Details: "CPQ-SM Storefront@0.2.0-1": "04tDn000000eT1UIAU"

Installation Link:

<https://login.salesforce.com/packaging/installPackage.apexp?p0=04tDn000000eT1UIAU>

Post Install Steps

- Assign the **CPQ-SM Storefront User** permission set to your user
- IMPORTANT: Configure **CPQSM Storefront Data Config** custom setting - add in Buy Now flow name, Product Selling Model Ids for One Time, Fixed Term and Evergreen
- Add Cancel Asset and Renew Asset actions to Asset page layout - might have to turn on Dynamic Actions in Lightning App Builder - Asset Record Page, then also add actions to Lightning Record Page

- Add SF site to remote site settings
 - Example
 - Remote Site Name: SFOrg
 - Remote Site URL: (Your Salesforce URL)
https://orgName.my.salesforce.com
 - Active: True
-

Using the CPQ-SM Storefront

Adding Subscription Management Products

- Search for and navigate to the CPQSM Storefront tab using the App Launcher (tab available via the CPQ-SM Storefront User permission set)
- Select Create Order to create One Time, Fixed Term, or Evergreen orders via Subscription Management
 - Fill out the appropriate details and select Create Order
- Select Buy Now to initiate the Buy Now flow of events for Subscription Management, available for One Time or Evergreen products
 - Fill out the appropriate details and select Buy Now

Asset Actions

- Before Amending an Asset, make sure to set the following fields on the Asset:
 - Quantity Increase Pricing Type - how to price the line item's increase in quantity. For example, to amend at the current list price, use List Price
 - Field Label: Pricing Type for Quantity Increase
- Before Renewing an Asset, make sure to set the following fields:
 - Renewal Term - the number of renewal term units in the renewal term. For example: the number of months
 - Renewal Term Unit - the unit of time used to measure the renewal. For example: Months
 - For Annual products, set this field to Annual
 - Renewal Pricing Type - how to price the renewal. To renew at the same price, use the Last Negotiated Price. To renew at the current list price, use List Price
 - Field Label: Pricing Type for Renewal
- Find an Asset you wish to cancel or renew. Click the desired action

Troubleshooting

Several logging systems are included with the managed package:

- If a queue fails or times out, you may search for Queue Items in the app selector (waffle) to help
- In the Waffle, search for Logs to see any other error logs.
- Buy Now - Products must have a billing policy for the flow to work

- Billing Policy must have the Billing Treatment Selection set as Default

Version 1.6 Updates

- Removed hard dependencies to Subscription Management objects and features so the package can be installed regardless of whether Subscription Management is enabled
- Deprecated the Order to Assets and Billing CPQ+SM template flow from the package. This flow is a copy of a core template flow named Create Billing Schedule and Asset Flow from Order
- Added a reference to created CALM Assets to the originating Order Product so that any Invoice Line Item inherits this reference and CALM asset Invoice Balance is reflected in the record
- Developed an unlocked package with actions to create SM Orders and provides the ability to amend, renew and cancel CALM Assets
- CumulusCI configurations to automate the creation of demo environments
> cci flow run ci_release --org release
- Creates Scratch Org with enabled licenses and settings
 - RevSubscriptionManagement
 - OrderSaveLogicEnabled
 - MultiCurrency
 - CPQ
 - Billing
- Installs CPQ
- Installs Billing
- Installs the latest CPQ SM Connector release version
- Assigns all permission set licenses and permission sets
- Deploys package customizations
 - Page Layouts and assignments
 - Record Pages
 - Additional required Permission Sets
 - List Views
- Loads configuration data
 - 3 fictitious Products
 - Meet Now (Standard) - Fixed Term subscription
 - 1 TB of recording storage - one-time payment
 - Meet Now (Premium evergreen) - Evergreen subscription
 - Pricebook Entries
 - Product Selling Models
 - Default Proration Policy
 - Default Billing Treatment
 - Default Billing Rule
 - Default Finance Book
 - Default Invoice Plan

- Default Tax Rule
- Default Revenue Recognition Rule
- A fictitious Business Account: Beecham Holdings Inc.
- A fictitious Business Contact: Bill Beecham

Version 1.8 Updates

- Added support for Subscription Management Annual Billing
 - Annual pricing term Subscription Management products connect to Salesforce Billing