



Salesforce Field Service and Billing Connector

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Salesforce Field Service & Billing Connector

Introduction

The Field Service and Billing Connector is a managed package from Salesforce Labs and allows customers of both Salesforce Field Service (SFS) and Billing to bill for work order labor, parts and expenses. This connector package will also be available as open source via GitHub. Please look into the [installation instructions](#) listed below

The goal of the connector is to allow the creation of Sales Orders and Invoices from the Work Order and its associated objects: Work Order Line Items, Products Consumed and Expenses. Salesforce Billing capabilities enhance invoicing and payment visibility: Calculate Taxes, Generate Invoices, Collect and Track Payments, Recognize Revenue.

The connector supports the following use cases:

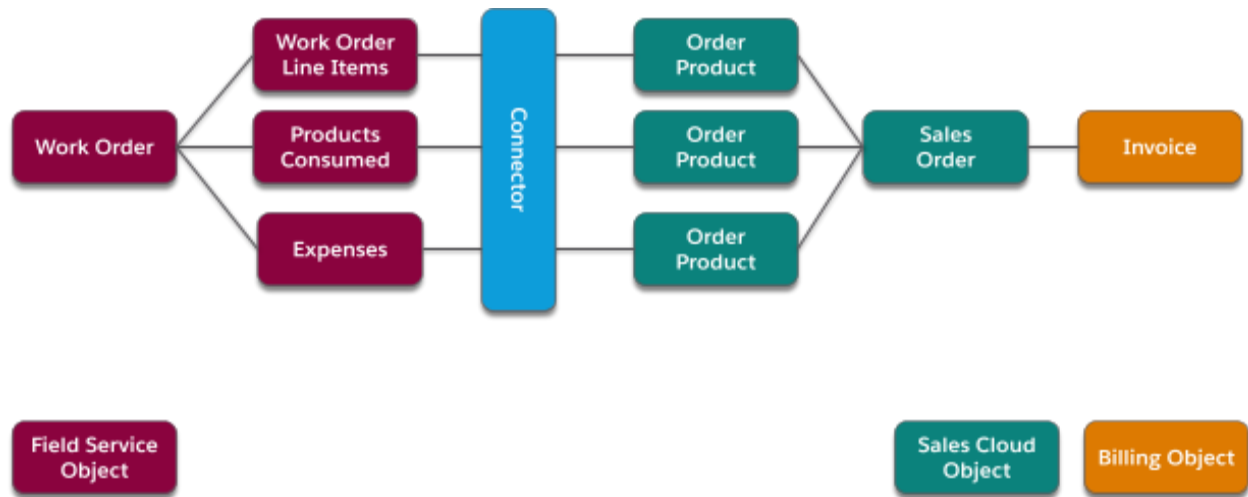
- On-demand creation of a Sales Order from a Work Order
- On-demand creation of a Sales Order and an Invoice from a Work Order
- Automated creation of a Sales Order from a Work Order
- Automated creation of a Sales Order and an Invoice from a Work Order
- Creation of multiple Sales Orders and/or Invoices from a single Work Order (staggered invoicing)

General Connector Information

- Connectors are a developer enablement framework designed to accelerate cross-cloud integration vs. a productized solution.
- Connectors support a core set of use cases and can be extended to support additional customer-driven use cases.
- Connectors will require customization and configuration in Salesforce Field Service and Salesforce Billing.
- Plan your connector implementation with a data strategy and governance policy.

Available in: Enterprise, Performance, Unlimited, and Developer Editions

Workflow



Considerations - Salesforce Field Service & Billing Connector

There are important considerations to understand before implementing the Connector capabilities. Below are the list of considerations.

- It is assumed that the Sales Order and Invoice creation are triggered from the browser application. The connector does not support the creation of Sales Order and Invoices from the Salesforce Field Service Mobile App natively.
- The connector only creates Sales Order Line Items and Invoice Lines from Work Order Line Items, Expenses and Products Consumed.
- The Work Order Lines Items, the Products Consumed and the Expenses must be rated before being converted into Sales Order Line Items and Invoice Lines. The connector itself or Salesforce Billing are not rating these elements.
- Even though the connector supports modifying a Sales Order after creation from a Work Order, it does not provide a User Interface for doing so.
- Modifications to the code in the package may be required to suit all business requirements
- The Lightning Connector was last tested against the Spring '21 Salesforce release.

Prerequisites

1. Billing Spring '21 (230) or later is installed
2. Salesforce Field Service Spring '21 (230) or later is installed
3. Product Records (for Work Order Line Items, Products Consumed and Expenses) are created and set-up for Billing:
 - a. Price Book Entries
 - b. Billing Rules
 - c. Revenue Recognition Rules
 - d. Tax Rules

Install Managed Package

Assumptions:

1. Billing Spring '21 (230) or later is installed
2. Salesforce Field Service Spring '21 (230) or later is installed

Procedure: A Salesforce Administrator can install the Field Service and Billing Connector

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 Connector package you want to install
3. Alternatively, you can download the package from AppExchange
4. Choose **Install for Admins Only** 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**

Set-up Permissions

3 Permission sets are included in the package:

- **SFSBC System Administrator:** allows users to adjust the configuration (settings)
 - **SFSBC Field Technician:** allows users to inform fields on the Work Order Line Items ("Billable"), Product Consumed ("Billable"), Expense ("Product", "Bilable")
 - **SFSBC Billing Assistant:** Provides the Billing assistant the same capabilities as the field technician (see above).
1. Navigate to **Setup | Administration | Users | Users**
 2. Click on the user
 3. Add the required **SFSBC** Permission set to the user
 4. Click **Save**

In order to test the package, at least one user needs to be granted the SFSBC Billing Assistant permission set.

In addition to these permission sets:

- Set "Flow User" on User Record or "Run Flows" within a permission set
- Create new permission set and apply to user:
 - Grant Read access to Invoices
 - Grant Read access to ProductConsumed.TotalPrice
 - Grant permission to Activate Orders
 - Edit Activated Order (to allow system to uncheck Bill Now)

Page Layouts

Work Order

Ensure that the following fields are visible in the Work Order Page Layout:

- Price Book
- Start Date
- End Date

Ensure that the following related lists are visible:

- Orders
- Invoices

The screenshot displays the Salesforce interface for a Work Order record (00002191). The page layout includes a top navigation bar with a search bar and various utility icons. Below the navigation bar, the record details are shown in a multi-column format. On the left, there is a sidebar with related lists: Asset Details, Work Order Line Items (1), Products Consumed (0), Expenses (0), Orders (0), and Invoices (0). The main content area is divided into two columns. The left column contains fields for Work Order Number, Work Type, Status, Parent Work Order, Account, Case, Opportunity, Order, Entitlement Is Active, Quote, Inventory Check, Currency ISO Code, Price Book, Start Date, End Date, and Description. The right column contains fields for Owner, Scheduling Priority, Priority, Contact, Asset, Entitlement, Duration Type, Duration, and Total Price (Consumed Products). On the far right, there are two panels: Milestones and Knowledge Articles. The Milestones panel shows no milestones. The Knowledge Articles panel contains a search bar and a list of articles, including "401k rollover", "Do you ship internationally?", "How do I update my profile?", "Cracked wind turbine blade", and "Loud noise coming from wind turbine".

Work Order Line Item

Ensure that the following fields are visible in the Work Order Line Item Page Layout:

- Billable
- Quantity
- Start Date
- End Date
- Total Price (for reference only)
- Product

Billable
☒

Start Date

Date	Time
6/1/2021 	12:00 PM 

End Date

Date	Time
6/1/2021 	12:00 PM 

Product

 Labor 

Quantity

Total Price
USD 1,500.00

Product Consumed

Ensure that the following fields are visible in the Product Consumed Page Layout:

- Billable
- Price Book Entry
- Quantity
- Total Price

 Product Consumed
PC-1389

Work Order	Product	Quantity Consumed	Unit Price
00002191		12.00	USD 1,500.00

Related

Details

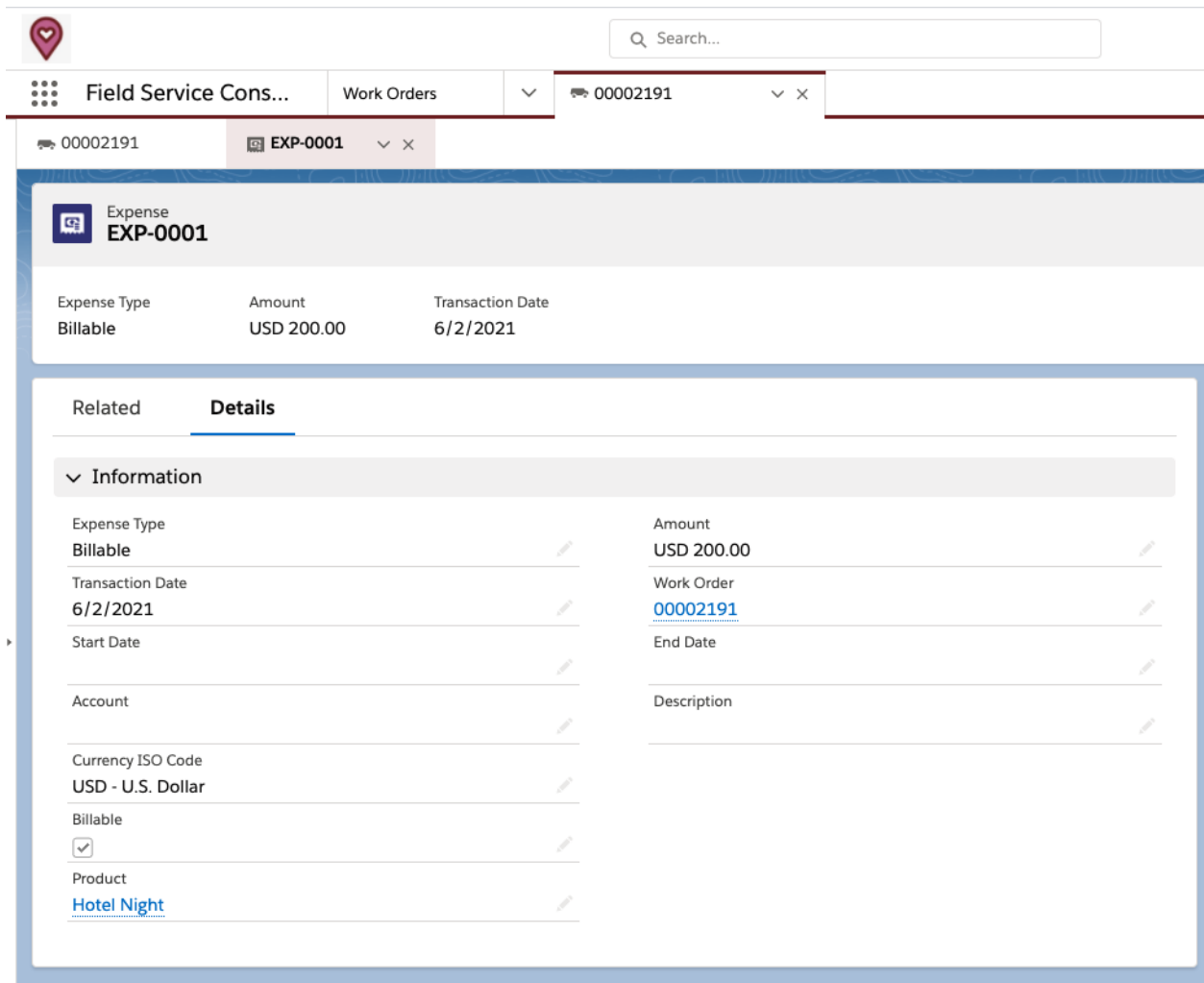
Information

Work Order	Work Order Line Item
00002191	
Product Item	Price Book Entry
	Battery, Low Capacity
Quantity Consumed	Unit Price
12.00	USD 1,500.00
Total Price	
USD 18,000.00	
Currency ISO Code	
USD - U.S. Dollar	

Expense

Ensure that the following fields are visible in the Expense Page Layout:

- Billable
- Product



Expense
EXP-0001

Expense Type	Amount	Transaction Date
Billable	USD 200.00	6/2/2021

Related Details

Information

Expense Type	Amount
Billable	USD 200.00
Transaction Date	Work Order
6/2/2021	00002191
Start Date	End Date
Account	Description
Currency ISO Code	
USD - U.S. Dollar	
Billable	
☒	
Product	
Hotel Night	

Order

Make sure the Work Order field is visible in the Page Layout.

Order Product

Make sure the Work Order Line Item, Product Consumed and Expense fields are visible in the page layout.

Optionally, and for more clarity in the UI, you can segregate the Order Products based on their origin (Work Order Line Items, Product Consumed or Expense).

Create a formula field (Order Product Type):

```
IF(sfsbc__WorkOrderLineItem__c != NULL, "WOLI", IF(sfsbc__ProductConsumed__c != NULL, "PC", IF(sfsbc__Expense__c != NULL, "EXP", "")))
```

You can then use this field, combined with a Custom Lightning Component to group the Order Products based on their origins:



Order
00000480

[+ Follow](#)
[Bill Now](#)
[Change Owner](#)
[Change](#)

Account Name Ohana Inc.	Contract Number	Order Start Date 1/1/2021	Status Activated	Order Amount \$2,200.00
--	-----------------	------------------------------	---------------------	----------------------------

Related

Details

Activity

Labor (1)

New

Product ID	Quantity	Billed Amount (wit...	Billed Tax	Total Billings
Onsite Labor	10	\$1,500.00	\$0.00	\$1,500.00

View All

Products Consumed (1)

New

Product ID	Quantity	Billed Amount (wit...	Billed Tax	Total Billings
Fuses (Set of 4)	5	\$500.00	\$0.00	\$500.00

View All

Expenses (1)

New

Product ID	Billed Amount (without ta...	Billed Tax	Total Billings
Hotel Night	\$200.00	\$0.00	\$200.00

Invoice

Make sure the Work Order Field is visible in the page layout.

Invoice Lines

Optionally, and for more clarity in the UI and in the Invoice Document, you can segregate the Invoice Lines based on their origin (Work Order Line Items, Product Consumed or Expense).

Create a formula field (Invoice Line Type):

```
IF( blng__OrderProduct__r.sfsbc__WorkOrderLineItem__c !=NULL,"WOLI",IF( blng__OrderProduct__r.sfsbc__ProductConsumed__c !=NULL,"PC",IF( blng__OrderProduct__r.sfsbc__Expense__c !=NULL,"EXP","")))
```

You can then use this field, combined with a Custom Lightning Component to group the Invoice Lines based on their origins:

Labor (1)

Name ▾	Qua... ▾	Subt... ▾	Tax ▾	Tota... ▾	
Onsite L...	10	\$1,500.00		\$1,500.00	▼

[View All](#)

Products Consumed (1)

Name ▾	Qua... ▾	Subt... ▾	Tax ▾	Tota... ▾	
Fuses (S...	5	\$500.00		\$500.00	▼

[View All](#)

Expenses (1)

Name ▾	Subtotal ▾	Tax ▾	Total A... ▾	
Hotel Night	\$200.00		\$200.00	▼

[View All](#)

Work Order to Sales Order Flow

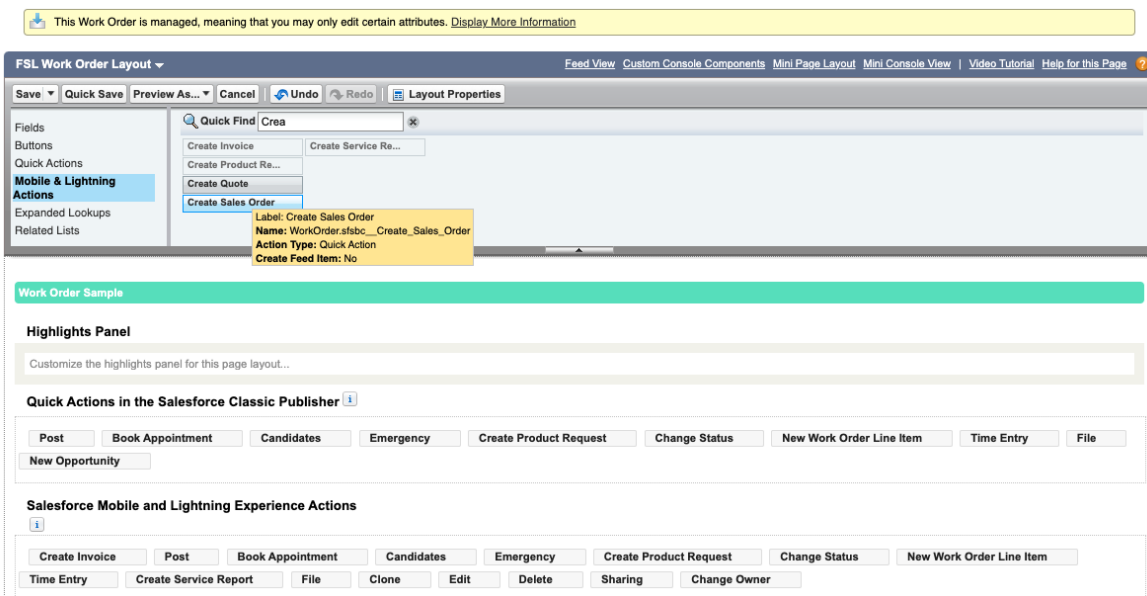
In order to invoice a Work Order, a Sales Order will need to be created. The administrator then has 2 options:

- Create a Sales Order (so that a user can then convert the sales order into an invoice later or a Salesforce Billing Invoice Scheduler can do that automatically and consolidate multiple orders into a single invoice per customer)
- Create a Sales Order and immediately convert it into an Invoice

This section describes the Sales Order Creation process, which can be manual (button) or automated, for example when the status of the work order is updated.

Option #1: Manual

In order to manually create a Sales Order from a Work Order, the administrator will need to add the “Create Sales Order” button in the Work Order Page Layout:



Option #2: Automation

Instead of having to rely on a button press, you can also automate the creation of a Sales Order from the Work Order on an event such as a Work Order Status change for example.

In order to achieve this, you can launch the Flow provided in the package (Field Service Billing Convert). It uses 2 parameters:

- workOrderId
- invoiceSalesOrder (false to only generate the sales order)

Process Builder - Generate Sales Orderr

Back To Setup

Help

Expand All

Collapse All

View All Processes

Clone

Edit Properties

Activate

START

Work Order

Status Complete

TRUE

IMMEDIATE ACTIONS

+ Add Action

STOP

FALSE

+ Add Criteria

TRUE

IMMEDIATE ACTIONS

+ Add Action

STOP

FALSE

STOP

Select and Define Action

Action Type*

Flows

Action Name*

Convert to Sales Order

Flow*

Field Service Billing Convert

Select an existing flow. If none exist, [create one.](#)

Set Flow Variables

Flow Variable*	Type*	Value*
workOrderId	Field Reference	[WorkOrder].Id
invoiceSalesOrder	Boolean	False

+ Add Row

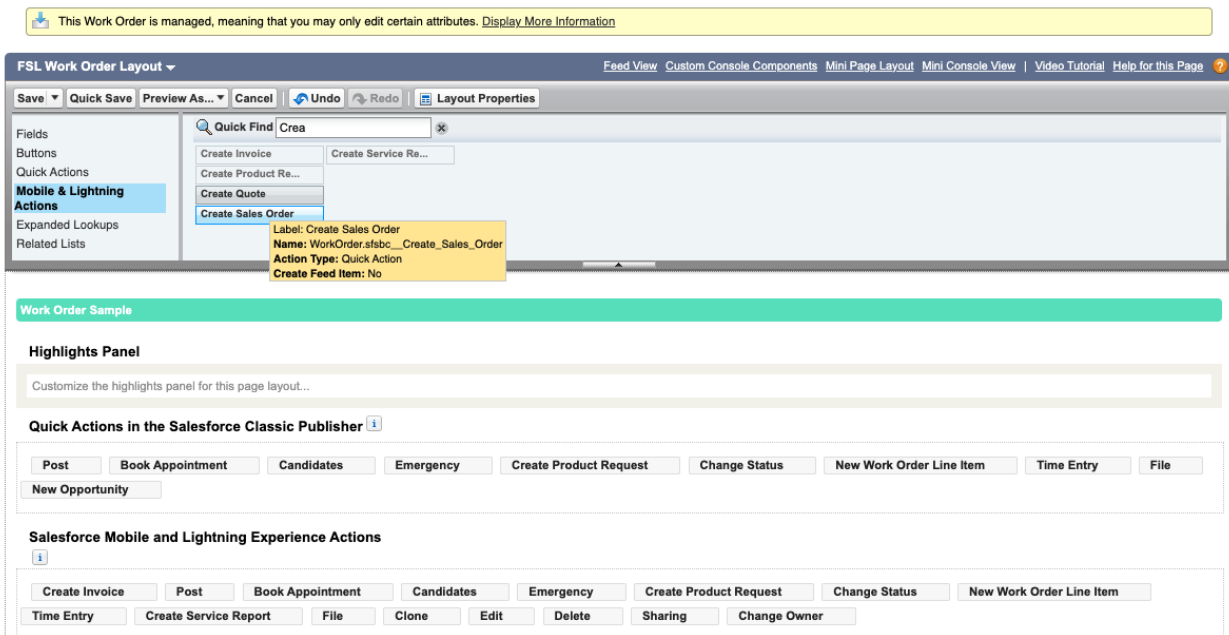
Save

Cancel

Work Order to Invoice

Option #1: Manual

In order to manually create an Invoice from a Work Order, the administrator will need to add the “Create Invoice” button in the Work Order Page Layout:



Option #2: Automation

Instead of having to rely on a button press, you can also automate the creation of an Invoice from the Work Order on an event such as a Work Order Status change for example.

In order to achieve this, you can launch the Flow provided in the package (Field Service Billing Convert). It uses 2 parameters:

- workOrderId
- invoiceSalesOrder (true to generate the sales order and the invoice)

Process Builder - Generate Sales Order

← Back To Setup ? Help

Expand All Collapse All

View All Processes Clone Edit Properties Activate

START

Work Order

Status Complete

TRUE

IMMEDIATE ACTIONS

Convert to Sales Or...

+ Add Action

STOP

FALSE

+ Add Criteria

TRUE

IMMEDIATE ACTIONS

+ Add Action

STOP

FALSE

STOP

Launch a Flow ?

Action Name *

Convert to Sales Order

Flow *

Field Service Billing Convert

Set Flow Variables

Flow Variable *	Type *	Value *
workOrderId	Field Reference	[WorkOrder].Id
invoiceSalesOrder	Boolean	True

+ Add Row

Save Cancel Delete



The setup is complete!

Mapping

Work Order

Work Order Field	Order Field
AccountId *	AccountId
Street	BillingAddress
City	BillingAddress
State	BillingAddress
PostalCode	BillingAddress
Country	BillingAddress
ContactId	BillToContactId
Description	Description
StartDate	EffectiveDate
EndDate	EndDate
Pricebook2Id *	Pricebook2Id
Id *	sfsbc__WorkOrder__c
	Status = "Draft"
WorkOrderNumber *	Name ("Work Order "+WorkOrderNumber)

* = Mandatory

Work Order Line Item

Work Order Line Item Field	Order Product Field
Id *	sfsbc__WorkOrderLineItem__c
Quantity *	Quantity
Description	LineDescription
UnitPrice	UnitPrice
StartDate	ServiceDate

EndDate	EndDate
	SBQQ__ChargeType__c="One Time"
TotalPrice *	blng__Billable_Unit_Price__c
PricebookEntryId *	PricebookEntryId
PriceBookEntry.ProductId.blng__Billing_Rule__c *	blng__Billing_Rule__c
PriceBookEntry.ProductId.blng__Revenue_Recognition_Rule__c *	blng__Revenue_Recognition_Rule__c
PriceBookEntry.ProductId.blng__Tax_Rule__c *	blng__Tax_Rule__c

* = Mandatory

Product Consumed

Product Consumed Field	Order Product Field
Id *	sfsbc__ProductConsumed__c
QuantityConsumed *	Quantity
Description *	Line Description
TotalPrice *	blng__Billable_Unit_Price__c
PricebookEntry *	PricebookEntryId
PriceBookEntry.ProductId.blng__Billing_Rule__c *	blng__Billing_Rule__c
PriceBookEntry.ProductId.blng__Revenue_Recognition_Rule__c *	blng__Revenue_Recognition_Rule__c
PriceBookEntry.ProductId.blng__Tax_Rule__c *	blng__Tax_Rule__c

* = Mandatory

Expense

Expense Field	Expense Field
Id *	sfsbc__Expense__c
Amount *	blng__Billable_Unit_Price__c
sfsbc__Product__c *	PricebookEntryId (get from product and Work Order Price Book)

PriceBookEntry.ProductId.blng__Billing_Rule__c *	blng__Billing_Rule__c
PriceBookEntry.ProductId.blng__Revenue_Recognition_Rule__c *	blng__Revenue_Recognition_Rule__c
PriceBookEntry.ProductId.blng__Tax_Rule__c *	blng__Tax_Rule__c

* = Mandatory

Staggered Invoicing

When a Sales Order gets created against a Work Order, it will create Order Products for all the Work Order Line Items, Products Consumed and Expense records that are not yet fully represented in existing Order Products.

Work Order Example:

Object	Quantity	Product
Work Order Line Item	20	Onsite Labor
Product Consumed	5	Low Voltage Battery
Product Consumed	7	High Voltage Battery
Expense	N/A	Hotel Night
Expense	N/A	Mileage

Suppose a Sales Order has already been created against this Work Order:

Quantity	Product
12	Onsite Labor
5	Low Voltage Battery
N/A	Hotel Night

The next sales order that will get created by the connector will contain:

Quantity	Product
8 (=20-12)	Onsite Labor
7	High Voltage Battery
1	Mileage

Configuration

Settings

Go to Setup > Custom Settings > SFSBC Configuration > Manage

The following settings can be adjusted:

- Conversion Flow API Name: can be changed to a custom flow (see “Flow Customization below”)
- Conversion Flow Namespace:
- Disable Multi-Order Billing: check if only one sales order should get created against a work order (to prevent staggered invoicing described in the previous section)

Flow Customization

If you wish to adjust the behavior of the connector, you can create a custom flow, based on the template provided in the package (Field Service Billing Convert Template).

In order to do so, follow the steps:

1. Open the Flow Template: “Field Service Billing Convert Template”
2. Save As a new Flow:

Save as

* Flow Label

My Template

* Flow API Name

My_Template

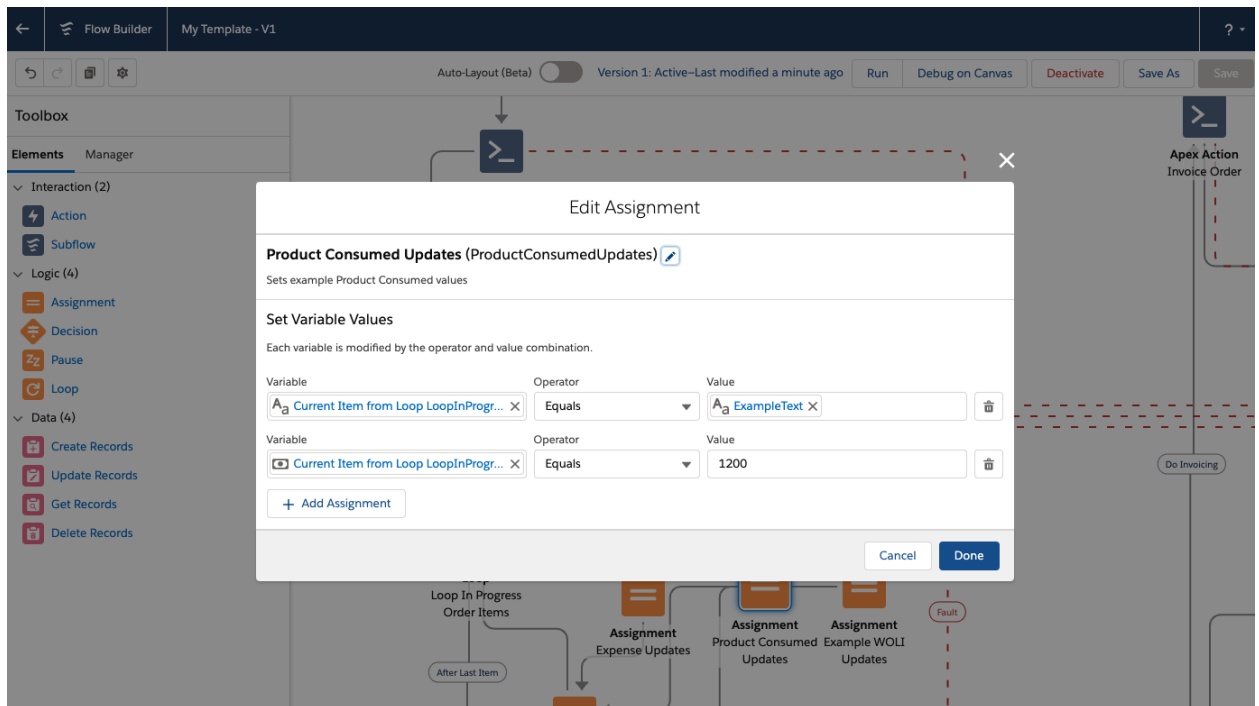
Description

Show Advanced

Cancel

Save

3. Make the adjustments. For example, one can adjust the Product Consumed Assignment step in order to adjust the mapping between the product consumed and the order product:



4. Save and Activate
5. Update the Custom Settings for “SFSBC Configuration”:

The screenshot shows the 'Edit SFSBC Configuration' dialog box. It has a title bar with 'Save' and 'Cancel' buttons. Below the title bar is a section titled 'SFSBC Configuration Information'. This section contains several fields: 'Location' with the value 'Salesforce Demo', 'Conversion Flow API Name' with the value 'My_Template', 'Conversion Flow Namespace' (empty), and 'Disable Multi-Order Billing' with an unchecked checkbox.