Exercise 9-4: Configure Source-Target Attribute Pricing

Scenario

It's going well so far, right? Time for a challenge! The Infiwave Pricing Manager wants pricing set up so that if the Back to School Student Offer is added to the cart with Full Service Install set as the Installation Type, the Back to School Backpack is $0. So, the pricing of one product (target) depends on the existence of another (source) in the cart. We think you're pretty confident with creating new decision matrices and expression sets now, so we're just going to supply you with the information you need to add to make this work.

Goals

- Add data to a source-target attribute-based pricing lookup table
- Create a new expression set to price the line item in the cart
- Add a new step to the default pricing plan

Tasks

1. Create the SourceTargetAttributePricingMatrix lookup table
2. Create the SourceTargetAttributePricingProcedure expression set
3. Create a new pricing plan step for source-target attribute-based pricing
4. Test your changes in the Cart

© Copyright 2023 Salesforce.com, inc. All rights reserved.

Task 1: Create the SourceTargetAttributePricingMatrix lookup table

By now, you know the drill! First you'll configure a lookup table that the expression set will use in calculations.

Instructions

1. Set up the Source-Target Decision Matrix by creating a new version of the **SourceTargetAttributePricingMatrix**, which was installed from the DataPack and adding the details shown below. Remember to check once the data is added that the matrix is enabled and that it has no end date.

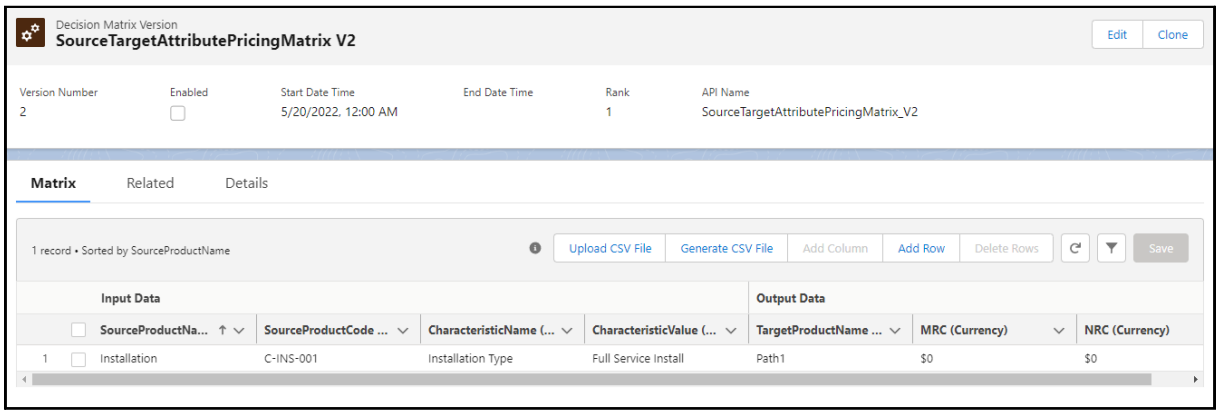
Field	Value
Version Data Selection	**Include column headers**
Name	`SourceTargetAttributePricingMatrix V2`
Start Date Time	**[Yesterday's date]**
End Date Time	**[leave blank]**
Rank	`1`
Version Number	`2`
Group Key Value and Sub Group Key Value	**[leave blank]**

© Copyright 2023 Salesforce.com, inc. All rights reserved.

2. Add this row to the matrix:

SourceProduct Name (Text)	SourceProductCode (Text)	Characteristic Name (Text)	Characteristic Value (Text)	Target Product Name (Text)	MRC (Currency)	NRC (Currency)
Installation	C-INS-001	Installation Type	Full Service Install	Path1	0	0

You can enter the Target Product Name simply using the product name, which will then price all occurrences of that target product throughout the order. However, if you want to only price a specific occurrence of a product within a bundle, you can use a path parameter as shown in this example. The path parameter is described in the next task.



3. Select **Save**.
4. In the RangeAttributePricingMatrix V2 header, click **Edit**. Check the **Enabled** checkbox and ensure the **End Date Time** fields are blank before selecting **Save**.

Due to the way that a lookup table requires input data to be unique across all rows in the matrix, it's not currently possible to use source-target attribute-based pricing to change more than one child product in a bundle.

© Copyright 2023 Salesforce.com, inc. All rights reserved.

Task 2: Create the SourceTargetAttributePricingProcedure expression set

Next up, create an expression set to perform calculations using the matrix you just created.

Instructions

1. Create a new expression set called `SourceTargetAttributePricingProcedure`, with a rank of `1`. Configure this expression set to use a Lookup Table element to connect the **SourceTargetAttributePricingMatrix**.

Is your Lookup Table element unable to find the SourceTargetAttributePricingMatrix? Go back to the matrix and check it has no end date, and that it is enabled.

2. Add the Recurring Standard Monthly Price (REC_MNTH_STD_PRC) and One-Time Standard Price (OT_STD_PRC) currency variables to the lookup table using the Resource Manager as you did in the last task.
3. Create a **Calculation** element to map the SourceTargetAttributePricingMatrix__MRC formula to the REC_MNTH_STD_PRC output variable.
4. Create a **Calculation** element to map the SourceTargetAttributePricingMatrix__NRC formula to the OT_STD_PRC output variable.
5. For all the elements you've created, make sure that the **Include in Output** checkbox is selected in the **Element Details** tab.
6. Click **Save** and **Activate**.
7. Simulate the expression set and troubleshoot any errors that occur. (You won't be able to check if there's any pricing errors, as this will always return $0 - but if there's a setup issue it will be flagged.)

© Copyright 2023 Salesforce.com, inc. All rights reserved.

Task 3: Create a new pricing plan step for source-target attribute-based pricing

Finally, add a pricing plan step that calls the source-target attribute pricing lookup table and expression set you just created.

Instructions

1. Create a new pricing plan step for Source Target Attribute Pricing using the information below.
    a. Click **New Item**.
    b. Enter the following information in the General Properties pane:

Field	Entry
Name	`Calculate Source Target Attribute Pricing`
Implementation Name	`CustomPricingPlanStepImpl`
Method Name	`GetMatrixPrice`
Sequence	**7**
Active	✔

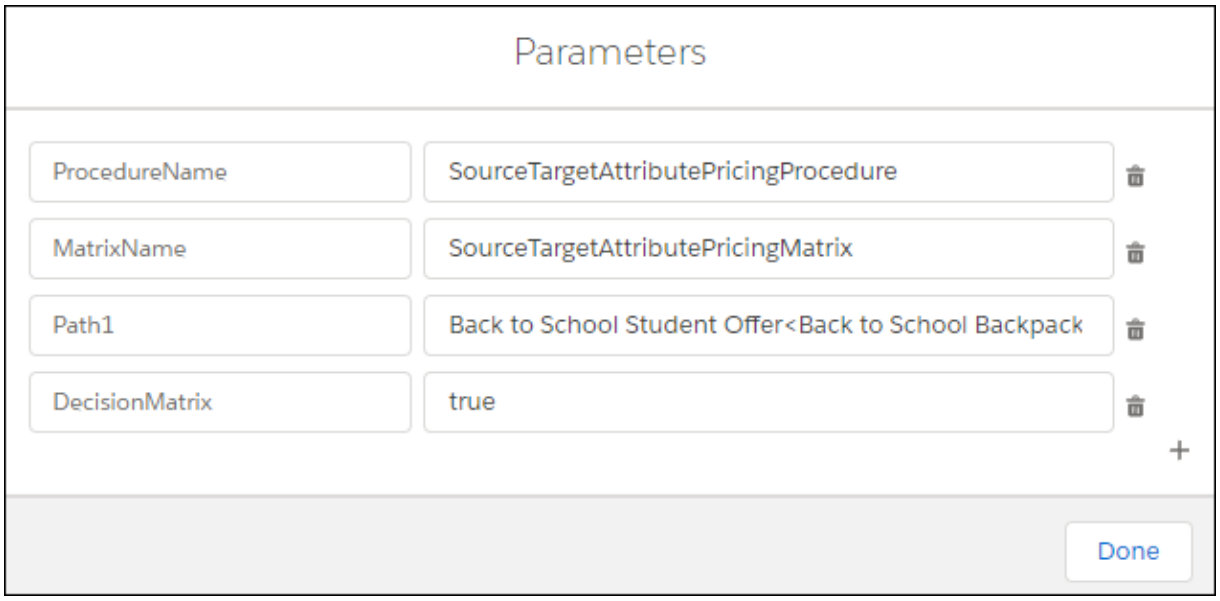
    c. Click the edit icon to edit the parameters. Click the plus **+** symbol to add the following parameters:

First Box	Second Box
`ProcedureName`	`SourceTargetAttributePricingProcedure`
`MatrixName`	`SourceTargetAttributePricingMatrix`
`Path1`	`Back to School Student Offer<Back to School Backpack`
`DecisionMatrix`	`true`

© Copyright 2023 Salesforce.com, inc. All rights reserved.

Remember in your decision matrix for Task 4, the source product was Installation, and the target product was Path1? In this pricing plan step, you're defining Path1 as the Back to School Backpack, but only when it's part of the Back to School Student Offer.

When you identify a path, you are pricing a target product differently. It prices the target product based on the bundle it is in. The target path must be formatted as: [root product name]<[parent1 product name][parent2 product name][...]<[product name].



d. Click **Done**.

2. Switch to the General Properties facet and click **Save**.

© Copyright 2023 Salesforce.com, inc. All rights reserved.

Task 4: Test your changes in the Cart

Pricing plan steps and/or parameters are cached in the platform cache after they are executed for the first time in the cart. Anytime you make changes to a pricing plan step/parameter you are required to run the maintenance jobs **Clear Managed Platform Cache** and **Refresh Platform Cache**. When the cart is invoked, the platform cache will be populated with the new pricing plan step and/or parameter data.

Therefore, you're going to run the Clear Managed Platform Cache and Refresh Platform Cache jobs before testing your attribute-based pricing in the cart.

Instructions

1. Clear and refresh the platform cache.
    a. Navigate to the **Vlocity CMT Administration** tab. You may need to click the **More** dropdown menu to expand for additional tabs.
    b. Under **Admin Console**, click **Maintenance Jobs.**
    c. For the job **CLEAR MANAGED PLATFORM CACHE,** click **Start** and **OK**.
    d. For the job **REFRESH PLATFORM CACHE (FULL),** click **Start** and **OK**.

2. Create a new order configured with products to test the attribute-based pricing.
    a. Use the **App Launcher** to locate and open **Industries CPQ**.
    b. From the Industries CPQ navigation menu, select **Orders**.
    c. From the Orders List header, click **New**.
    d. On the **New Order** dialog, enter the following:

Field	Value
Order Name	`Noah White - Attribute Based Pricing Order`
Account Name	**White, Noah**
Order Start Date	**[Today's date]**
Price List	**B2C Price List**

    e. Click **Save**.

© Copyright 2023 Salesforce.com, inc. All rights reserved.

2. Add products to the order to test the impacts of attribute changes on pricing.

    a. In the Catalog Preview, search and locate the **Back to School Student Offer**.
    b. Click **Add to Cart** to add the Offer to the cart.

    c. Next to the Back to School Student Offer line item, select the icon, and click **Configure**.

    d. You can now configure the missing attributes. Expand the **Back to School Student Offer**, and within the offer, the **Home Internet Solution**.

3. Test the standard attribute pricing you set up with the **AttributePricingMatrix** and its associated expression set and price list step. This amended the pricing of the DSL Service based on the upload and download speeds selected.

    a. In the **Home Internet Solution** configuration, locate the **DSL Service.** Notice the price is currently $0. This is because it needs the download and upload speeds to calculate the price.
    b. For **DSL Service**, select **40 Mbps** for the **Download Speed** and **896 Kbps** for the **Upload Speed**. Notice the recurring charge is now $45.00.
    c. For the **DSL Service**, select **20 Mbps** for the **Download Speed** and **2 Mbps** for the **Upload Speed**. Notice the recurring charge is now $50.00.
    d. Try some other combinations of download and upload speed for the DSL Service. Why do some combinations of Upload and Download speeds give a $0 price?

4. Test the range attribute pricing you set up with the **RangeAttributePricingMatrix** and its associated expression set and price list step. This amended the pricing of the Home Hub Modem, based on the quantity selected in the cart.

    a. Scroll down the **Home Internet Solution** configuration to locate the Home Hub Modem. Notice the price is currently $0.00. Why is that?
    b. For the Home Hub Modem **Grade**, select **Better**. The configuration error message disappears, but the price is still $0. This is because you didn't include any pricing options for the Better grade in your decision matrix.

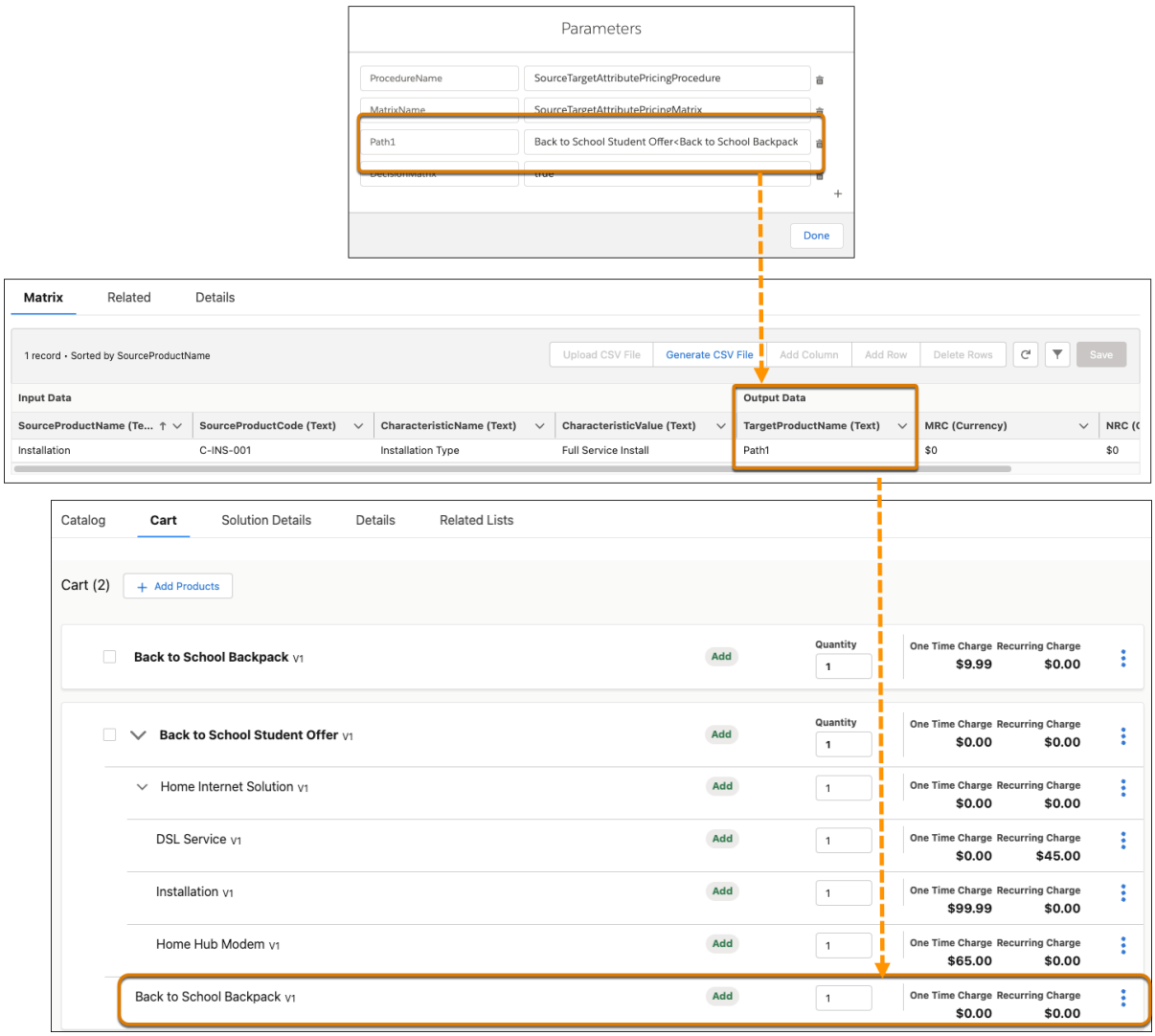
© Copyright 2023 Salesforce.com, inc. All rights reserved.

c. Change the **Grade** to **Best**. This was an option in your decision matrix, and the price is recalculated to $65.00.
d. Now try changing the quantity to 7. You receive a cardinality error because you can't have more than 2 modems in this bundle. Set the quantity to 1.
e. Click **X** to close the configuration dialog. We'll try the higher quantities with a modem that's not included as part of a bundle.
f. Locate and add a **Home Hub Modem** to the cart.
g. From the **Home Hub Modem** action menu, select **Configure**.
h. Change the **Grade** to **Best**. What is the price of the modem? It should be $65, which is the price for a quantity of 1 - 4.
i. Change the **Quantity** to **7**. What is the price now? $350, which is $50 per unit. What happens when you change the quantity to 12? Why?
j. Change the Quantity back to 7 and close the configuration dialog to return to the cart. Notice the price per unit for the modem is $50.

5. Test the source-target attribute pricing you created using the **SourceTargetAttributePricingMatrix** and its associated expression set and pricing step.

    a. Notice the price of the **Back to School Backpack** when added to the cart not as part of a bundle.
    b. Now in the **Back to School Student Offer** configuration, expand the **Home Internet Solution**. For **Installation** select Installation Type as **Full Service Install.**
    c. Notice that the **Back to School Backpack** price returned is $0.00. This comes from the Source Target Attribute Pricing Procedure based on the data entered in the matrix (Path1).
    d. The custom pricing plan step parameter (Path1) and the target product (Path1) in the matrix states that if the Back to School Student Offer is added to the cart with Full Service Install set as the Installation Type the Back to School Backpack is $0.

© Copyright 2023 Salesforce.com, inc. All rights reserved.



© Copyright 2023 Salesforce.com, inc. All rights reserved.

Troubleshooting Guide

If you encountered issues while performing the simulation of an expression set, or aren't getting the intended results in the cart after completing the above tasks, try the following.

Lookup Table (Decision Matrix)

- Check that all matrix row information and expression set variables are entered correctly.
- Check that the matrix is enabled.
- Make sure that the MRC and NRC columns are configured as Currency and Output column types.

Expression Set

- Make sure you've set the Rank of the expression set version to `1`.
- Check that each expression set element has the Include in Output checkbox selected in the Element Details tab in the Expression Set Builder.
- Make sure that the REC_MNTH_STD_PRC and OT_STD_PRC variables are configured with the type Currency in the expression set.
- Check that the expression set is activated.

Pricing Plan Step

- Verify that all data input is spelled correctly and has proper spacing.
- Make sure each step is active.
- Did you save the changes you made in the General Properties facet before you cleared and refreshed the cache?

© Copyright 2023 Salesforce.com, inc. All rights reserved.

Yay! All done!

© Copyright 2023 Salesforce.com, inc. All rights reserved.