Before You Begin

Did you sign up for a special OmniStudio Developer Edition org already? You'll need one to do the steps in this guide. Here's how to request one if this is your first time completing an OmniStudio module:

1. Sign up for a [free Developer Edition org with OmniStudio](#).
2. Fill out the form.
   a. For Email, enter an active email address.
   b. For Username, enter a username that looks like an email address and is unique, but it doesn't need to be a valid email account (for example, [yourname@omnistudiotrails.com](#)).
   c. After you fill out the form, click **Sign me up**. A confirmation message appears.
3. When you receive the activation email (this might take about 10 minutes), open it and click **Verify Account**.
4. Complete your registration by setting your password and security challenge question.
   Tip: Write down your username, password, and login URL for easy access later.

You are logged in to your Developer Edition and you can begin practicing.

Look Up Data with Calculation Matrices

Requirements

"As a developer, I'd like to explore potential future needs and set up a matrix to calculate ***Customer Lifetime Value****."*

If you wish to work with Calculation Procedures in OmniStudio, you need to make sure the base data is in your org. A critical component of this base data is a Calculation Matrix (a lookup table). You need to create a Calculation Matrix with Products and their prices.

Prerequisites

- None

Tasks

1. Download a File from your Org
2. Build a Calculation Matrix

Time

- 10 mins

Task 1: Download a File from your Org

You need the **teamSLARetention** file to build the Calculation Matrix in the next Task.

1. Download a CSV file from your org.

    a. Navigate to **App Launcher > Files > Libraries > OmniStudio**.

    b. Click the triangle to the right of the **teamSLARetention** and select **Download** to download the file to your downloads folder.

Task 2: Build a Calculation Matrix

1. Create your Calculation Matrix.

    a. Open the **App Launcher**, and select the **OmniStudio** app.

    b. From the dropdown, select **Vlocity Calculation Matrices** and click **New**.

    c. If needed, confirm **Standard** and click **Next**.

    d. Enter `teamSLARetention` on the **Calculation Matrix Name** field and click **Save**.

    e. Select the **Related** sub-tab and click to access **teamSLARetention V1** on the **Vlocity Calculation Matrix Versions** related list.

    f. Upload your CSV file by using **Upload CSV > Choose File > teamSLARetention.csv > Upload > Close**.

    g. Map the data as follows:

Name	Header Type	Data Type
SLA	Input	Text
Retention Cost	Output	Currency
Retention Rate	Output	Percent

> **ALERT:**
> It's important to match your data types, especially if they are numeric such as number or currency, because if your Matrix doesn't have a numerical data type, you won't be able to use it for Algebraic calculations in a Calculation Procedure.

h. Click **Edit Data** to review the data.

   Matrix inputs or sets of inputs (combinations of inputs) must be unique. Outputs do not need to be unique and Matrices can have multiple output fields.

i. Click **Save Data**. Calculations and Matrices require an explicit save!

j. If visible, click **Show All Rows**. The Button changes to **Show Errors Only** and you can confirm there are no errors.

k. At the top of the screen, click the **Edit** action button (you may have to click the down arrow to view it).

l. Select the **Enabled** checkbox.

m. Click **Save**.

Name		Version Number	
teamSLARetention V1	✎	1	✎
Pricing Matrix		Enabled	
teamSLARetention		✓	✎
Start Date / Time		End Date / Time	
11/20/2019, 12:40 AM	✎		✎
Priority			
1	✎		

∨ Table

TEAMSLARETENTION V1

Search Download CSV Update JSON

Input Data	Output Data	
SLA (Text) ∨	Retention Cost ($)	Retention Rate (%)
Search column	Search column	Search column
Bronze	$6000	60%
Gold	$11000	90%
Platinum	$12500	95%
Silver	$8000	70%

TIPS:

- A Matrix will only run if the current date and time is between the Start Date/Time and End Date/Time.

- If there are multiple versions of a Matrix, only one version can be accessed at a time, based on these factors:

    ○ The date/time range on the Matrices (i.e. are they active at the same time?).

    ○ If they are both active, the highest priority active Matrix is the one that runs. (1 is the *lowest* priority)

- The previous versions will always be available to allow products with old prices to still access the proper price tables

- If there is a lot of data, Matrices can represent ranges. This keeps them small!

Review

Confirm your understanding by answering these questions.

1. What is a Calculation Matrix?

2. What are some uses for a Calculation Matrix?

3. Can you have multiple Inputs or Outputs to your data?

4. If two matrices are both enabled at the same time, which one will be called?