Get and Transform External Data

Requirements

Now that you have your Integration Procedure working well (see previous unit), you're ready to focus on the ways you'd like to transform the data to create the JSON output that needs to go out from the Integration Procedure to a FlexCard or OmniScript. In the previous unit, you saved a URL to work with weather icons in a DataRaptor Transform.

Prerequisites

- Extract External Data with an Integration Procedure (prior unit)

Tasks

1. Transform Weather Data
2. Confirm the Weather Data Displays on your FlexCard and OmniScript.

Time

- 30 mins

Task 1: Transform Weather Data

1. Add a DataRaptor Transform component to your Integration Procedure.
    a. Open the **App Launcher**, and select the **OmniStudio** app.
    b. From the dropdown, select **OmniStudio Integration Procedures**.
    c. Locate and access the **team/getWeatherForecast > Team Get Weather and Forecast Data (Version 2)** Integration Procedure. This is the Integration Procedure you worked with in the prior unit.
    d. From **Actions**, drag a **DataRaptor Transform Action** component to the STRUCTURE panel, above the **ResponseAction** element.
    e. For the **Element Name**, enter `DRXformWeather`.
    f. Expand **ADDITIONAL INPUT/OUTPUT/FAILURE RESPONSE** if needed.
    g. Select **Send Only Additional Input**.
    h. Under **Additional Input**, click **Add Key/Value Pair**.
    i. Enter the information as follows:

Key	Value (*fx*)
`Current`	`%HTTPGetCurrentWeather%`

    This sends the JSON output from the HTTPGetCurrentWeather element to the DataRaptor on a node named Current.

2. Create the DataRaptor Transform to use in this element.
    a. Click **PREVIEW**.
    b. If needed, click **+ Add New Key/Value Pair** and enter:

Key	Value
`AccountId`	[Acme's RecordId]

NOTE:
If you don’t already have it, locate Acme's Record Id as follows:

1. Duplicate the browser tab, then use the App Launcher to open the **OmniStudio Console**.
2. Select **Accounts** from the Object dropdown.
3. If needed, switch the view to **All Accounts**.
4. Click **Acme** to view Acme's detail page.
5. Copy the RecordId from the URL (Account Ids always begin with 001, Contact Ids with a 003) and paste it somewhere to use it again.

c. Click **Execute**.

d. Select **Debug Log > DRXformWeatherDebug**. (Remember, this is the input for the element.)

e. Copy the JSON for the **Current**: node, including the brackets { } and save it to paste below.

3. Create the Transform DataRaptor.

    a. From the dropdown, select **OmniStudio DataRaptor** and open the **teamStarterXformWeather** DataRaptor.

    b. Click **Clone**.

    c. In the new name field, enter `teamXformWeather` and click **Save**.

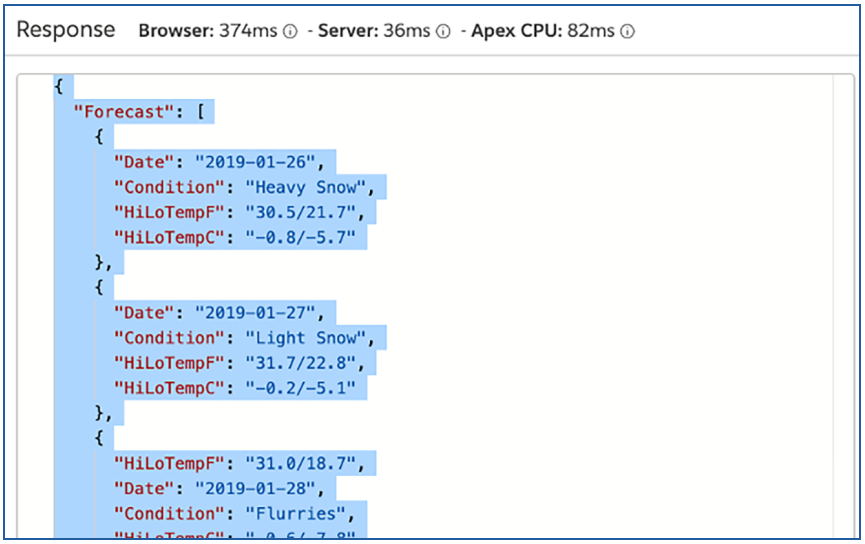
    d. In the **TRANSFORMS** sub-tab, expand **Input JSON** and replace the text there with the JSON you copied in Task 1 Step 2.e.

e. Click **PREVIEW** and paste the JSON text in the **Input** text box if needed.

4. Add the expected Output JSON to the DataRaptor.

   a. From the dropdown, select **OmniStudio Integration Procedures** and open the *previous* version of the weather Integration Procedure (the one with Stub in the title): **team/getWeatherForecast > Team Stub Get Weather and Forecast Data**.

   b. Click **PREVIEW > Execute** and copy the stub data in the **Response JSON** to paste in d. below.



   c. Return to the DataRaptor tab and select the **TRANSFORMS** sub-tab.

   d. On the right, in **Expected JSON Output** paste the Response JSON from the previous version that you copied in step b. above.

5. Create a formula to concatenate the city_name and state_code

   Because Acme is based in the United States, you wish to display the city and state names together as City, State Code rather than as separate data entries.

   a. Open the teamXformWeather DataRaptor (if it is not already open) and click the **FORMULAS** sub-tab.

   b. Click **+ Add Formula**.

   c. Add the following formula:
   `CONCAT(%Current:city_name%,", ",%Current:state_code%)`

   (If you wish, you can copy the formula from the Response Action of the **Team Get Weather and Forecast Data** Integration Procedure **Internal Notes** field and paste it here.)

   d. Use `Current:city_name` for the **Formula Result Path**. This puts the concatenated value back into the Current:city_name node.

6. Create a formula to concatenate the weather icon into the JSON output.

   a. Click **+ Add Formula**.

   b. Enter `CONCAT(condition)`. Locate the URL for the icon that you saved earlier and replace condition with the URL.

      1. Delete `http://` and put the URL in quotes to create a string, stopping before the file name. Then put `.png` in quotes.
      2. Replace the file name with ,`%Current:weather:icon%`,.
      3. The complete edited URL will look like this:
      "www.weatherbit.io/static/img/icons/",%Current:weather:icon%,".png"

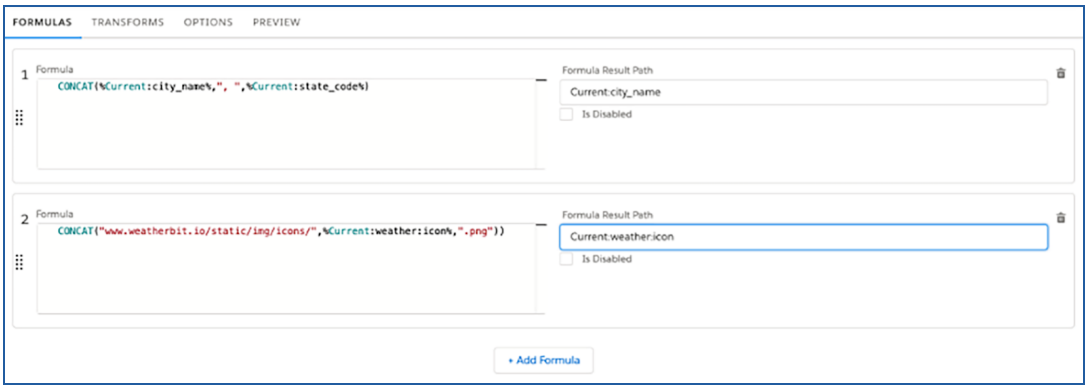
   (If you wish, copy the formula from the Response Action of the **Team Get Weather and Forecast Data** Integration Procedure **Internal Notes** field and paste it here.)

   OR

Edit the URL for the icon that you saved earlier and enter as mentioned below:

Formula	Formula Result path
www.weatherbit.io/static/img/icons/",%Current:weather:icon%,".png	Current:weather:icon

This puts the concatenated value back into the Current:weather:icon node. You can use the Formula Result Path field to add a new node to the Input JSON by using a new node or subnode. (You will need to do this in the Edit the DataRaptor Transform to Include Forecast Data section).

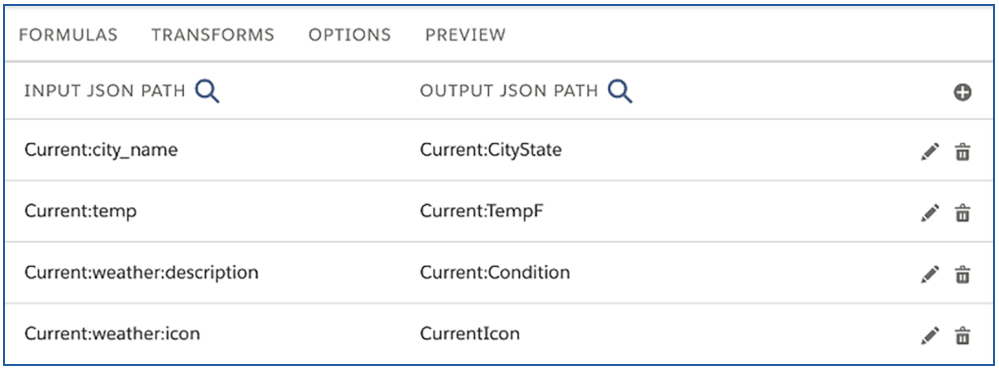


7. Complete mapping the input to the output transforms.

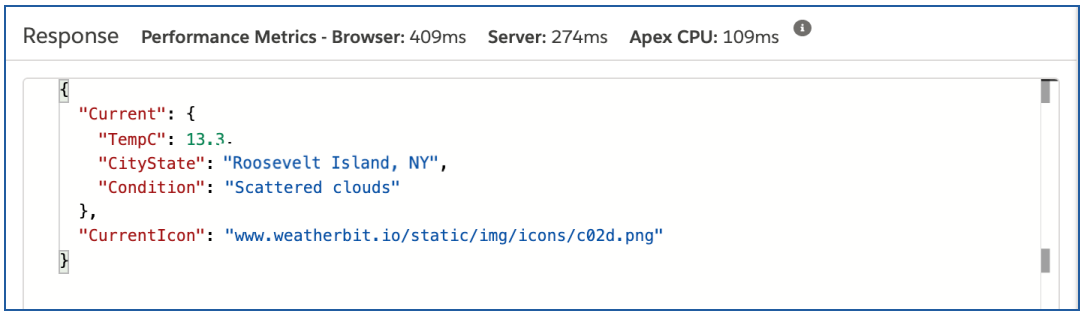
    a. Click the **TRANSFORMS** sub-tab.

    b. Use **Quick Match** to add the following mappings (click **Save** when done):

INPUT MAPPINGS	OUTPUT MAPPINGS	Notes
Current:weather:icon	CurrentIcon	
Current:temp	Current:TempF or Current:TempC	Choose the temp format that matches the data.



c. Click **PREVIEW > Execute**.



8. Complete your Integration Procedure.

   a. If it isn't already open, from the dropdown, select **OmniStudio Integration Procedures** and open **team/getWeatherForecast > Team Get Weather and Forecast Data (Version 2)**.

   b. Click on the DataRaptor Transform element.

   c. In **DataRaptor Interface**, select **teamXformWeather**.

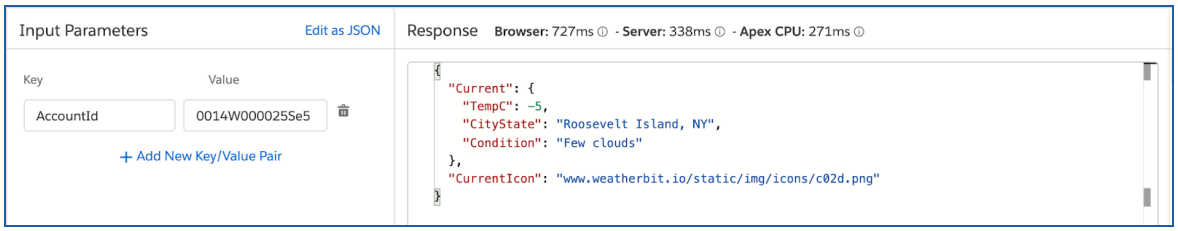
   d. Copy the name of the element.

   e. Select the **Response Action** component at the bottom of the STRUCTURE panel.

   f. In **SEND/RESPONSE TRANSFORMATIONS**, in the **Send JSON Path**, replace **SetValues** with the Transform element name (**DRXformWeather**).

g. Click **PREVIEW**.

h. Click **Execute** and confirm the current weather displays in the **Response**.



i. Click **PROPERTIES** to return and activate the Integration Procedure.

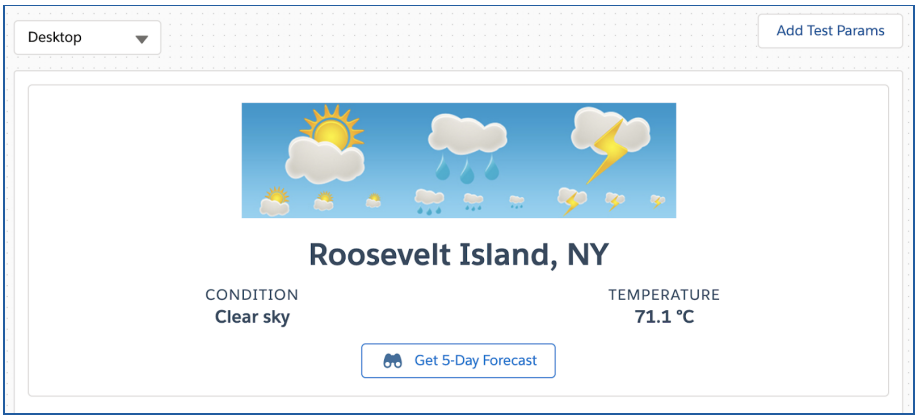
j. In the **Procedure Configuration** element, click **Activate Version**.

Task 2: Confirm the Weather Data Displays on your OmniStudio FlexCards and OmniScript

1. Confirm the weather data displays on the Weather FlexCard.
    a. If needed, from the dropdown, select **OmniStudio FlexCards** and open the **sampleWeather** FlexCard. (Important: If you have not used this org for FlexCards before, see Setup Remote Site Settings for FlexCards at the end of this document before you continue).
    b. From the upper-right of the canvas, just above the FlexCard, click **Deactivate** to deactivate the FlexCard for editing.
    c. Click the Setup panel, and scroll down to the Test Parameters section.
    d. Change the AccountId value to the Acme account's recordId in your org.
    e. Click **Save and Fetch**, then click **OK**.
    f. (Conditional) If the image doesn't display, you may need to reselect it:
        i. Make sure you are in the FlexCard's Active state rather than the /alert state.
        ii. Select the Image element.
        iii. In the Image element properties, click the Magnifying glass icon next to **Image Source**.
        iv. Select **weatherbannerActive (Version 1)** from the **Select an Image from Content Document** dropdown, then click **Save**.
    g. Click **Preview**.
    h. In the upper-right corner of the canvas, click the **Add Test Params** button.
    i. Confirm the correct RecordId for Acme displays in the **Value** field.
    j. Click **Add** to close the modal window.

k. The screen will refresh and display Acme's weather.

l. Click **Activate** to activate the FlexCard.



2. Confirm the weather data displays on the Master Account FlexCard.

   a. If needed, from the dropdown, select **OmniStudio FlexCards** and open the **sampleMasterAccount** FlexCard.

   b. Click the Setup panel, and scroll down to the Test Parameters section.

   c. Change the AccountId value to the Acme account's recordId in your org.

   d. Click **Save and Fetch**, then click **OK**.

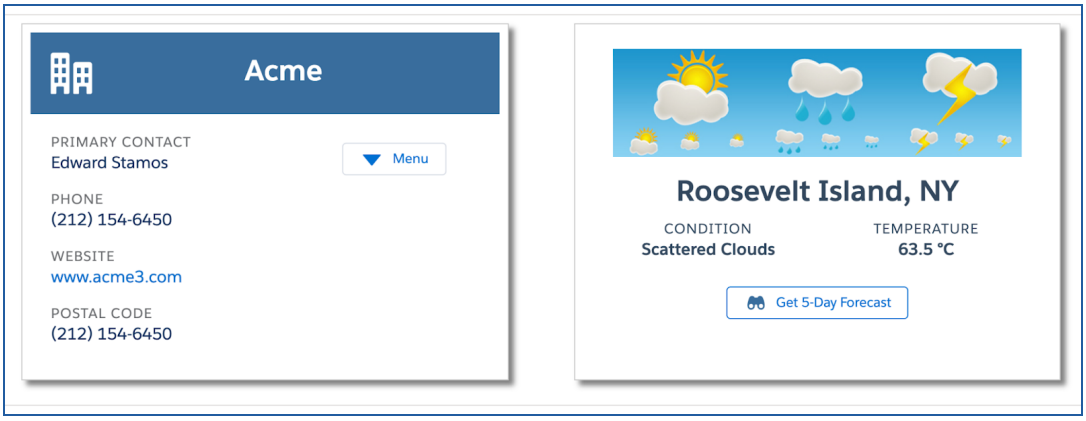
   e. Click **Preview**.

   f. In the upper-right corner of the canvas, click the **Add Test Params** button.

   g. Confirm the correct RecordId for Acme displays in the **Value** field.

   h. Click **Add** to close the modal window.

   i. Confirm the preview displays Acme's data for both the Account and Weather OmniStudio FlexCards.



Review

Confirm your understanding by answering these questions.

1. What does a DataRaptor Transform allow you to do?
2. How did you update the way the City and State display in the results?
3. What does the Response Action do?

Edit the DataRaptor Transform to Include Forecast Data

To solidify what you learned, update the DataRaptor Transform to bring in Forecast weather data for 5 days in the future. Do this only if you completed the More Practice section in the previous unit. We've summarized the requirements; refer to the step-by-step instructions above if you get stuck.

1. Add Forecast Data to the DataRaptor Transform. Follow the same process you just followed to add in Forecast data as a part of the DataRaptor Transform.

    - Map data to the Forecast output nodes (choose one temp node)
    - Concatenate the max_temp and min_temp for the HiLoTempF (or HiLoTempC) output field
    - Concatenate a URL for the Forecast Icon field. Remember the Forecast Icon is only used in the OmniScript and only for tomorrow's weather.

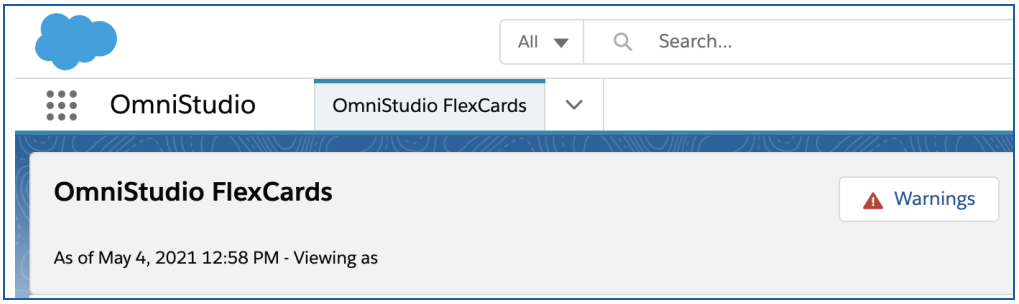
Hints:

- Check the valid_date to find the forecast array element for tomorrow.
- Remember the merge code syntax for an array element is %parent|n:child% where n is the element number. The pipe symbol is shift + \
- The Forecast Icon node is in the Output JSON root - so be careful with the Formula Result Path for that node and test that your JSON Output matches the Expected JSON Output. Remember that you can create a new node in the input JSON.

2. Update the Integration Procedure.
    - Configure the DataRaptor Transform Action to send the forecast data on a node called `Forecast`.

Set Up Remote Site Settings for FlexCards

1. Click the App Launcher , and then select the **OmniStudio** App.
2. Open the dropdown menu and select **OmniStudio FlexCards**.



3. Click **Warnings**. The Warnings message displays, showing the URLs needed in Remote Site Settings for Lightning web components to work correctly in FlexCards.
4. Click the "**Gear**" icon to go to **Setup**. This opens a new tab.
5. In the **Quick Find** box, search for `Remote Site Settings` and click to open it.
6. Return to the tab with the Warnings message and copy the URL ending in **lightning.force.com**.
7. In the Remote Site Settings tab, click Edit next to the Remote Site ending in **lightning.force.com**.
8. Paste the URL you copied over the URL in the **Remote Site URL** field, then click **Save**.
9. Click **Edit** next to the Remote Site ending in **visual.force.com**.
10. Return to the tab with the Warnings message and copy the URL ending in **visual.force.com**. Copy the URL.
11. Paste the URL you copied over the URL in the **Remote Site URL** field, then click **Save**.
12. Return to the tab with the Warnings message. Close the modal window and refresh the tab. The **Warnings** button is now gone.