

# Chromeleon Exercise #1: Create Sequence

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## In this article:

- [Overview](#)
- [Prerequisites](#)
- [Best Practices](#)
- [Build the Orchestration](#)
- [Create Sequence](#)
- [Execute the Orchestration](#)

## Overview

In this exercise, we will demonstrate how to create and configure a User triggered Orchestration with a Function Transform Orchestration step. We will use the Connection Action step to create a sequence with a Chromeleon Connection then trigger the Orchestration and verify successful completion.

Scitara recommends that you conduct this exercise in your DLX Core 1.8 or later test environment, not in production.

## Prerequisites

- You must have a DLX user account granted at least the **Orchestrations : View**, **Orchestrations : Create**, and **Orchestrations : Modify** permissions.
- You must have a Chromeleon Connection created according to [Thermo Scientific™ Chromeleon™ Chromatography Data System \(CDS\) Connector Configuration](#).
- Review these related articles before proceeding with the Orchestration Build:
  - [Orchestration Triggers](#) ("Orchestration Triggers Overview" and "Connection Event Trigger")
  - [Expressions](#) ("What is an Expression" and "Building Expressions")
  - [Function Transform](#)
  - [Connection Action](#)

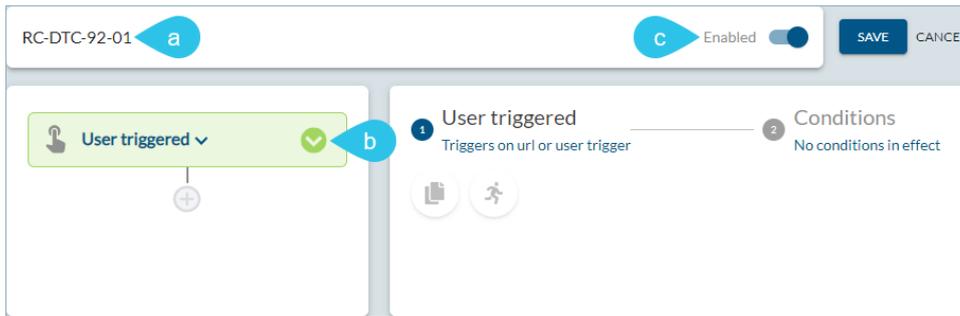
## Best Practices

Scitara recommends that you follow a stepwise "build-execute-build" methodology while creating Orchestrations, executing the Orchestration after each step to verify success. This is even necessary for some steps which may be dependent on the data output of previous steps. Therefore, adhering to "build-execute-build" is the most efficient approach since you both verify and supply data to each subsequent step in the workflow.

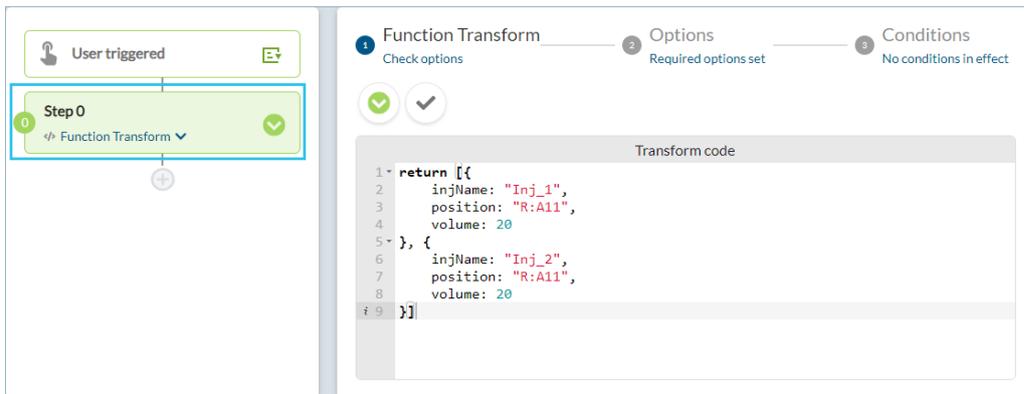
## Build the Orchestration

1. From the Scitara DLX Web Console landing screen (default menu item is **Connections**), click on the **Orchestrations** menu item. Click **+ Add New**.
2. Refer to the image following these steps.
  - a. Enter a name for your Orchestration.

- b. Use the trigger type, "User Triggered."
- c. Enable the Orchestration.

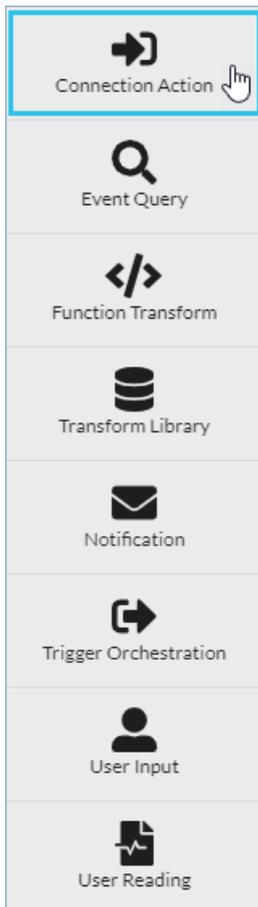


- 3. Click the plus sign (+) to add a step and click the **Function Transform** step type to add data to your Orchestration.



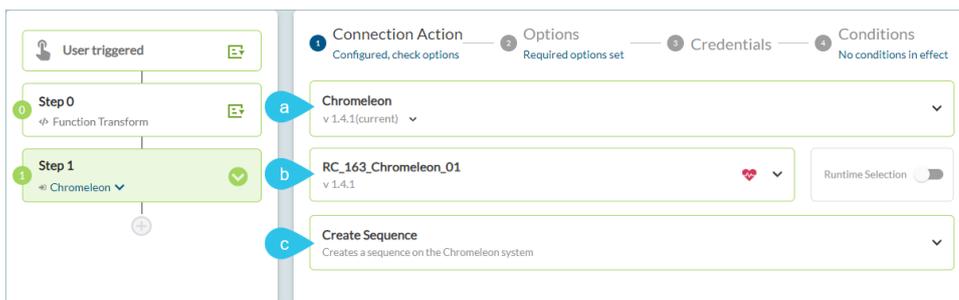
## Create Sequence

- 1. Open your Orchestration and click the plus sign to add a step and select **Connection Action**.



2. Set up the Connection Action by doing the following steps:

- a. Select the Chromeleon Connector.
- b. Select your configured Connection.
- c. Select the Create Sequence action.



3. Under Options, enter the following mandatory data values by typing directly into the String:

- a. Sequence Name
- b. Folder URI

**NOTE:** You can find the Folder URI in the Chromeleon application under *Folder Properties*.

1 Connection Action 2 Options 3 Credentials 4 Conditions  
 Configured, check options Required options set No conditions in effect

a	Sequence Name * string	Tr DTC-92-RC-07 ... +	Test Run X
c	Description string	Tr DemoScitara ... +	Test Run X
b	Folder URI * string	Tr chrom://ec2amaz-5lg8hq/ChromeleonLocal/Demo Data/BS_Test_Data ... +	Test Run X
d	Injection List array	steps[0].output ... +	Test Run X
e	Instrument URI string	Tr Enter the text ... +	Test Run X
f	Custom Sequence Variables array	Click to create array ...	Test Run X
g	Default Channel string	Tr Default Channel ... +	Test Run X
h	Report Templates URIs array	Array [1] ...	Test Run X
i	View Settings URIs array	Array [1] ...	Test Run X

4. Optionally, enter the following values:

**NOTE:** Click the **Test Run**  icon to test the Expression after entering each new value.

Option	Description
<b>c. Description</b>	Description of the new sequence. Manually enter the sequence description in the String.
<b>d. Injection List</b>	Array detailing each injection you will create. Enter the Injection List value by clicking on the  icon in a Reference to open the Execution Data viewer. Select the reference data field by clicking the  icon in the Execution Data viewer.
<b>e. Instrument URI</b>	URI of the instrument on which the sequence will run. Enter the Instrument URI in the String. You can find the input for this field in the list instruments step output.

Option	Description
<p><b>f. Custom Sequence Variables</b></p>	<p>Custom variables for the new sequence. Enter the Custom Sequence Variables by clicking the “Click to create array” prompt to begin input of array elements. In the Array Editor, use the Expression to input data for array element 0. The default data type is an Object.</p>
<p><b>g. Default Channel</b></p>	<p>Default channel for the new sequence. Manually enter the Default Channel in the String.</p>
<p><b>h. Report Templates URIs</b></p>	<p>URI of the report templates for the new sequence. Enter the Report Templates URIs from the Chromeleon application by clicking the “Click to create array” prompt to begin input of array elements. In the Array Editor, use the Expression to input data for array element 0. The default data type is a String.</p>
<p><b>i. View Settings URIs</b></p>	<p>URIs of the view settings for the new sequence. Enter the View Settings URIs from the Chromeleon application by clicking the “Click to create array” prompt to begin input of array elements. In the Array Editor, use the Expression to input data for array element 0. The default data type is a String.</p>

5. Under Credentials, optionally enter your Username, Password and Role in the String.

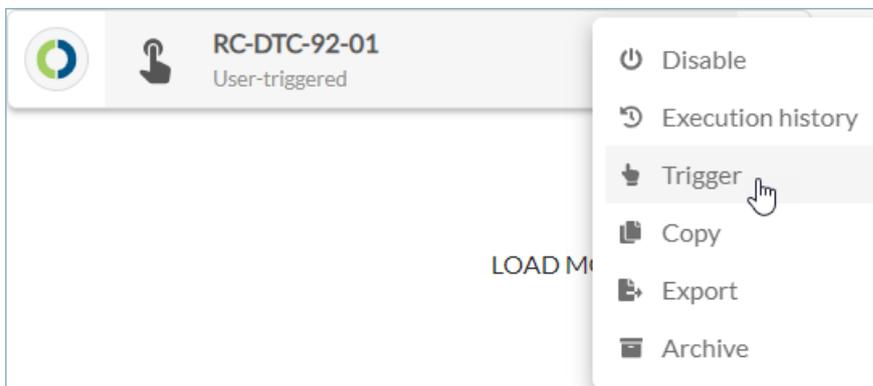
**NOTE:** If you don't enter your user information in Credentials, your information will automatically be pulled from Connection settings. When you enter step credentials, Connection settings credentials will be overridden and the step credentials will be honored.

6. Click **Save** and close the Orchestration.

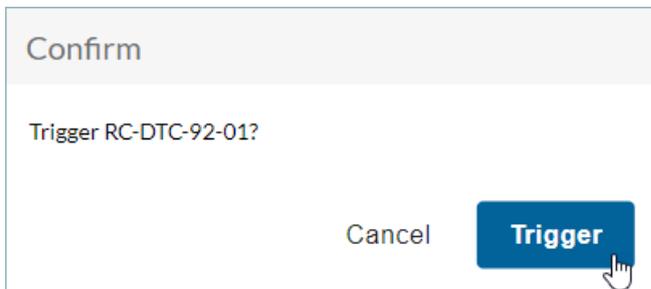
## Execute the Orchestration

### Test the Orchestration

1. Click the vertical ellipsis on the right side of the Orchestration tile and then click **Trigger**.

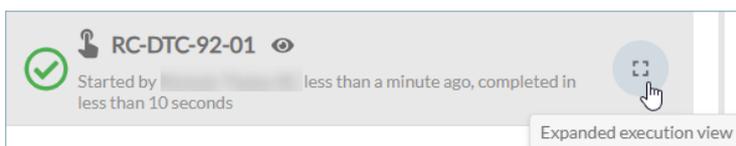


2. Confirm that you want to trigger the Orchestration.



### Verify Orchestration Execution

1. Click **Expanded execution view**.



2. Click on the Connection Action step to view the new sequence data.

### Execution Details

**RC-DTC-92-01**  
 Started by [redacted] 3 minutes ago, completed in less than 10 seconds

✕ Orchestration execution completed

- ✔ **User Triggered**  
User-triggered
- ✔ **Function Transform**  
Javascript transform completed
- ✔ **Connection Action**  
CreateSequence action completed

Step output

```

name "DTC-92-RC-07"
▶ associatedItems [] 2 items
availableChannels [] 0 items
▶ creation {} 5 keys
customVariables [] 0 items
dataVault "chrom://ec2amaz-5lg8hq/ChromleonLocal"
defaultChannel "Default Channel"
defaultReportTemplate "JamesReportTemplate"
description "DemoScitara"
id "a1ad3b39-dc70-4825-8e9d-8a79aabb1272"
▶ injections [] 2 items
isReadOnly false
▶ lastUpdate {} 5 keys
▶ reportTemplates [] 1 item
  
```

Close

3. View the created sequence in the Chromeleon application.

The screenshot shows the Chromeleon application interface. On the left, a tree view displays the project structure, including folders like 'Chromleon 1', 'ChromleonLocal', and 'Demo Data'. The 'Demo Data' folder is expanded, showing a list of sequences, with 'DTC-92-RC-06' selected. The main window displays the details for 'DTC-92-RC-06', including a 'New' button, a 'Start' button, and a 'Vanquish' button. Below this, a table shows the sequence configuration:

#	Unit	Channel	Name	Type	Level	Position	Volume	Injection	Method	Status	Inject Time	Lock Status	Weight	Dilution
1	None	Inj 1		Unknown		RA11	20.00			Idle			1.0000	1.000
2	None	Inj 2		Unknown		RA11	20.00			Idle			1.0000	1.000

Below the table, there is a link that says 'Click here to add a new injection'.

You have completed this exercise successfully if you:

- Created a new Orchestration and added a Function Transform step.
- Added a Create Sequence Connection Action step for the Chromeleon Connector and filled in the data options for the new sequence.
- Executed your Orchestration and verified execution in the Execution Details.

For more information or assistance, please contact [Scitara Service](#) to submit a ticket or use the chat bot.

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