PARTNER USE CASE

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iPaaS for Science™

Chromatography: Revvity's Signals™ Notebook Driving Digital Transformation using Scitara's Digital Lab Exchange, DLX™

Summary

Integration between Informatics systems and HPLC CDS platforms are very common requests within the lab. The ability to set up a chromatography run in an Electronic Lab Notebook (ELN) or LIMS (for example), send the sample list to a CDS, and then seamlessly retrieve the processed results is highly desirable but is often still a manual or semi-manual process.

This use case illustrates how Scitara's DLX can be integrated with Revvity's Informatics' Signals research management platform to provide a seamless interactive experience with CDS systems.

revvity signals

Simplify and enhance experimental procedures and data handling with a single button click

Challenge

The desired workflow is bi-directional and requires a dialog between the systems. Within the Signals Notebook, the user will have a complete or partial sample list that they want to send to a CDS. That list may need to be augmented with additional information before the samples are acquired and processed. When data processing is complete, the processed results need to be transferred back from the CDS to the Signals Research platform. The challenge is making this data exchange as seamless and easy as possible while maintaining data integrity and a chain of custody for the data.

For the purposes of illustration, this example will use Thermo Scientific™ Chromeleon™ Chromatography Data System (CDS) software, but the same process is readily achievable with other leading CDS platforms.

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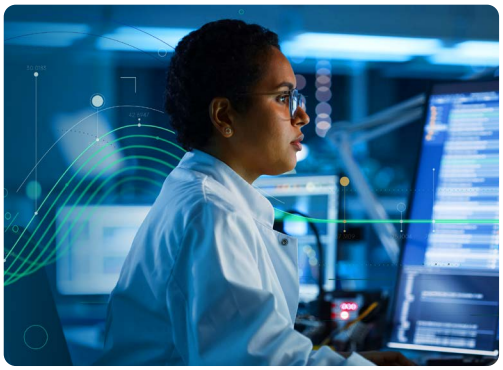
Solution

Using Scitara DLX, an external action may be configured in the relevant Signals Notebook table where the user is building the sample list. When the user has accumulated all of the relevant data within Signals and is ready to send the list to Chromeleon and create a sequence, the external action link is selected. This launches a dialog inside of a Signals Notebook iFrame and prompts the user for needed information. Since the prompts are based on a dynamic Chromeleon lookup based on the Chromeleon SDK, the number of required prompts can be minimized by having more information at hand in advance and pre-loading this information.

The following information may be configured as part of the sequence creation process:

- ☐ **The Chromeleon instance to be used**
- ☐ **User credentials (important in regulated environments and for data integrity in general)**
- ☐ **The Chromeleon folder where the sequence will be stored**
- ☐ **The instrument to be used (optional)**
- ☐ **A sequence preview where methods may be dynamically selected, and missing parameters entered, such as injection volume or carousel position**

The user experience is under customer control based on the Scitara DLX Orchestration and may be modified by the customer administrator at any time



Any additional information added to the sequence as part of the sequence creation process can be written back to Signals Notebook as well as sent to Chromeleon to keep Signals and Chromeleon in sync.

When the samples have been processed, the user may retrieve the processed results from another external action selection within Signals Notebook. The user experience may be as simple as a single button click that retrieves all processed results associated with the sequence name. The user may also browse their accessible Chromeleon locations and select their desired results.

The user experience is under customer control based on the Scitara DLX Orchestration and may be modified by the customer administrator at any time if the workflow requirements change. It is also possible to route data to multiple locations in parallel (for example, send CDS results to the Signals Platform and to a data lake in parallel).

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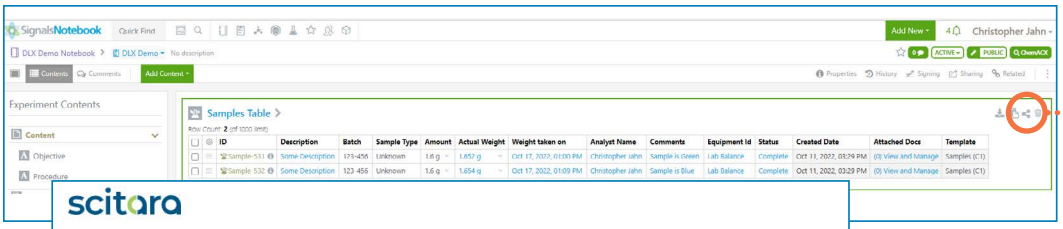
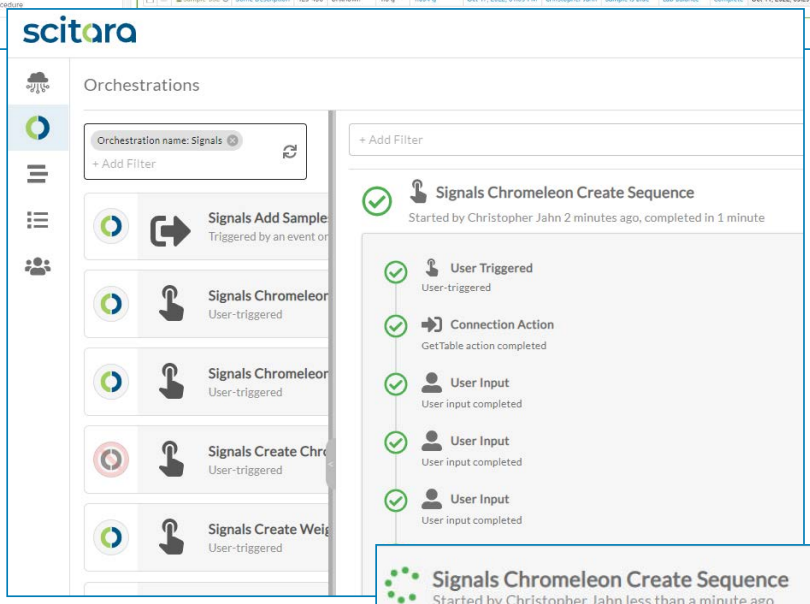
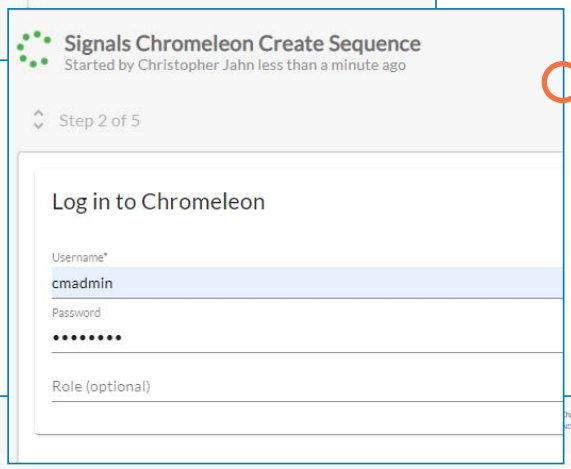
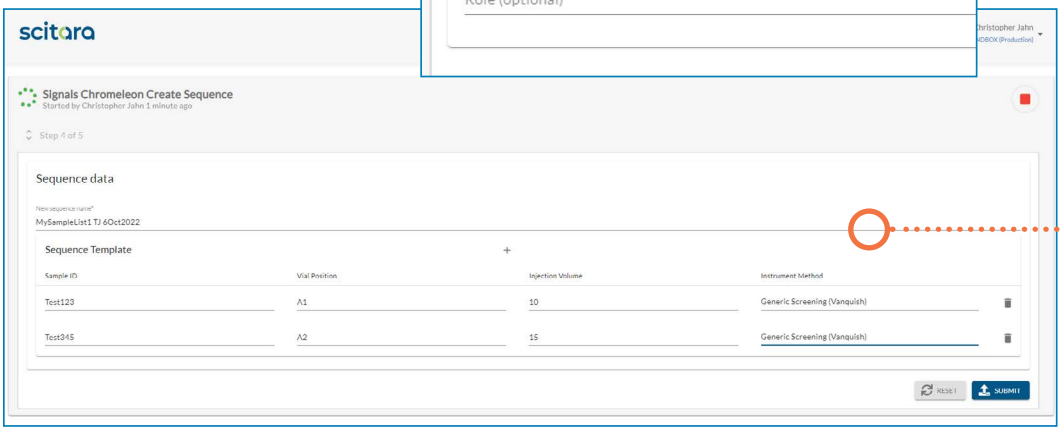


Add samples weight data automatically to a CDS run ...





Initiate CDS sequence creation by selecting an external action menu choice in Signals Notebook, prompting user log-in and subsequent configured steps.



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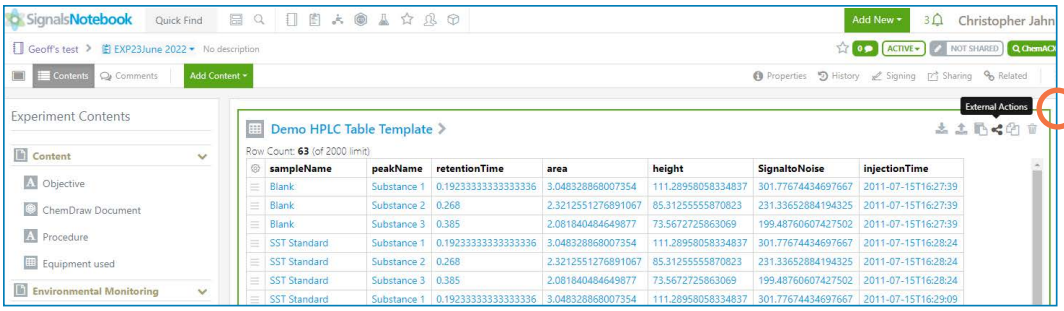

After the sequence is complete and the data processed, the results may be uploaded seamlessly into Signals Notebook.

Benefits

With the integration of DLX and Signals Notebook, the manual process of collecting and entering data is mitigated. In addition, the likelihood of an error is greatly reduced by removing the possibility of human error when manually entering data.

- ☐ **Seamless bi-directional integration between Signals Notebook and CDS systems**
- ☐ **Configurable user input based on workflow needs**
- ☐ **Direct retrieval of CDS processed results back to Signals Notebook**
- ☐ **Route data to multiple locations in parallel**
- ☐ **Full digital chain of custody for data integrity and compliance support**

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BOOK A DEMO

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