GSoC 2020: Improved OpenMRS DHIS2 Integration

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**Blog** [https://medium.com/@jayasanka_sack/improved-openmrs-dhis2-integration-6261db6e9c98](https://medium.com/@jayasanka_sack/improved-openmrs-dhis2-integration-6261db6e9c98)

**Abstract**

A lot of [great work](https://medium.com/@jayasanka_sack/improved-openmrs-dhis2-integration-6261db6e9c98) was done during GSoC 2013 to integrate OpenMRS and DHIS2. The aim of this project is to extend the [OpenMRS-DHIS2 Integration Module](https://www.dhis2.org/). The new features to be added will be sourced from the community.

**Objectives**

1. Gather requirements by communicating with the teams who have currently deployed the OpenMRS to understand the problems using the current DHIS2 Integration module
2. Upgrade the module to work with the latest version of the DHIS2 data model

**Extra Credit**

1. Upgrade the UI of the module to be used with the micro frontend architecture

**Skills Needed**

1. OpenMRS data model/understanding of OpenMRS terms.
2. DHIS data model
3. Reporting Module functionality.
4. Basic understanding of Spring and Hibernate.

Basic understanding of XML and JAXB is needed as the [OpenMRS-DHIS2 Integration Module](https://www.dhis2.org/) implements them.

**Future Work**

1. **Reconcile DHIS2 Reporting module branches**
   - To make the module available in production, the ‘adx’ and ‘adx-disaggregations’ branches should be merged to master to ensure the module has the following:
     - Use CODE values instead of UIDs
     - Use DHIS2 friendly terms at the dataset level
     - Define a standard set of concepts/terms to use
     - Import datasets using a connected DHIS2 instance
     - Support multiple Period Types
     - Map OMRS locations with DHIS2 Organisation Unit codes
2. **Develop the UI using Micro Frontends**
3. **Add custom SQL Queries support**
4. **Add Export functionality (export SQL-mapped dataset from the module)**
5. **Push data to DHIS2 automatically**
6. **Store multiple DHIS2 connections**

More details on the next steps can be found here: [COVID-19 Public Health Response — Improving OMRS to DHIS2 Integration](https://www.dhis2.org/)

**Resources**

OpenMRS-DHIS2-SDMX-HD Integration [see also child pages](https://www.dhis2.org/)

1. [http://www.dhis2.org/](http://www.dhis2.org/) (see documentation)
3. [http://folk.uio.no/bojo/sdmx/sdmxhd_doc.xhtml](http://folk.uio.no/bojo/sdmx/sdmxhd_doc.xhtml)
5. [https://lists.launchpad.net/dhis2-users/msg03768.html](https://lists.launchpad.net/dhis2-users/msg03768.html) (read the complete thread)
10. [COVID-Squad notes](https://notes.openmrs.org/covidsquad2020)
11. ADX specification: [https://ihe.net/uploadedFiles/Documents/QRPH/IHE_QRPH_Suppl_ADX.pdf](https://ihe.net/uploadedFiles/Documents/QRPH/IHE_QRPH_Suppl_ADX.pdf)
12. ADX-HIV content profile: [https://ihe.net/uploadedFiles/Documents/QRPH/IHE_QRPH_Suppl_ADX-HIV.pdf](https://ihe.net/uploadedFiles/Documents/QRPH/IHE_QRPH_Suppl_ADX-HIV.pdf)
13. Dive into DHIS2 Integration work: What’s done, and gaps to know: [https://docs.google.com/presentation/d/1QkyaN9L14fu_I5jURZSF4hlID7vz6ufQtaKLFNwN9kw/edit?usp=sharing](https://docs.google.com/presentation/d/1QkyaN9L14fu_I5jURZSF4hlID7vz6ufQtaKLFNwN9kw/edit?usp=sharing)

15. Summary: Comparison between OpenMRS DHIS2 integrations: https://docs.google.com/presentation/d/1620-UgZLnu2KuMps2HXMzu9ZEmdlRVWmY1qXz-pOG4/edit?usp=sharing

16. Summary: Reconcile DHIS2 Reporting module branches: https://docs.google.com/presentation/d/1ldNzo1acBKrBDV3cIGCNpy0_lQldQbgn9ZCO1rJ4/edit?usp=sharing