

Context of this Draft

Goal: Help answer the question “Does OpenMRS integrate with...” and give implementers practical resources to follow if they need somewhere to get started

We will put this content on the OMRS website, linking to it from the Product Website page.

NOTE: Anything highlighted in **YELLOW** means that we are looking for more/better links & resources for this integration :)

[Version 2 Published Dec 13, copy of text here](#)

[Version 1 Published Dec 5, copy of text here](#)

Things that are notably missing from the latest version of the Integration Catalog:

Facility-Level Integrations

- Additional Inventory / LMIS (?correct?)
 - **OpenLMIS**
- Pharmacy
 - _____
- Blood Bank
 - *Anyone know of options?*
- Data Visualization & Reports
 - **Tableau**

National-Level Integrations (e.g. HIE, NDR)

- Cloud Service Readiness (e.g. for National Data Centers, cloud environment needs, hybrid or otherwise)
 - _____
- SHR
 - 3.x on Guide + HIE ITECH: github.com/I-TECH-UW-ci-hie-demo/configs

How OpenMRS talks to other systems

Many teams need their EMR to connect well with other systems. We want to help you find the answer to whether OpenMRS has previously been integrated with the systems you use, and to share practical resources you can follow to get started. Didn't find what you're looking for? Let us know by posting in the OpenMRS forum.

APIs

In general, the OpenMRS product has 2 major API options your team can leverage to call resources as required:

- **REST API:** Thoroughly [documented here](#). To rapidly explore the OpenMRS data model, you can also use [this search tool](#).
- **FHIR API:** [Information here](#), and [FHIR IG here](#).

Facility-Level Integrations

Billing and Inventory Management

- **Odoo**
 - In [Ozone](#): Odoo Config for the Ozone interoperability layer with OpenMRS: [repo here](#), uses Odoo 14.0+ (Community Edition)
 - In Bahmni: Odoo 10.0-20190619 (Community Edition) built-in to latest Bahmni release
- **ERPNext:** OpenMRS 3 community members are currently working on an OpenMRS <-> ERPNext integration. For more information join the #openmrs3 channel on the [OpenMRS Slack](#). Integrating OpenMRS with ERPNext is also on the Ozone roadmap.
- **Crater:** open-source app for expenses, payments, invoices & estimates. Bahmni-Lite is using Crater as a lightweight alternative to Odoo for invoicing & billing. [Details here](#).

SMS and WhatsApp

- [OpenMRS SMS module](#), documentation [here](#). Connects OpenMRS with SMS service providers, and provides a convenient layer to send SMS/WhatsApp from the OpenMRS. Configuration [examples here](#).
- **SMS Notifications in Bahmni Lite:** [Details here](#).

Data Visualization, Reporting, and Flattening

DHIS2 (Health Management Information System)

- **OpenMRS DHIS2 Connector Module:** [Module here](#), [Demo Video #1 here](#), [Demo Video #2 here](#)
- **OpenMRS <> DHIS2 exchanging patient identifications and individual data (such as observations) through OpenFN – 5 minutes walkthrough video**
- **FHIR-related:** Members from the DHIS2 and OpenMRS communities are starting to collaborate on a FHIR-based integration strategy. We are seeking your use cases! Please contact grace@openmrs.org if you have a use case to share.
- **Apache Superset (Open Source data visualization tool)**
 - **Ozone Analytics**, a versatile big data pipelines technology, streams data from OpenMRS to a data lake consumed by Apache Superset. [More info here](#). **Known OMRS Community Integrations:** Cote d'Ivoire's HIS Technical Working Group, ICRC (see some [example ICRC Superset dashboards here](#)).

PowerBI

Several implementers use SQL scripts to ETL from OpenMRS to a SQL Server where Power BI then consumes the transformed data (eg PIH, EGPAF). For more information consider posting to the OpenMRS Forum at talk.openmrs.org

Other Data Extraction Tools

Open Health Stack: The Analytics Pipeline of Open Health Stack is specifically called **fhir-data-pipes**. **Known Community Member Integrations:** Being used for Cote d'Ivoire OpenMRS analytics capture by ITECH. **MambaETL:** UCSF module for OpenMRS Data Flattening. [Details here](#).

Laboratory Information Systems (LIS)

- **OpenELIS:** [See the OpenELIS FHIR IG](#). **Known Community Member Integrations:** ITECH (Sigdep3 in Cote d'Ivoire and Isanteplus in Haiti). **Prerequisite modules:** FHIR2 Module, [Lab-on-FHIR Module](#). Point of contact for OpenELIS integration questions: digit@uw.edu See also: the [EMR and LIS Data HIE Exchange Knowledge Base](#)
- **SENAITE:** In Ozone: SENAITE Config for the Ozone interoperability layer with OpenMRS: [repo here](#).

Lab Analyzers and Lab Machines

- **OpenHIE Lab Information Sysytems COP** and the **Decoupled Analyzer Interface System (DAIS)** – Community built middleware to connect clinical lab analyzers and convert their output to FHIR resources.
- **Analyzer Interface Manuals:** shared Folder [here](#) (e.g. ASTM, HL7v2 guides for common Lab Analyzers, since these guides are often difficult to find or even only available in CDROM)

CHW Community Health Worker Apps

- **Community Health Toolkit (CHT) & Medic:** See the CHT [Integration Guide for OpenMRS](#) Additionally, Medic has built an interoperability layer for the CHT based on the OpenHIE architecture: [here](#). CHT has been integrated with OpenMRS in unique scenarios at peer to peer level based on unique requirements. Community Orgs with known integrations: Partners in Health; KenyaEMR/Palladium
- **CommCare:** CommCare's [Data Integration Layer](#) product can be used to exchange data with OpenMRS. Some implementers are using the [CommCare FHIR API](#).
- **OpenSRP:** OpenSRP-OpenMRS [Integration Guide Here](#)
- **Open Health Stack Android FHIR SDK:** Demo application built using Android FHIR SDK to connect with an OpenMRS instance using the FHIR2 omod. [Code location](#). [Demo slides and O2 <--> Android App Sync video](#).

Imaging, PACS (Picture Archiving and Communication System), DICOM (Digital Imaging and Communications in Medicine), and RIS (Radiology Information System)

- **DCM4CHEE:** Currently in Bahmni. Soon to come for [Ozone](#).

System Monitoring

- **Grafana & Prometheus:** Helpful with deployment of upgrades, application up-time and hard-drive health monitoring, backup monitoring, sync monitoring. See all servers where application is down so you can proactively contact those sites. (Prometheus listens for this information; Grafana helps you visualize them.) Used by ITECH Cote d'Ivoire: monitoring to manage 500 locally stored instances and pull up in local fhir store. Deployment and updates; remote management and monitoring tools – could work on data

center or locally installed. E.g. can show you which sites did not yet upgrade and may need a manual intervention. Contact: [digit\[a\]uw.edu](mailto:digit[a]uw.edu) (Similar to [CHT's WatchDog](#) setup).

National-Level Integrations (e.g. HIE, NDR)

Terminology Service / Terminology Registry / Dictionary Manager

- **OCCL (Open Concept Lab)**
 - **OCCL serves as a terminology management service that can host OpenMRS concept dictionaries, prepare them for integration with your system(s), and manage them over time. OCCL also serves as the home for the CIEL interface terminology, which can be adapted and reused for your OpenMRS concept dictionaries.**
 - **OpenMRS Open Concept Lab Module: This module unlocks OpenMRS and OCCL integration. [Get started here.](#)**
 - **[Using OCCL for OpenMRS Concept Dictionary Management](#)**
 - **[OCCL Getting Started Materials](#)**
 - **[Brief OCCL demonstration using a CIEL/OpenMRS Use Case](#)**
 - **Squad Calls: OpenMRS/OCCL call that folks can join with questions / sharing experiences**

Insurance and UHC

- **openIMIS: [openIMIS FHIR IG](#)**

Facility Registry

- **GOFR (Facility Registry) – Uses FHIR's MCSD profiles so OpenMRS can query those FHIR stores for the desired facility information. Known Community Member Integrations: ITECH**
- **Geoprism: Uses FHIR's MCSD profiles so OpenMRS can query those FHIR stores for the desired facility information.**

Client Registry

- **OpenEMPI:** Integration steps [documented here](#).
- **OpenCR:** Demo Video of OMRS and OpenCR integration, with installation guides and repository links, [available here](#). Known Community Member Integrations: ITECH (Sigdep3 in Cote d'Ivoire and Isanteplus in Haiti).
- **SanteMPI:** [SanteMPI Client OpenMRS Module](#)
- **JeMPI:** The new 2023 OpenMRS – JeMPI Integration Guide is [here](#).

Interoperability Layer

- **OpenHIM:** Demo video of OpenMRS integration using OpenHIM [here](#), **sample architecture [here](#), and comparison to Apache Kafka [here](#)**
- **Ozone Platform:** Ozone's interoperability layer. Data is directly pulled from a source OpenMRS MySQL database and wired onto camel routes in an effort to integrate OpenMRS with other systems without any use of the OpenMRS Java API or data model. [More info here](#).

Didn't find what you're looking for? Please share your use case by posting in the OpenMRS forum at: <https://talk.openmrs.org>

This page last updated: ____