

## 23.01. DHIS2 integration

DHIS2 is an open source data warehouse that can be used to store, aggregate and display health data. mSupply can push data periodically to a DHIS2 instance. Before this can happen, the data to be sent and any calculations that need to be made will need to be configured.

### Requisites

DHIS2 stores data values that have 3 dimensions:

DHIS2 Dimension	Description	mSupply typical mapping
organisation unit	Can be a facility, or a region	The customer/store in mSupply
data element	The type of data that is stored	Usually a combination of an item code and the type- for instance "SOH_368c74bf" for the stock on hand of Amoxycillin 250mg Capsules (using the universal code from <a href="https://codes.msupply.foundation/detail/368c74bf">https://codes.msupply.foundation/detail/368c74bf</a> )
Period	The historical time period associated with the data	Same in mSupply

With these DHIS2 has the power to show different types of data for different places of interest on various graphs. It can also aggregate those values in hierarchical groups.

### Common types of data

1. Stock on hand
2. Stock expiring
3. Value of stock on hand
4. Critical items availability

### mSupply connection to DHIS2

Before you can send mSupply data to a DHIS2 instance, you need to tell mSupply where the data has to go. To do that, go to *File > Preferences* and click on DHIS2 tab to get to this window:

**Preferences...**

**Database connection settings**

☒ Use DHIS2

☐ Basic authentication

URL:

Username:  Client:

Password:  Secret:

**Setup**

☒ Using category option combo ☐ Different data elements per Item ☐ Push only 1 data element

**Data elements to push**

Active	Data element	Category option ID	Custom field name	Interval	Push data basis
<input type="checkbox"/>	average_monthly_consumption			first_day_of_the_ +	previous_monthl +
<input type="checkbox"/>	days_out_of_stock			first_day_of_the_ +	previous_monthl +
<input type="checkbox"/>	inventory_adjustment			first_day_of_the_ +	previous_monthl +
<input type="checkbox"/>	issued_quantity			first_day_of_the_ +	previous_monthl +
<input type="checkbox"/>	months_of_stock			first_day_of_the_ +	previous_monthl +
<input type="checkbox"/>	received_quantity			first_day_of_the_ +	previous_monthl +
<input type="checkbox"/>	stock_beginning_of_month			first_day_of_the_ +	previous_monthl +
<input type="checkbox"/>	stock_end_of_month			first_day_of_the_ +	previous_monthl +

Data set ID:  Period format:

Item field reference: ☐ Universal code ☐ Custom field

Data element ID scheme: ☒ Code ☐ UID

Store field reference:

Round off: ☐

No. of items per payload:

- **Url:** The URL of the DHIS2 database including the port if any.
- **Username:** The username mSupply will use to access the DHIS2 database
- **Password:** The password mSupply will use to access the DHIS2 database
- **Client:** The client name mSupply must use to access the database.
- **Secret:** The secret that is used for mSupply to access the DHIS2 database. No need to enter this if none was provided.



If this page already has settings entered and they have been used to successfully connect to the DHIS2 database then a “Last successful connection: *date & time*” message will show next to the **Test connection** button.

After entering the values you should click on the **Test connection** button to save the credentials and check that mSupply can now access the DHIS2 database. If the connection is successful you will see a green “Connection successful” message next to the button.

If the connection is not successful you will see a red “Authentication failed” message next to the button. Check your settings, edit them as necessary and try again. The connection problem may not be the credentials, it could be something else like the settings for firewalls between mSupply and the DHIS2 database.

Once configured, a scheduler will run and regularly send data from mSupply to DHIS2. In order for this to work, you first need to have a DHIS2 instance that has links with mSupply for each organisation unit and data element.

Contact our team to help you to create the specific data elements on DHIS2 accordingly with the data that you want to be sent. We will configure it for your specific situation.

This has been done already for Laos and countries that are part of the [Tupaia](#) project including Kiribati, Tonga, Solomon Islands, Cook Islands and Vanuatu with some more to come!

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From:

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Last update: **2021/10/08 11:06**

