GO.DATA – DHIS2
INTEROPERABILITY
GUIDE TO EXPORT METADATA

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Introduction to interoperability

Interoperability is the ability of computer systems or software to exchange and make use of information. In order to set up the interoperability between two information systems, their metadata (the information that describes the data contained in a system) will need to be compared and mapped to each other. Such comparison requires having the metadata of both systems at hand, which can be often achieved by exporting the systems' metadata.

This guide provides instructions on how to export metadata from DHIS2 and Go.Data in order to map their respective metadata.

The two types of information that need to be exported are:

- **Location tree**: these are the hierarchical location tress that represent the administrative divisions of a country.
- **Metadata related to COVID 19:** These are descriptions of variables and indicators used to collect information on COVID 19 outbreaks.

Step 1 – Location trees

In order to effectively manage cases, trace and follow up their contacts, it is crucial to know where cases and contacts are located. Hence, data collection both in DHIS2 and in Go.Data relies on a consistent description of the geographical locations of a country. These are hierarchical location trees that describe the administrative divisions of the country. They are called Organisation Units Tree is DHSI2 and Locations in Go.Data.

In order for DHIS2 and Go.Data to exchange data effectively and accurately, their hierarchical locations trees need to be mapped to each other. In order to compare and map the two location trees, the tree will need to be exported from both platforms.

This section provides instructions for exporting the location trees from DHIS2 and from Go.Data.

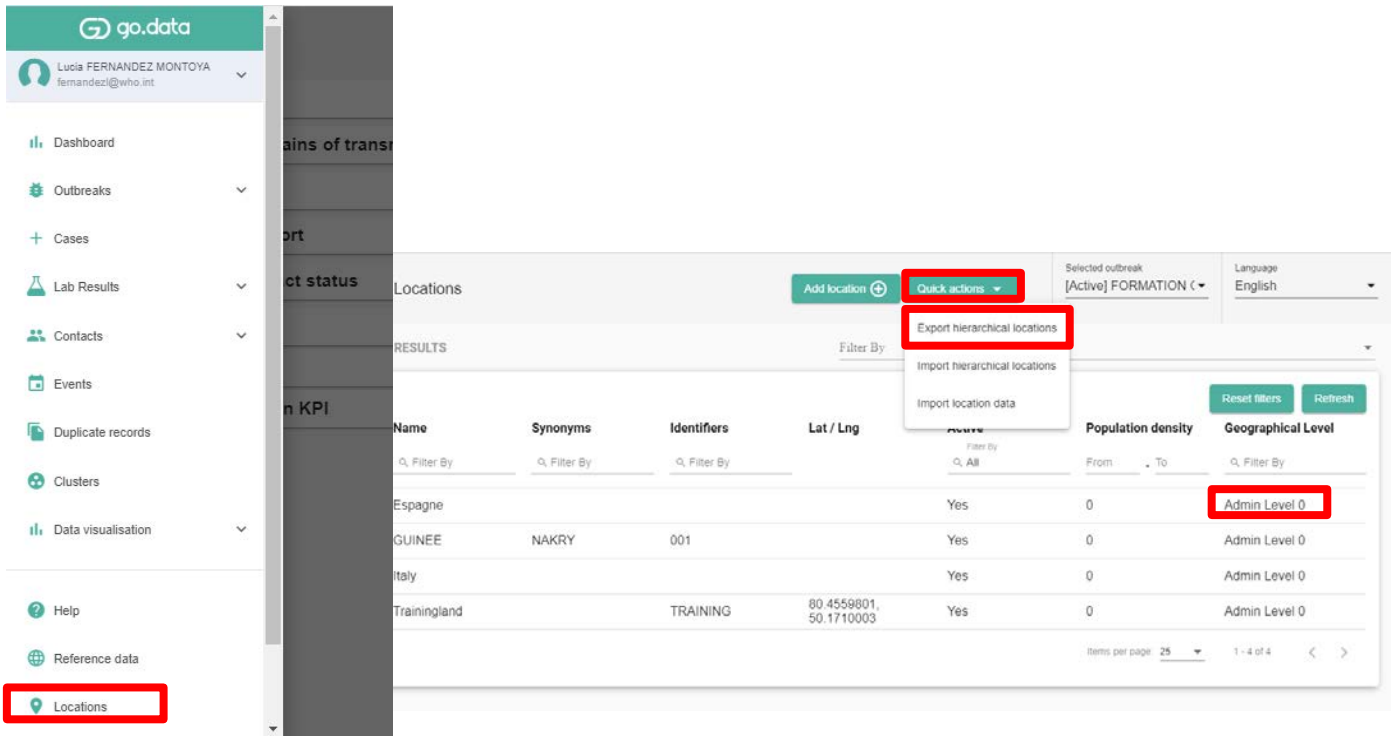
Exporting location tree from Go.Data

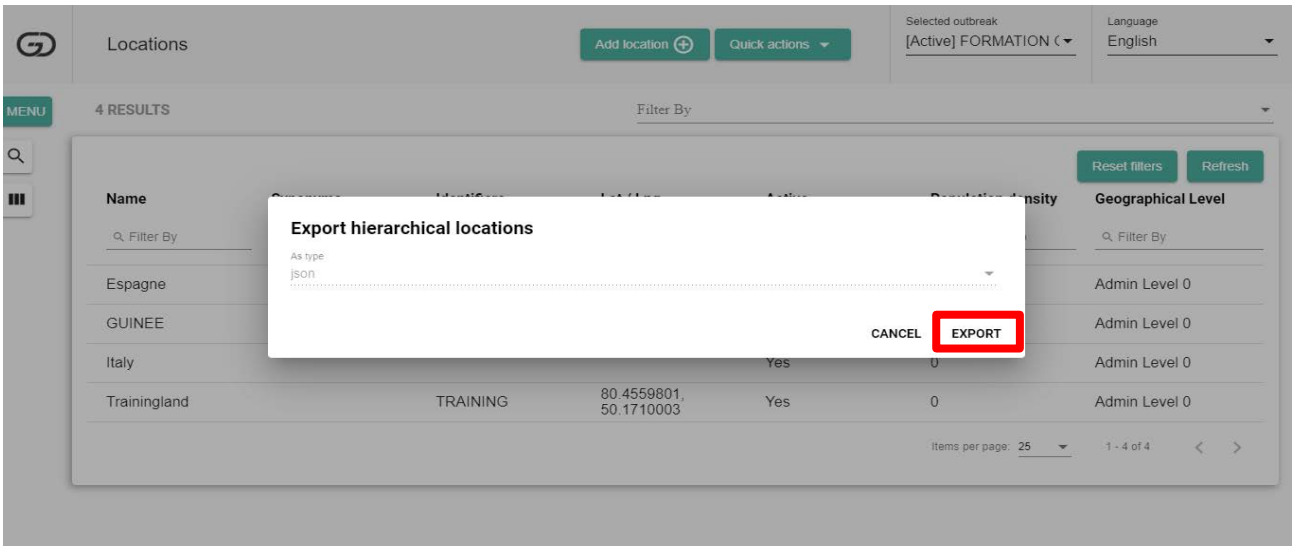
1. Open the Go.Data menu and click on “Locations” in the menu. The location page will show the top level location (administrative level 0) created in Go.Data

2. Click “Quick actions” – “Export Hierarchical locations”

Go.Data will show an screen that warns us that the locations will be downloaded in json format.

3. Click on “Export”- A document ending in “ .json” will be downloaded into your computer. These are the location trees





Exporting organizations Unit tree from DHIS2

1. Identify the UI of the country in DHIS2 by typing in the browser the following address replacing <INSTANCE-URL> and <NAME> by the corresponding values as described below.

<INSTANCE-URL>/api/organisationUnits.json/filter=name:ilike:<NAME>

- <INSTANCE-URL>: this is the URL Of DHIS2 in your country
- <NAME>: the name of your country as it appears in DHIS2

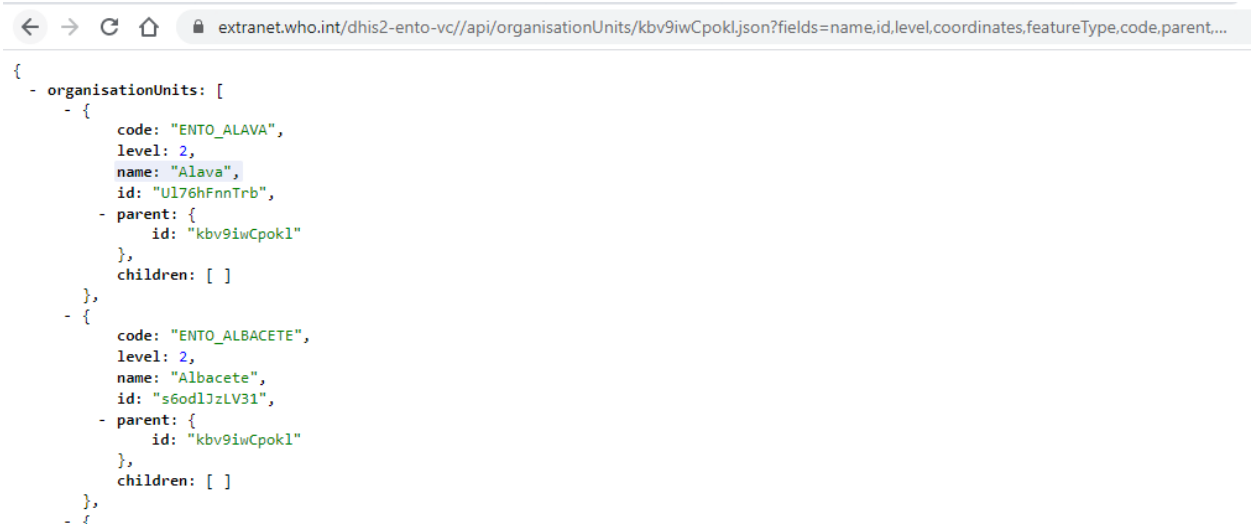
Example of result

2. Type in the browsers the following address.

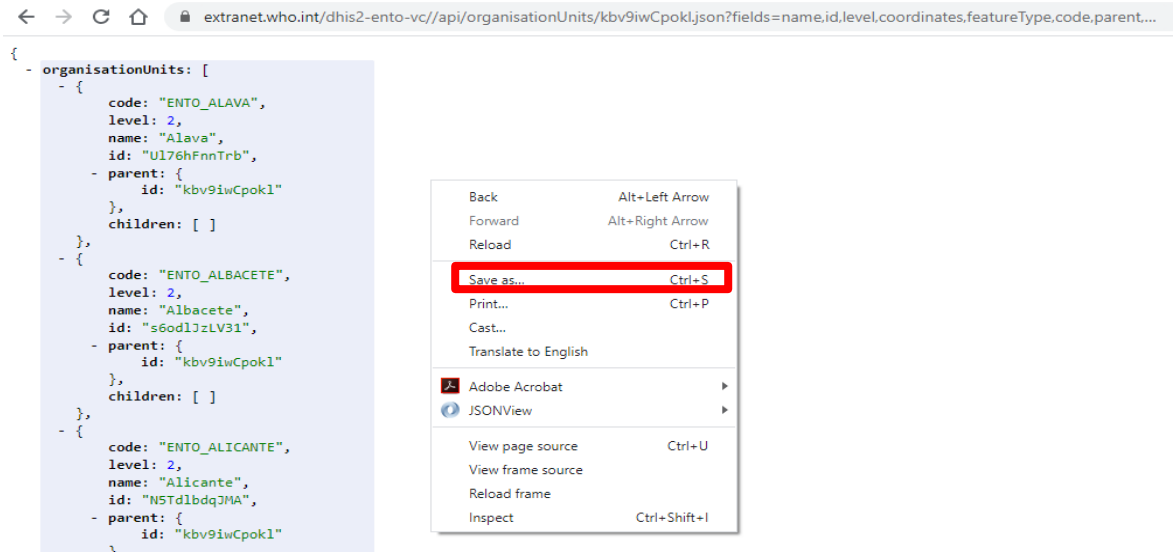
<INSTANCE-URL>/api/organisationUnits/<UID>.json?fields=name,id,level,coordinates,featureType,code,parent,children[id]&paging=false&includeDescendants=true

- <INSTANCE-URL>: this is the URL Of DHIS2 in your country
- <UID>: this is the id obtained in the previous step

Example of result



3. Do right click on your mouse or pad and click on “Save as…”. Save the file in the folder your choice in your computer.



Step 2 – Metadata

In order to effectively manage cases of a disease, trace and follow up their contacts, certain information will need to be collected from the cases and contacts. This information will be collected by means of variables that can store personal, epidemiological, clinical and laboratory data. These variables will serve as the basis to calculate indicators that will support epidemiologist and public health specialist to manage a disease outbreak. The metadata of a system describes this set of variables and indicators.

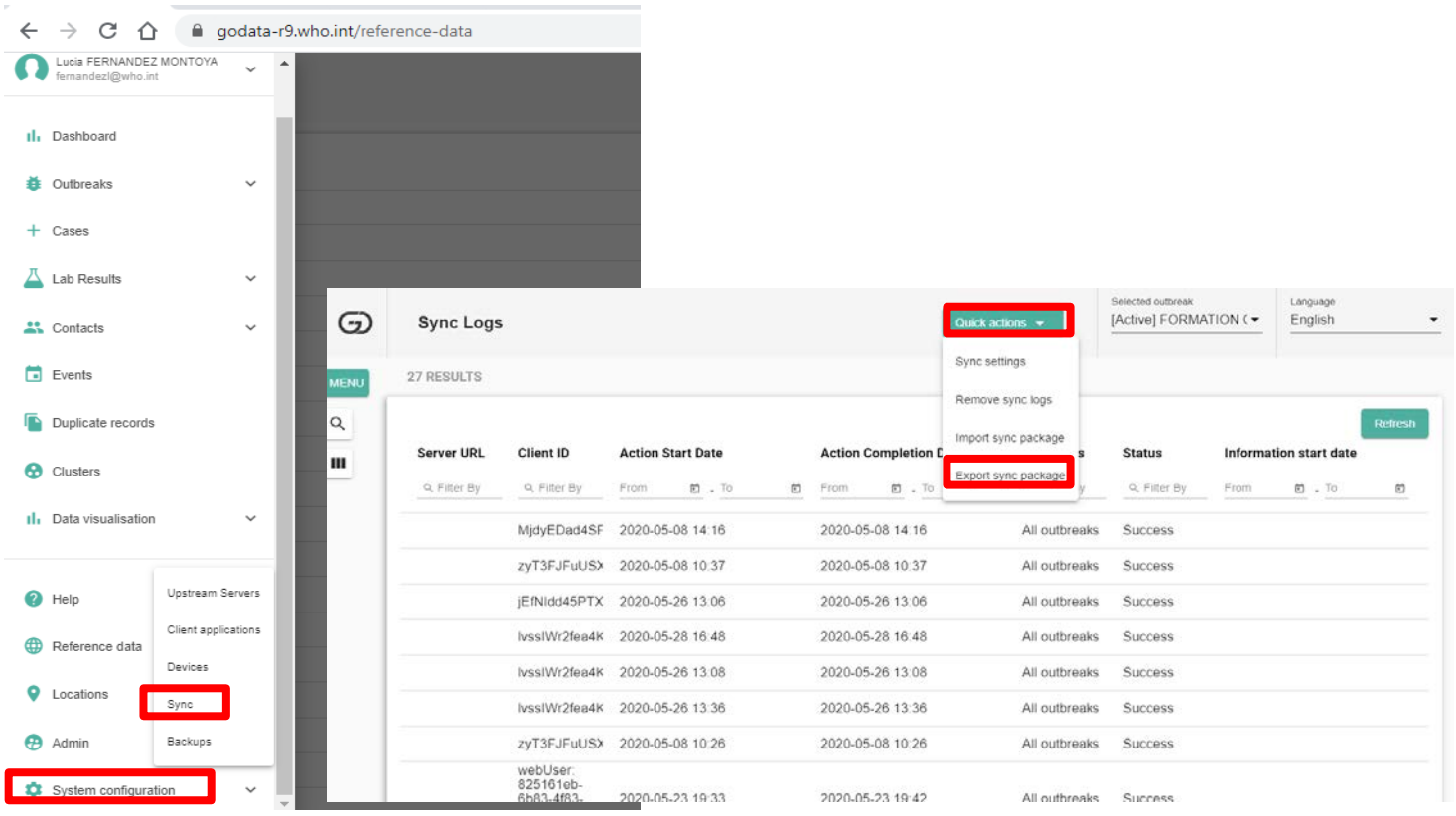
In order for DHIS2 and Go.Data to exchange data effectively and accurately, their metadata need to be mapped to each other. For this purpose, the medata will need to be exported from both platforms.

This section provides instructions for exporting COVID 19 relevant metadata from DHIS2 and from Go.Data.

Exporting metadata from Go.Data

1. Open the Go.Data menu and click on “System configuration” in the menu. The click on “Sync”. This page will show a list packages that have been already exported.

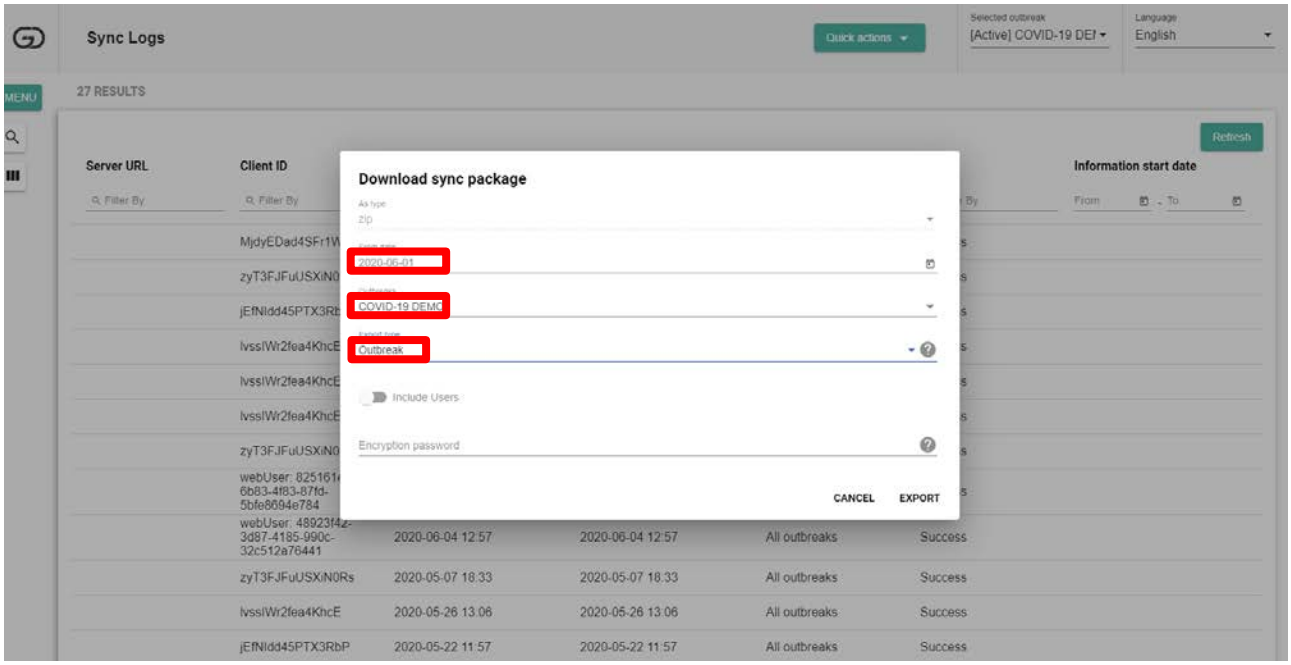
2. Click on “Quick actions”- “Export sync package”



3- In the Download sync package window select:

- Date: a date after the outbreak had been fully configured
- Outbreak: the outbreak that is being used to collect COVID 19 data- If multiple outbreaks are being used in your country, plase export a package for each outbreak
- Export type: “Outbreaks”

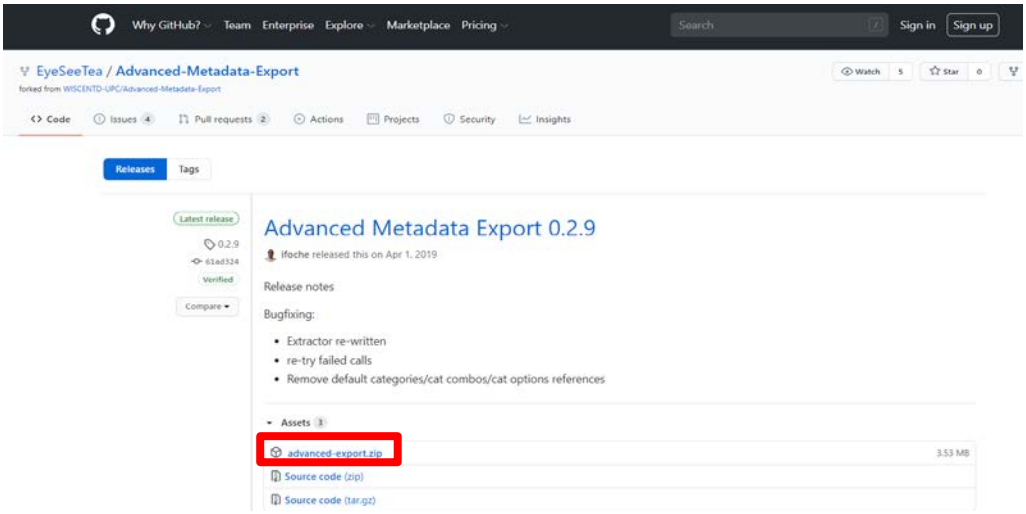
4. Click “Export” : A metadata package will be downloaded into your computer.



Exporting metadata from DHIS2

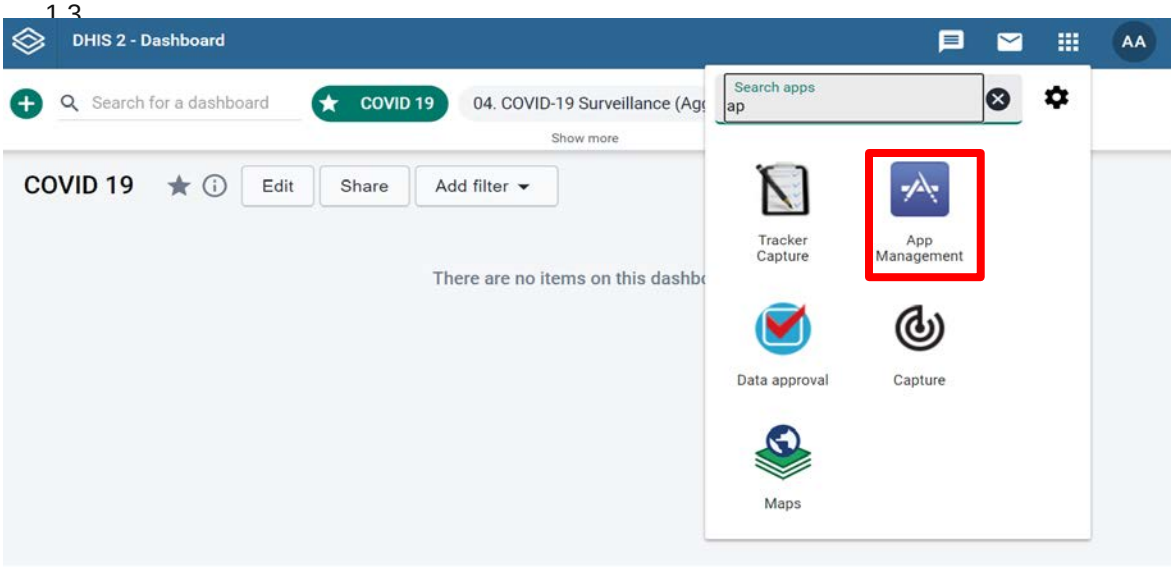
1. Install de application “Advance Export” into your national DHIS2:

1.1. Download the package “advanced-export.zip” from the link below into your computer: https://github.com/EyeSeeTea/Advanced-Metadata-Export/releases/tag/0.2.10

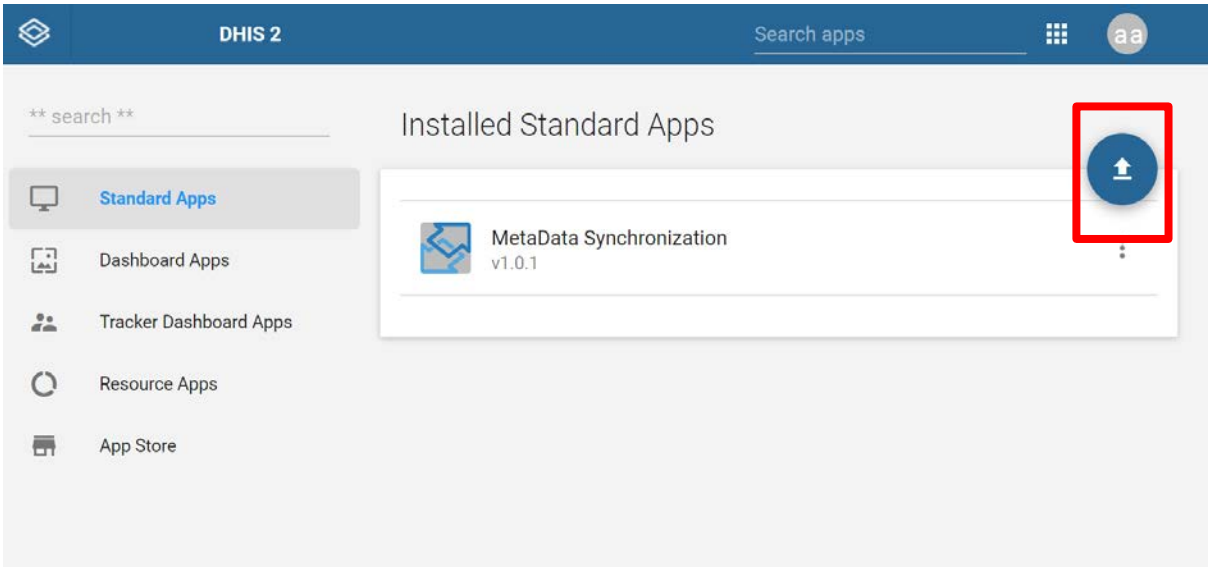


1.2. Open your DHIS2 and look for “App Management” in the search bar

1.3



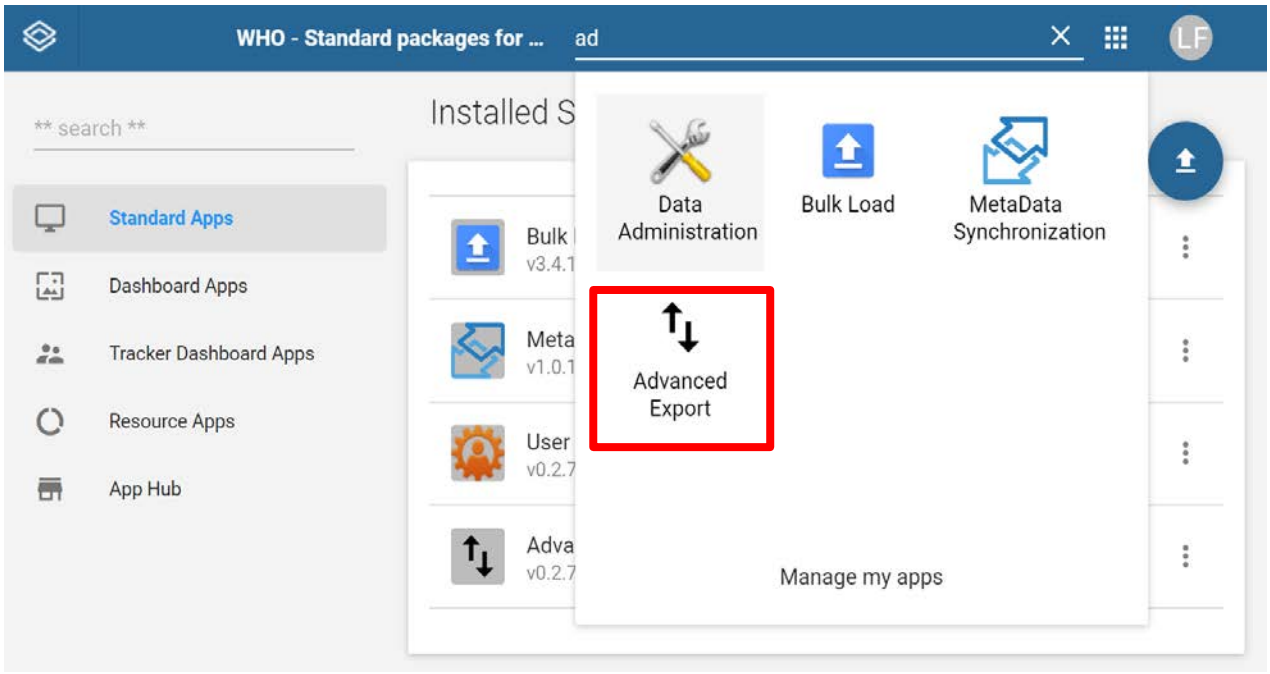
1.4. Click on the upload arrow



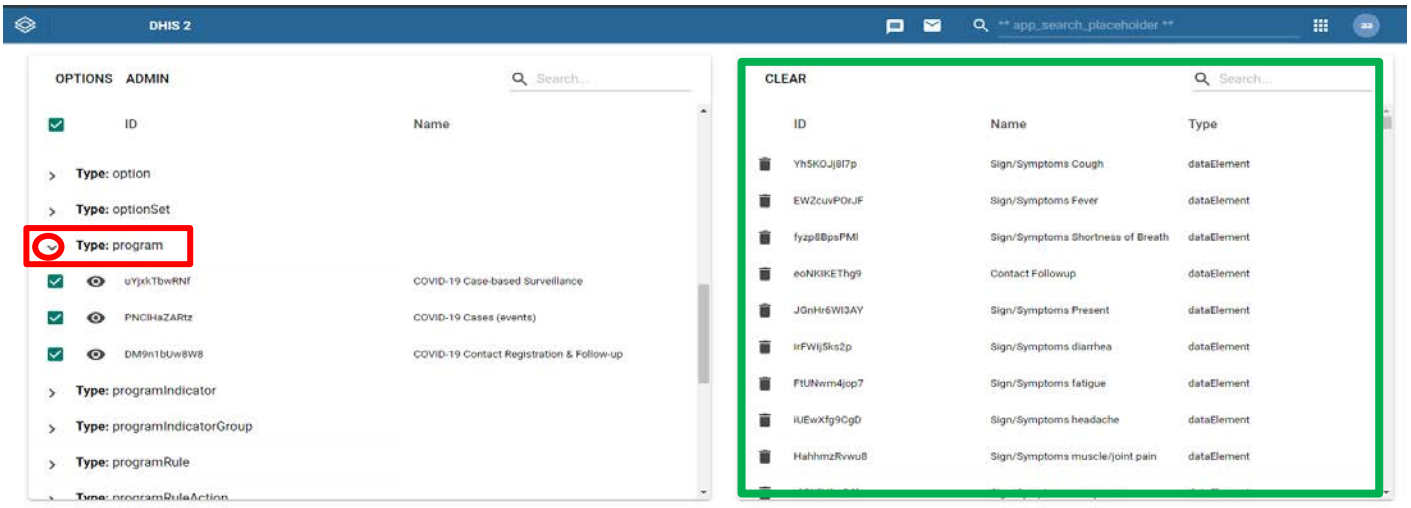
1.5. Search for the application among your computer files and double click on the zip file you downloaded in step 1.1. The application will be installed and it will appear in the list of Install Standard Apps

2. Open an incognito or private window in your browser and log in into your DHIS2.

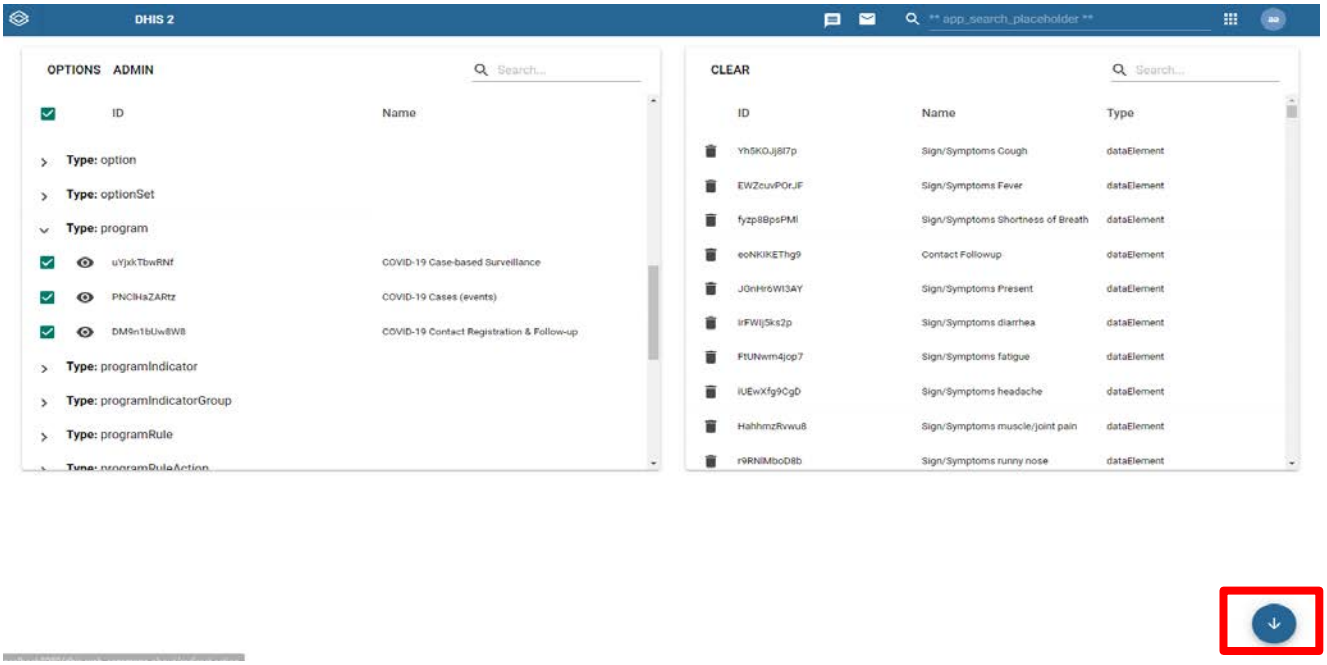
3. Search for the application in the DHIS2 search bar by typing “advance”. Click on the +Advance Export” icon to open the application.



4. Scroll down until you see “**Type: programs**”**.** Click on the arrow to display the list of programs and search for the COVID 19 tracker or event program that you are using to collect data for COVID outbreaks. Select them by checking the tick box. On the right of the page, the application will show all the metadata dependencies of these programs.



5. Click on the download arrow. The metadata package will be downloaded into your computer.



Annex 1 – Getting started with Go.Data

Go.Data is a software application that supports data collection, including case investigation and contact tracing. Available in online, offline, and mobile settings, Go.Data provides users with the necessary tools to:

- view critical case, contact, and event records for an outbreak
- record data that is essential to tracking the outbreak
- create visualisations to aid in the tracking of an outbreak
- track follow-up activities for a specific outbreak
- identify relationships between individual outbreak records.

In addition, you can configure Go.Data to create specific user types and permissions for access to the system's data. Go.Data administrators can also create specific help topics and reference data to customize the software tool for a specific use or outbreak type.

You can further customize Go.Data for any language or geographical mapping.

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Application concepts

To use Go.Data tools effectively, you must first understand the concepts used within the software for the investigation and monitoring of an outbreak.

The following list defines the concepts critical to managing an outbreak using Go.Data.

- **Case**: A case is an individual who meets the epidemiological case definition for a particular disease outbreak. Standard case classifications can be defined within Go.Data.
- **Cluster**: A cluster is a grouping of cases, contacts, and events that have existing exposure or contact relationships for an outbreak. Generally, clusters are created when a potential relationship exists between records, but you are unsure of how the records are related.
- **Contact**: A contact is a person who is believed to be at risk through exposure to a case or event.
- **Data visualisation**. A data visualisation is a graph or chart that displays outbreak relationships and chains of transmission. After you have created cases, contacts, and events in Go.Data and the relationships between them with the direction and certainty level of transmission, the system can generate a relationship network as a chain of transmission graph.
- **Event**: An event is a specific community gathering where transmission of an outbreak disease is believed to have occurred. Examples of typical events include clinics, concerts, funerals, markets, mass gatherings, schools, and sporting events.
- **Follow-up**: A follow-up is an exercise performed by contact tracers to monitor the health of each contact following a potential exposure. The frequency and duration of a follow-up is determined by the suspected disease at the source of the outbreak.
- **Outbreak**: A disease outbreak is the occurrence of disease cases in excess of normal expectancy. Disease outbreaks are typically caused by an infection, transmitted through person-to-person contact, animal-to-person contact, or from the environment or other media. Outbreaks may also occur following exposure to chemicals or radioactive materials. Occasionally, the cause of an outbreak is unknown, even after a thorough investigation.[1]
- **Questionnaire form**: A questionnaire form allows you to ask a set of questions related to cases, contacts, and lab results. Go.Data contains a flexible questionnaire builder to author data input forms for cases, contacts, and lab results.

[1] "Disease Outbreaks," World Health Organization, August 24, 2012. https://www.who.int/environmental_health_emergencies/disease_outbreaks/en/.

Application terminology

Go.Data and this user guide employ specific terminology that is critical to understand and properly use the application. The following list defines the terminology that is critical to managing the outbreak using the Go.Data application.

- **Breadcrumbs**: A history of pages you have accessed prior to the current screen you are viewing. You can click the breadcrumbs to return to previous screens.
- **Button**: An object you click to initiate a specific action defined by the button's text.
- **Dashboard**: A landing screen that displays a summary of information related to the active outbreak.
- **Details**: A single location to view individual record data for a specific feature.
- **Drop-down menu**: A list where the values are derived from the reference data and that allows you to select from a variety of predefined options when entering or modifying data.
- **Feature**: An individual component of Go.Data used for viewing and recording data for an outbreak. You can access Go.Data's features by selecting the Menu button. Examples of features include cases, events, and contacts.
- **Filter**: You can use Go.Data filters to display and sort specific records based on the criteria you enter.
- **List icon**: An icon that displays when you hover over an individual record in a list. List icons are grouped on the left-hand and right-hand sides of a record. Examples of list icons include options (ellipses), modify, and view.
- **List**: A single location within Go.Data to view all records within a specific feature.
- **Message**: Text displayed by Go.Data confirming that an action has been recorded.
- **Reference data**: A list of data defined by a Go.Data system administrator that populates the selection options within drop-down menus.
- **Relationship**: Within Go.Data, you can make connections between specific records to determine how a disease has been transmitted. Examples of relationships include contact and exposure.
- **Team**: A group of Go.Data users to be assigned to a particular location. You can view the workload and assign follow-ups to specific teams in Go.Data.
- **Toggle**: An object you click to define if a statement is true or false.

Where does my data go and how does it relate to the outbreak?

The majority of Go.Data implementations are one of these installation scenarios:

- Stand-alone installations
- Server-based installations.

In extremely rare instances, Go.Data can also be implemented as a server-based linked installation, however, this scenario would only be likely after discussion with your Go.Data system administrator.

Stand-alone installations

In a stand-alone installation, you install Go.Data for PC, Windows, or Linux on a single computer. With this installation, your computer records all the data, which stays on your computer. If you wish to exchange data, you can do so by manually importing or exporting data files. This installation is best suited to small outbreaks or situations where there is limited internet connectivity.

Server-based installations

In a server-based installation, you install Go.Data for PC, Windows, or Linux on a single computer that acts as a server. You can then install Go.Data on any number of computers, phones, or tablets, which act as client applications.

With this installation, the client records all the data and syncs it back to the server, which makes the data available to other installations of Go.Data in the same system as long as the other users have the appropriate system permissions. You may also manually import or export data files. This installation is the most typical scenario.

Server-based linked installations

In extremely rare instances, you may need to consolidate data from multiple installations of Go.Data into a single point. While you install Go.Data on a single machine, it contains functionality to link multiple machines together, exchange data, and collaborate when multiple users are working on the same outbreak.

For more information about this complex scenario, visit https://www.who.int/godata and complete the Contact us form.

Annex 2 – Installing Go.Data

Go.Data installs onto a Windows, Mac, or Linux machine, on either a personal workstation or a server. Go.Data also includes Android and iOS mobile applications, which have limited functionality and are focused on recording follow-up, case, and contact data in the field

You can install Go.Data from a source installation file for a workstation or by downloading a mobile smartphone or tablet application from an app store.

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Locating installation files on mobile devices.....**Error! Bookmark not defined.**

Installing Go.Data on personal workstations..... Error! Bookmark not defined.

Installing Go.Data on mobile devices ..... Error! Bookmark not defined.

What are the minimum requirements to install Go.Data?

The minimum requirements to install Go.Data on each of the following devices are as follows.

Windows:

- 64-bit
- CPU: 2GHz (Go.Data may be slow on processors with lower speeds)
- RAM: 8GB
- Storage: 3GB (more space will be needed to store larger amounts of data)
- OS: Microsoft Windows 7 or higher

Mac:

- CPU: 2GHz (Go.Data may be slow on processors with lower speeds)
- RAM: 8GB
- Storage: 3GB (more space will be needed to store larger amounts of data)
- OS: OS X 10.10 (Yosemite)

Linux:

- CPU: 2GHz (Go.Data may be slow on processors with lower speeds)
- RAM: 4GB
- Storage: 3GB (more space will be needed to store larger amounts of data)
- OS: Ubuntu 12.04, Fedora 21, or Debian 8

Android:

- CPU: quad-core CPU 2GHz or higher
- RAM: 2GB (Lowest end device tested is Samsung Galaxy S5: https://www.gsmarena.com/samsung_galaxy_s5-6033.php)
- Storage: 1GB
- OS: Android 5.0 or higher (preferably newer versions due to updated security patches)

iOS:

- Hardware: iPhone 5s or higher (preferably iPhone 6 or newer due to bigger screen size)
- Storage: 1GB
- OS: iOS 9.3 or higher (preferably iOS 10 or higher)