

# User Manual

SORMAS-DHIS Adapter version 2.4

2023



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# INTRODUCTION

## What is SORMAS

SORMAS® is a mobile eHealth (response, disease control, monitoring, management and analysis) system aimed to improve the prevention and control of communicable diseases, especially in resource-poor environments. The system is being developed by those involved in the surveillance of public health and disease control. SORMAS® is free and complies with the highest data protection standards, good scientific practice and open access policy.

## What is DHIS2

District Health Information System (DHIS) 2 has been adopted by more than 60% of African countries as a National Health Information System. All relevant data are required to be stored and managed on this system. DHIS2 can receive, store and share data from various data sources to other systems and reporting platforms. DHIS2 can exchange data with other software applications and platforms. This interoperability enables collaboration with various software platforms and the integration of data sources from other applications.

## What is SORMAS-DHIS2 Adapter v2.4

SORMAS and DHIS2 will be connected to provide a data exchange between these systems. The purpose of data exchange is to improve the control and management of infectious diseases and to allow timely initiation of disease control.

The objective of the project is to create a dynamic, custom interoperability channel that is specifically designed to transfer data between SORMAS and DHIS2 (SORMAS-DHIS2 Adapter, referred to as Adapter in this document).

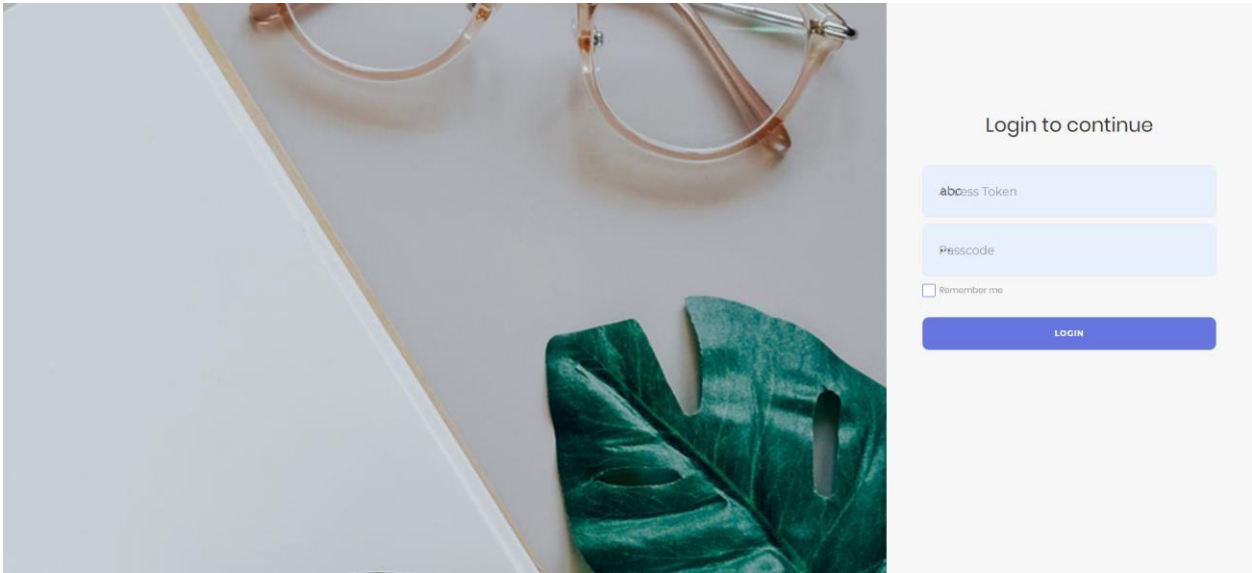
This manual is to guide the user through the use of the Adapter using a step by step approach and screen shots

## Key features and purpose of Adapter v2.4

1. Infrastructure Data Reconciliation Tool
2. SORMAS Adapter v2.4 Aggregate Module
3. SORMAS Adapter v2.4 Case-Based Module
4. Transaction Logger

## ACCESSING THE ADAPTER V2.4

1. Access the login page and input the default login in credentials (Access Token: Administrator, Password: qwerty\_). The default credentials can be changed in the configuration file (kindly refer to the installation manual for more on changing login credentials).



# INFRASTRUCTURE DATA RECONCILIATION TOOL

## About the OrgUnitTool Module

The OrgUnitTool App is where you import the infrastructure data from both systems into the AdapterV2.4 System. The app allows you to edit server configuration, sync refined organisation unit with sormas or dhis. You configure the server URL and parameter in **configuration app**.

## Sync data into AdapterV2.4

⚙️ Active source paired selected = **Master : DHIS2** | **Destination : SORMAS** may edit by clicking the **Edit Config** button

**Maintenance**

Please answer "Setup" if this is the first time the adapter is been installed or the adapter service has just been reinstalled. If not, click next to perform maintenance

New Server?

Perform maintenance ☐ Setup on New SORMAS Server » Next

<< Close Edit Config Prime < Destination Prime < Master Analyse and Match Display Results Sync with PHIR Sync with SORMAS

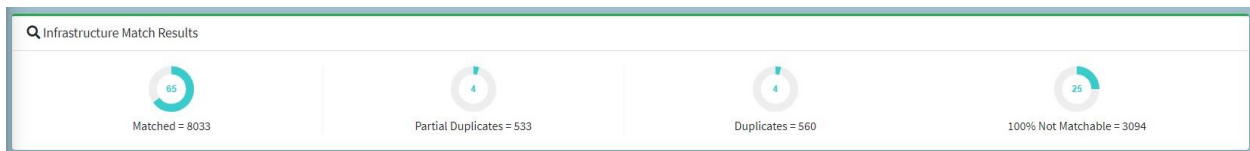
1. Select **organization tool module**
2. Select **operations**
3. Switch the controller to *Perform maintenance* to open perform maintenance tab.
4. Select **Next** button
5. If your servers are not configured, click edit configuration to set them up.
6. Click **Prime < Destination** to import organization unit from SORMAS system.
7. Click **Prime < Master** to import organization unit from DHIS2 system.
8. Click Analyse and Match to trigger the automatic reconciliation logic.
9. You can Select Display results to see result of the analyses.



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Reconciliation logic runs through both infrastructural data from masters and destination, matches the data from regional, district, community and facility level. After which all successfully matched are grouped and attaches UUID which enables the adapter to perform other functions and analyses including the deduplication algorithm, aggregate export as well as case based export.

## Infrastructural data Deduplication.



*While in perform maintenance tab,*

1. Select *Display Results*
2. You can Select *Matched* dialpad to view the successfully matched data.
3. Select duplicate dialpad to open the deduplication app.
4. Select State/Region<sup>1</sup>.

*You are advised to resolve the duplicates at the higher level before going to the lower ones e.g resolve region before district.*

5. Select show details button to open deduplicator.

## DEDUPLICATING ADMIN DATA

To resolve duplicates using the de-duplicator app, you have three options i.e. accept the primary match, accept the secondary match or send to unmatchable list. While in the deduplicator app, follow the steps outlined below;

1. Select see details on any of the desired level.

1

2. Select the resolve icon in front of the duplicate.
3. Select *Accept Duplicate* to match the secondary data.
4. Select *Accept Current Match* to match the primary data.
5. Select *Remove all Matched Elements* to send data to unmatchable list.

## Configure SORMAS with DHIS2 infrastructural data

To configure your SORMAS system with the adapter, you will need to complete these steps.

1. Select organization tool module
2. Select operations
3. Switch the controller to *Perform maintenance* to open perform maintenance tab.
4. Select *Next* button
5. If your servers are not configured, click edit configuration to set them up.
6. Select sync with SORMAS.



*You are strongly advised to complete the deduplications and review the matched data before performing these actions.*

## Setting up brand new SORMAS server with DHIS2 infrastructural data

You can use the adapter to populate your brand new sormas server with dhis2 existing admin data. This also ensures that the SORMAS server has all metadata to communicate with the adapter without performing the above.

To do this, follow these simple steps;

1. Select organization tool module
2. Select operations
3. Switch the controller to *Setup New SORMAS Server* to open perform maintenance tab.
4. Select *Next* button.
5. If your adapter has not been previously configured, click edit configuration to set it up.
6. Click *Prime < Master* to import admin data from DHIS2 system.
7. Select *Sync With New SORMAS*, to configure your new SORMAS server with relevant admin data and infrastructure metadata.

## AGGREGATE MODULE.

Part of the main core feature of your adapter is the ability to aggregate the case based data in sormas system by each disease and synchronize it with your DHIS2 server. This module leverages on the report date of the case i.e. the system aggregates and groups the data using the report date and not the date the data is created or entered on the SORMAS system. This module is divided into two parts:

1. Installation of the SORMAS aggregate module on DHIS2.
2. Synchronization of aggregate data into DHIS2-SORMAS aggregate module.

To carry out the first step, you will need to set some parameters. Follow these steps:

## SETUP SORMAS MODULE PARAMETERS

A01

**Controller Setup**

**Maintenance**  
Please answer "Setup" if this is the first time the adapter is been installed or the adapter service has just been reinstalled. If not, click next to perform maintenance.

New Server?  
Perform maintenance ☒ Setup as new Server

**What will you like to publish to DHIS2 Server from the SORMAS System?**  
Please select all that applies

CASES DATA ☐ Disable Sync ☒ Enable Sync

SAMPLES DATA ☐ Disable Sync ☒ Enable Sync

CONTACT DATA ☐ Disable Sync ☒ Enable Sync

AGGREGATES ☐ Disable Sync ☒ Enable Sync

AGGREGATES ONLY ☐ Disable Sync ☒ Enable Sync

**Next**

A02

**Aggregation lowest level?**  
Please select the lowest level you will like the sync with DHIS2

☐ Admin 2 (State / Region)

☒ Admin 3 (LGA / District)

☐ Admin 4 (Ward / Community)

☐ Admin 5 (Health Facility / Facility)

**Next**

A03

**How often?**  
Please select one, note that too often duration may poss more traffic on both servers

☐ 6-hour

☐ daily

☐ weekly

☐ monthly

**Next**

1. Go to *Admin Console > Maintenance App*
2. Flip the switch to *Setup as new Server*
3. Select Next button
4. Flip the AGGREGRATES ONLY to Enable Sync ref: A01
5. Select Next
6. Choose your desire aggregate level ref: A02
7. Click Next
8. Choose how often you want the synchronization to happen ref: A03
9. Finally, choose how you want your adapter to install these configurations on DHIS2 system

## INSTALL DHIS2 SORMAS MODULE

After setting up the parameters and you are satisfied with all your choices. You will be presented with the final step, which asks you to choose how you want the module installation to be carried out on the DHIS2 system. You can flip the switch to Create Module Automatically, if you will prefer the adapter to carry out this task for you. However, flipping to Download the Installer file Instead will allow developers with more controls of the metadata before importing it on the DHIS2 system (follow the instruction here to manually install on dhis2 system).

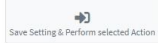
**Can I do ahead and install SORMAS Module on you DHIS2?**  
 You will need to provide an administrator username and password of the DHIS2 server

Download Installer file instead ☒ Create Module Automatically

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Using default DHIS URL found in the system Administrator Username:


Administrator Password

 Save Setting & Perform selected Action

**Can I do ahead and install SORMAS Module on you DHIS2?**  
 You will need to provide an administrator username and password of the DHIS2 server

Download Installer file instead ☐ Create Module Automatically

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 Save Setting & Download installers

**i** You will be asked to reauthenticate on the DHIS2 before carrying out this function, please provide your dhis2 credential with at least access to "meta-data import role" at the provided form before clicking on **Save Setting & Perform selected Action** button.

## PUSH AGGREGATE DATA MANUALLY


Sometimes you may want to manually sync the aggregate data yourself, you may do this also in the maintenance app.

1. Go to *Admin Console > Maintenance App*
2. Flip the switch to *Perform Maintenance*
3. Select *Manually Sync Aggregate Data*

**Controller Setup**

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**Maintenance**  
 Please answer "Setup" if this is the first time the adapter is been installed or the adapter service has just been reinstalled. If not, click next to perform maintenance

New Server?  
 Perform maintenance ☒ Setup as new Server 

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**Maintenance Options**  
 Please click on any of the available options to perform maintenance, you may want to refer to the user manual on this



