# SOP: IQCare to KenyaEMR system migration

# Data Validation/ Verification

**Last reviewed: Jun 2020**

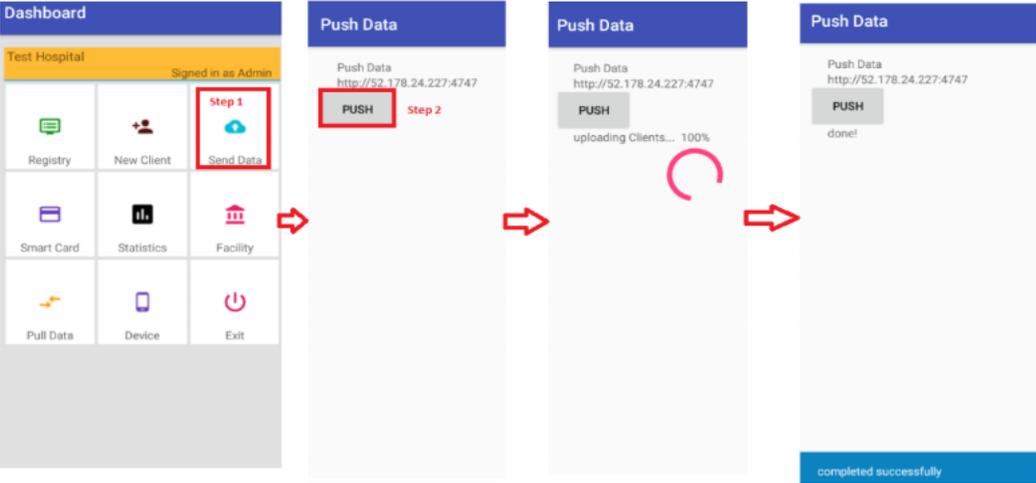| | |
|---|---|
| **Tasks:** | Perform data Validation & Verification during migration from IQCare to KenyaEMR system |
| **Objective:** | To maintain data integrity before, during and after migration. |
| **Who:** | KenyaHMIS/ Service Delivery Partners/ MoH/ Facilities |
| **Required Materials:** | Functional IQCare System, Working KenyaEMR environment, Migration toolkit, Backup disk, Internet |

**Overview**:

*This document outlines data validation procedure during IQCare to KenyaEMR migration validation SOP. The process has been categorized into three distinct phases i.e. Pre-migration, Migration and Post migration phase. The instructions are accompanied by relevant screenshots for clarity where applicable. Links have been provided for external resources as reference.*

**Migration validation summary**

1.  IQCare database backup
2.  LiveHAPI Database backup
3.  Verify IQCare version
4.  Sync all eHTS data
5.  Upgrade DWAPI version to 2.4.8.2
6.  Refresh IQTools database
7.  Extract relevant reports
8.  Setup migration PDI
9.  Perform the migration
10. Perform post migration data validation/ Verification
10. Document results and take appropriate action

# SECTION 1:  PRE-MIGRATION PHASE

| STEP | SCREENSHOT |
|------|------------|
| **Step 1.1: Sync all data from Afya Mobile**<br><br>This procedure applies to facilities that are implementing eHTS (Afya Mobile).<br><br>- Ensure data from all the tablets/ mobile devices are uploaded to the server.<br>- Navigate Afya mobile dashboard<br>- Tap on the "Send Data"<br>- Tap on "PUSH" on the next screen Wait for the data to upload and you get "Successful" feedback. |  |
| **Step 1.2.0: IQCare Database Backup**<br><br>Login into SQL server<br><br>i.      Expand databases<br>ii.     Right click on IQ Care folder and move cursor to tasks<br>iii.    Click on backup link<br>iv.    Click OK button to start backing up notice progress<br>v.     Click OK button on the successful backup prompt<br><br>**NB: Obtain the backup from the indicated path and save in an external drive for additional caution.** |  |
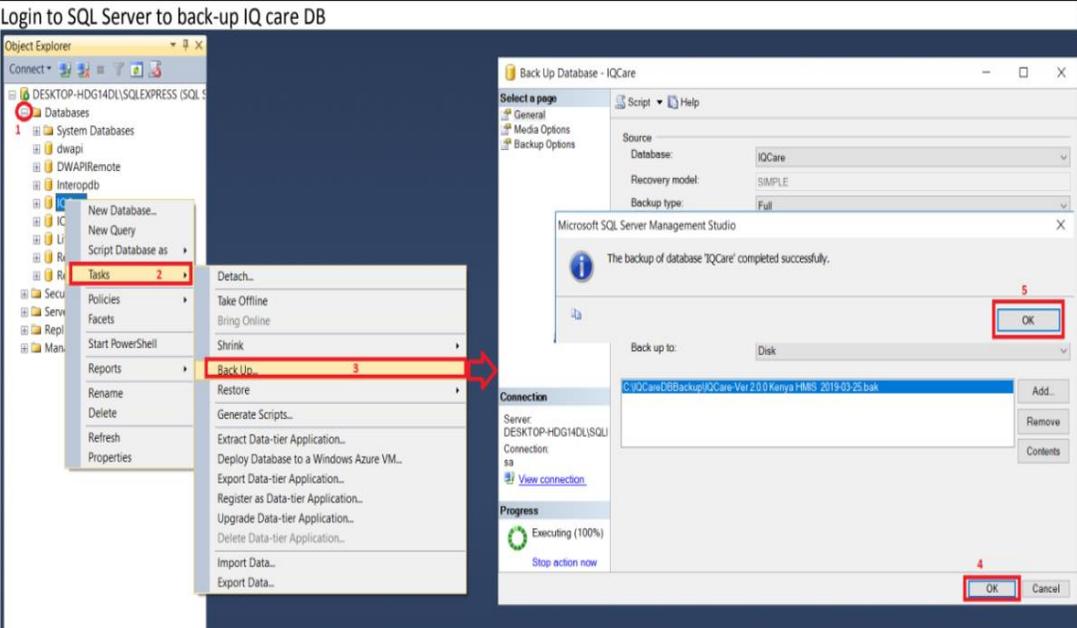
**Step 1.2.1: LiveHAPI Database Backup**

Login into SQL server

    i.        Expand databases
   ii.        Right click on LiveHAPI folder and move cursor to tasks
  iii.        Click on backup link
  iv.        Click OK button to start backing up notice progress
   v.        Click OK button on the successful backup prompt

**NB: Obtain the backup from the indicated path and save in a n external drive for additional caution.**

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**Step 1.3: Verify IQCare version**

-   Launch IQCare page and check for the version as shown.
-   The migration version should be v2.2.1 Patch 2

**NB**: If the version is lower, you need to upgrade IQCare. Obtain the upgrade package from here.
Refer to IQCare upgrade SOP from this link.

**Step 1.4: Update IQTools for migration**

Obtain IQTools update script from [here](#)



- Open SQL server management studio (MSSMS)
- Open new query
- Execute the script against IQTools database
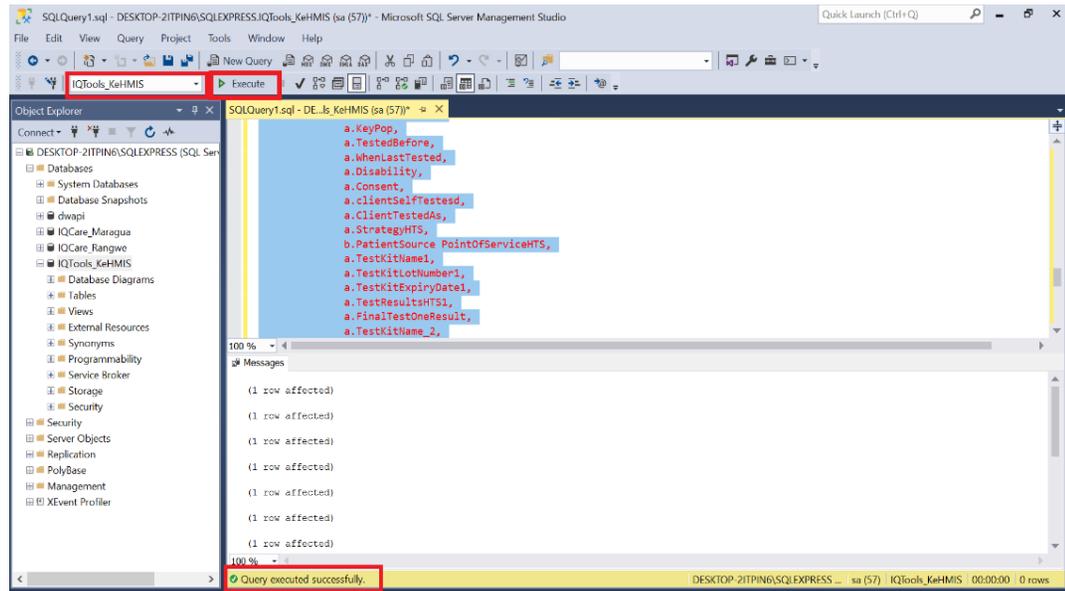
**Step 1.4: Refresh IQTools**

- Launch IQTools and enter the correct login credentials
- Remember to check "Refresh IQTools Data" before you click "Login
- Wait for the refresh to complete and IQTools landing page launches.
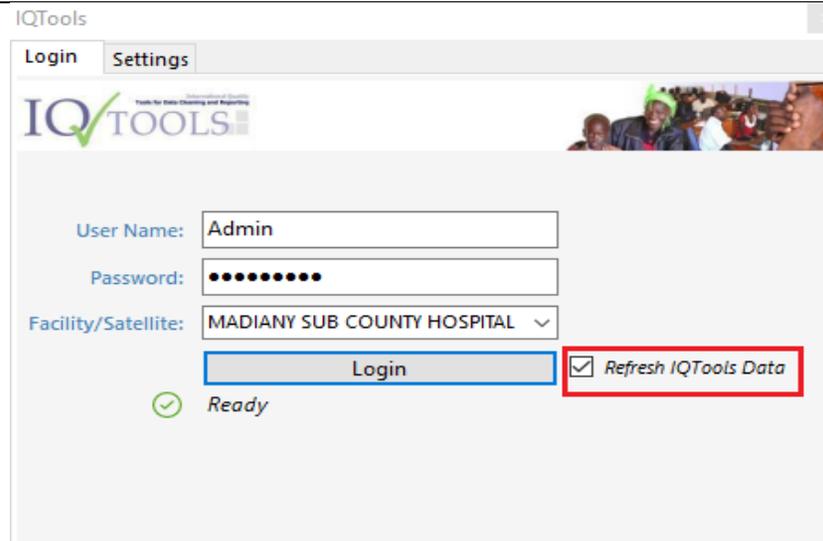
**Step 1.4: Upgrade DWAPI version**

It is imperative to upgrade DWAPI before uploading data to DWH. The valid migration DWAPI version is 2.4..8.2.

- Clear browser cache
- Locate "upgrade DWAPI" icon on the desktop and double click. This requires internet connectivity.
- Go through the process of upgrade till the end

**Alternatively.**

You can download the latest DWAPI version from here and install.


Double-click to upgrade
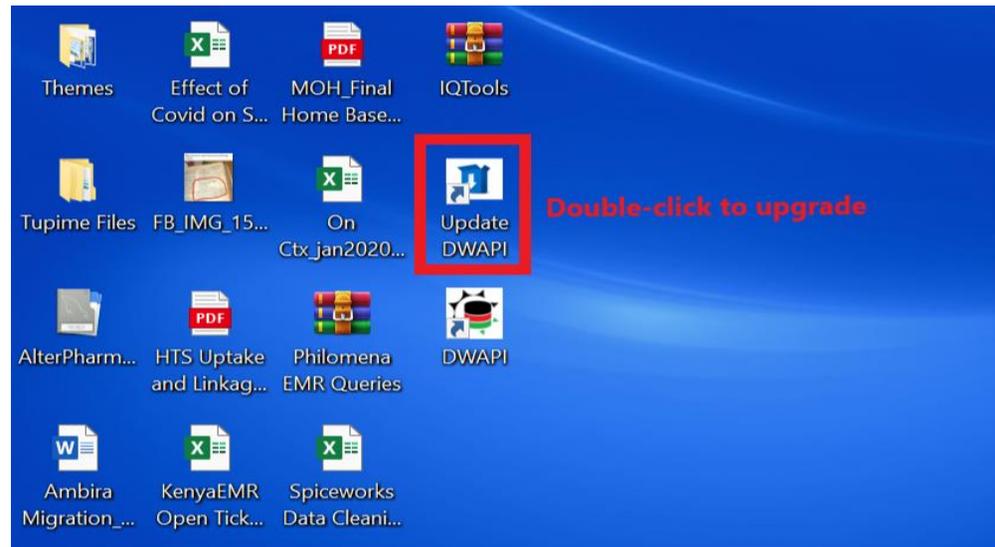
**Step 1.5: Generate reports**

Generate the following reports:

i. MoH 731
ii. ART register
iii. HTS Lab register
iv. DATIM
v. Any other report deemed important for validation.

**NB**: The reports should be stored safely for verification purposes after migration.  An extra copy of the reports should be saved in an external drive for future reference.

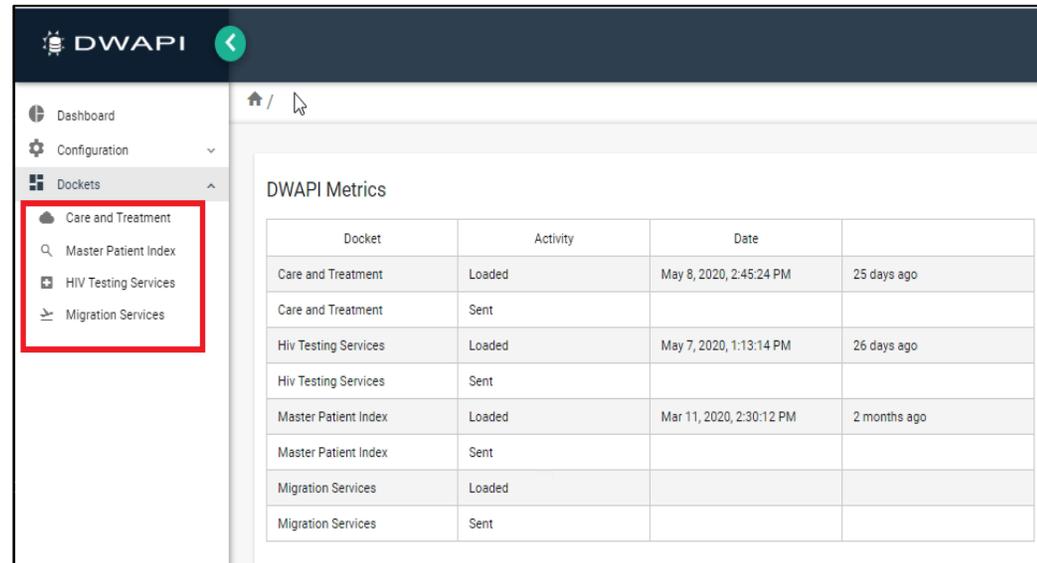**Step 1.6: Upload data to DWH using DWAPI tool**

Upload all the four dockets in DWAPI
tool i.e.
- MPI
- C&T
- HTS
- Migration

NB: Refer to the DWAPI data upload
SOP on how to upload data using the
tool

*Once you upload data via the DWAPI, you can
then check your uploads from this migration
instance:*
https://spotstaging.kenyahmis.org/#/migration/

## SECTION 2: MIGRATION

**Refer to IQCare – KenyaEMR migration Technical SOP [here](#) for guidance on migration environment setup and process.**

## SECTION 3: POST-MIGRATION PHASE

**Assumptions in this phase:**

1. PDI is setup and data transformation completed successfully.
2. KenyaEMR is setup and data importation completed successfully
3. Default facility set in KenyaEMR
4. ETL tables refreshed successfully

NB: Refer to IQCare- KenyaEMR migration technical SOP [here](#) for details on migration environment setup

| STEP | SCREENSHOT |
|---|---|
| **Step 2.1: Generate reports from KenyaEMR**<br><br>Generate the following reports from KenyaEMR<br><br>   i.      MoH 731<br>   ii.     ART register<br>   iii.    HTS Lab register<br>   iv.    DATIM<br>   v.     Any other report deemed important for validation.<br><br>**NB**: The reports should be stored safely for verification purposes after migration. An extra copy of the reports should be saved in an external drive for future reference. |  |
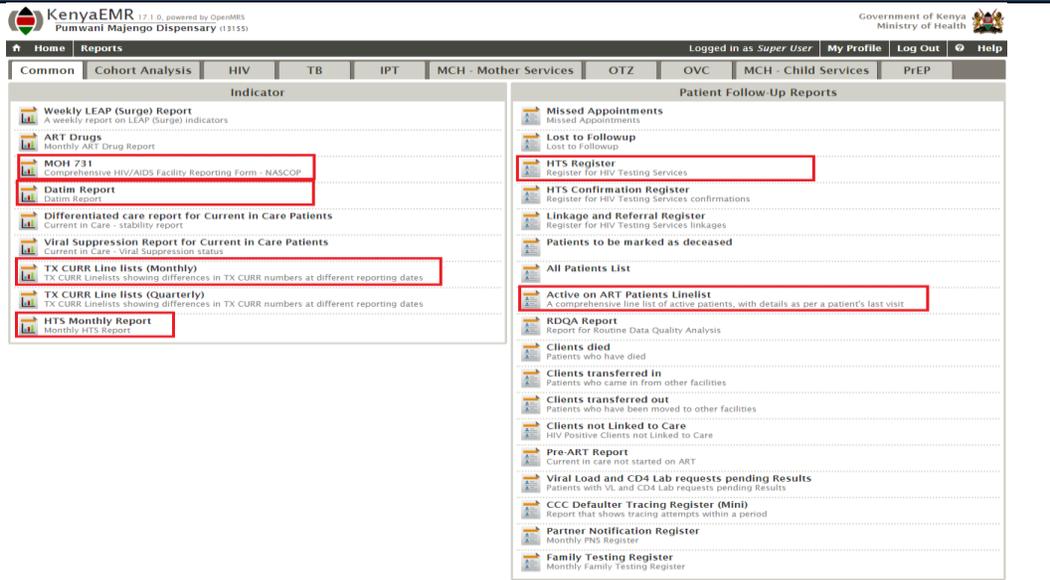
**Step 2.2: Set up DWAPI (for KenyaEMR)**

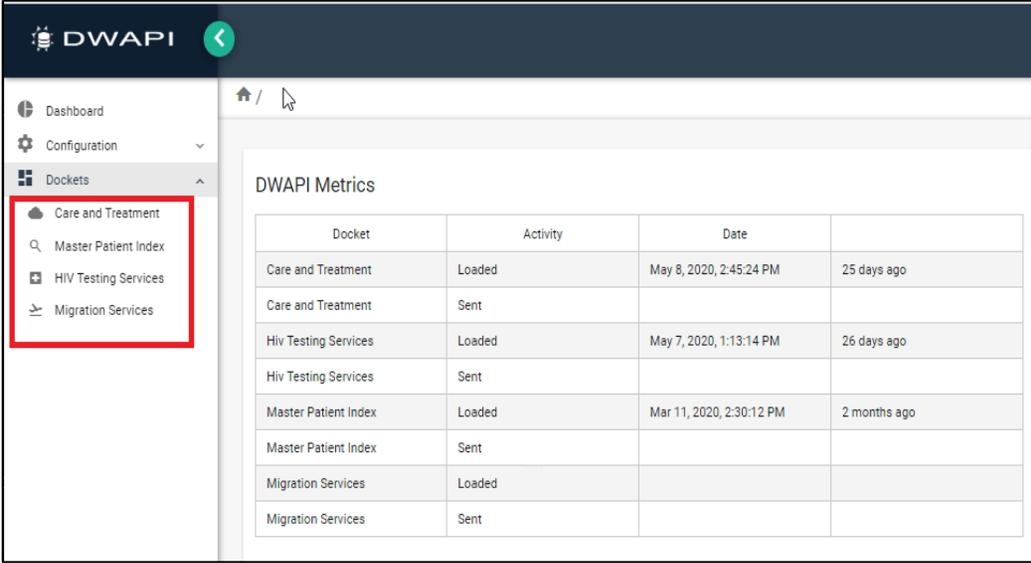Refer to the DWAPI setup SOP on how to install DWAPI for Ubuntu here.

- [Using Docker (on Ubuntu Server)](#)
- [MySQL Configurations for DWAPI (Ubuntu)](#)
- [Using Windows](#)

Once successfully set up, upload the following dockets to DWH

- MPI
- C&T
- HTS
- Migration

*Once you upload data via the DWAPI, you can then check your uploads from this migration instance:* https://spotstaging.kenyahmis.org/#/migration/



**Step 2.3: Carry out data verification/ validation**

- Compare reports from IQCare to the reports generated from KenyEMR and document finding in the Migration Testing Feedback template provided **here**.
- Where indicators from both systems are not matching, Use the compare tool **here** to compare and identify records missing in either of the systems and drill down to specific records for causes leading to the variance

**Step 2.4: Take Action**

Based on data validation and verification results from step 2.3 above, various actions can potentially be taken as follows:
  i.     Proceed with migration and conduct data quality improvements on KenyaEMR platform
  ii.    Undertake data corrections at the source (IQCare) platform then redo the migration
  iii.   Where error is encountered during validation process, contact palladium service desk for support.

At this point you can also go to the Data Warehouse and verify your uploads.