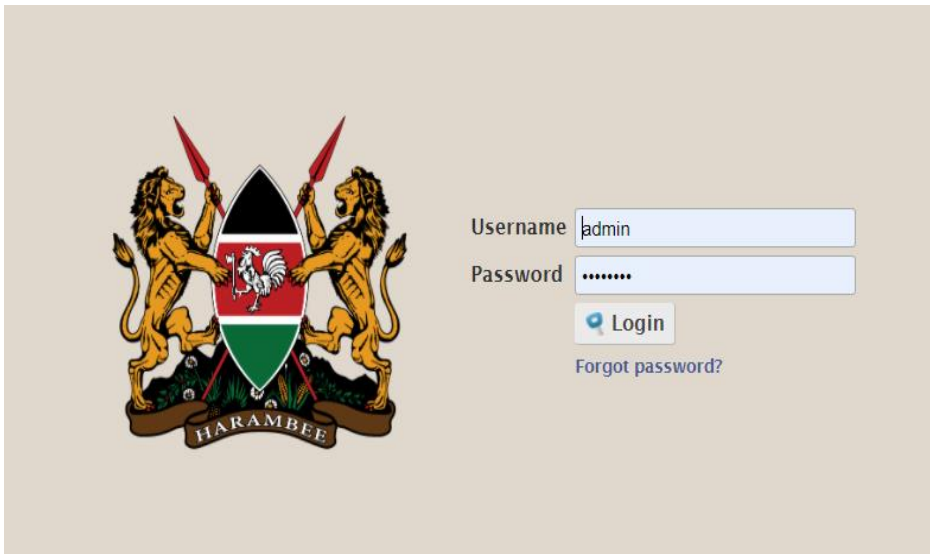# SOP: How to use Intergrated Ushauri module in KenyaEMR

Last updated: 6th Feb 2023

TASK:	Configure KenyaEMR to send and receive Ushauri messages including queue management.
OBJECTIVE:	To achieve exchange bwteeen KenyaEMR and mHealth applications (Ushauri)
WHO:	Facility Admins, Healthcare provider, Data Staff
REQUIREMENTS:	Functional KenyaEMR V. 18.4.2 or above, Internet Connectivity, Properly configuration of Ushauri end points

SUMMARY:

To ease data exchange between KenyaEMR and Ushauri platform, a number of configuration parameters have been introduced in KenyaEMR version 18.4.2 above. The goal is to introduce data exchange module that facilitates transmission of messages to from KenyaEMR platform to Ushauri platform in an efficient and seamless manner. The information exchanged include: Client Apointment dates, Patient registration details Patient Consent and more.

Activity	Screenshot
CONFIGURING KENYAEMR TO SEND MESSAGES FOR USHAURI **Step 1:** Log into KenyaEMR and navigate to the Advanced Settings • Use **admin** credentials to log in to KenyaEMR. • Click home and Select "**Developer**" tab • Click on "**Legacy admin UI**" • Click on "**Advanced Settings**"	

Step 2: Open advanced settings page on KenyaEMR admin.

Once logged in, click **Home** and follow the procedure outline on the diagram shown to open the page.
- Click the **Developers** tab
- Click the **Legacy admin UI**
- On the OpenMRS settings page, under Maintenance, click Advanced Settings.

List of properties to be set in KenyaEMR Global configuration page

Item	Property Name	Description	Default Values
General settings	`kemr.mhealth.middlware`	Configures how KenyaEMR sends messages to mHealth servers. Valid options are IL or Direct	• **IL** - this is the default. It configures the module to work only with IL. All messages generated are sent to the IL. • **Direct** - this is ideal if IL is not utilized in a facility or if the only interoperability use case is for Ushauri. All interoperability messages are sent directly to Ushauri server. • **Hybrid** - works by duplicating messages to both IL and Direct channels.

IMPORTANT:
i. The normal IL schedulers for enrollment and appointments should be running in KenyaEMR for the module to work. Verify this on the Scheduler page.
ii. Ensure the schedulers (**push messages to Ushauri server**) is correctly configured and started.

To ensure KenyaEMR is able to send data to Ushauri, **Push messages to Ushauri server** scheduled task must be configured correctly and started. This scheduler runs in the background and requires internet to send messages.

The scheduler can be found under scheduler management section as shown below.

	Stopped	**Push messages to Ushauri server** org.openmrs.module.kenyaemrIL.UshauriDirectPushTask	Runs every **5 hours** From **11:59:59PM** , Starting on **Nov 28 2021**	31 January 2023 13:30:34 EAT	**No** (manual)
	Start	Stop	Delete		

The scheduler must be set within a reasonable time intervals depending on the desired frequency; however, it should not be set for less than 5 minutes, otherwise the scheduler might take up more system resources and potentially compromise performance of your server.
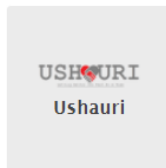
USHAURI QUEUE MANAGEMENT IN KENYAEMR

Step 3: Navigating the module.

The module interface shows the status of messages sent by KenyaEMR to Ushauri.
To access the page, follow the process below:
Steps:
- Click log into KenyaEMR.
- Click Home
- On the home page, locate Ushauri Tab (shown below) and click. The window shown here will be opened.

USHAURI
Ushauri

Ushauri summary

Total data in queue	15	← Shows total number of items in the outgoing queue.
Total errors	0	← The number of queue items with errors

Outgoing queue | **Sent Messages** | **Error queue**

List of message item that could not be sent due to errors
List of messages successfully sent out.
List of message items to be sent out to client

Patient Identifier	Patient Name	Message Type	Visit/Appointment Date	Date created
2497900200	madanda madanda madanda	Registration update	2022-12-05	2023-01-25
2691100021	alek alek alek	Registration	2023-01-26	2023-01-26
1315603276	juliet wambani	Registration	2023-01-26	2023-01-26
1307601156	esther m grace	Registration	2023-01-26	2023-01-26
1376520231	adi ery	Appointment	2023-04-26	2023-01-26
2691100021	alek alek alek	Registration update	2023-01-26	2023-01-26
1307601156	esther m grace	Registration update	2023-01-26	2023-01-26
1307601156	esther m grace	Appointment	2023-02-06	2023-01-26
2691100021	alek alek alek	Appointment	2023-02-07	2023-01-26
1360805643	wa mpesa mwizi	Appointment	2023-01-30	2023-01-27

First Previous 1 2 Next Last

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Management of Error Queue

In the event that some messages are not sent out due to error, KenyaEMR will drop the messages under Error queue.

The following actions can be taken on the items under the error queue.

i. **Re-queue**: This will send the message item back to outgoing queue for resending.

   Steps: Tick the checkbox against the message to select. Click on Re-queue.

ii. **Delete:** This option will drop the message from the error queue. This option should be used with cautions and only for errors in messages that cannot be resolved.
   NB: It is recommended that you always try to requeue for processing messages before deciding to delete.

   Steps: Tick the checkbox against the message to select. Click on Delete.

Ushauri summary

Total data in queue	0
Total errors	0

Outgoing queue | **Sent Messages** | **Error queue**

Re-queue   Delete

Patient Identifier	Patient Name	Message Type	Visit Date	Date created	Error	☐

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Important:
- Where the error is due to missing clients in Ushauri, you need to requeue the messages for reprocessing. This action will force creation of the patient and subsequent message being sent out to Ushauri successfully.

END