TUTORIAL - USING THE OFFLINE SERVER ODK AGGREGATE WITH RASPBERRY SERVER

Tutorial version: 1.0
System used: ODK Aggregate version 2.0.3; ODK Collect version 1.23.3

I. Overview

To setup your pre-configured RaspberryPi and connect it to a mobile device you will need to follow the steps below:

➔ Connect the RaspberryPi and mini router
➔ Configure your phones to connect them to the offline server

The set-up is straightforward and requires no previous knowledge of any of the hardware. This document also contains a section on how to troubleshoot at the end. Downloading data from the server is covered in another tutorial called Tool 2 - Exporting Data for Analysis.

I.1. Connect the RaspberryPi and mini router

The below configuration will be used to link the four devices (RaspberryPi, Router, Mobile Device and Laptop). As the RaspberryPi has already been configured, no additional hardware or software is required.
Connect the RaspberryPi to a power supply using the one of the mini USB charging plugs and do the same with the router. Each should display a light to confirm that it has power (in the case of the RaspberryPi it may be necessary to remove the lid to see the light).

Connect the RaspberryPi to the mini router using a short Ethernet cable.

You can check your setup against the image to the right.

Note: If you are in an environment with irregular power supply, you can also use an USB power bar to power the devices.

II. Connect your mobile device to the router

The mobile device is connected in order to download ODK forms and upload data. If you do not already have ODK Collect installed on the mobile device, please first read Tool15 - Tutorial - How to Setup a Phone for a SENS Survey.

II.1. Connect the phone to the Wi-Fi network

The phones must be in **Wi-Fi mode**: click on the Wi-Fi icon on the status switch widget, so that the icon is blue (1.). If the widget is not visible on your phone home screen, open the Settings menu (2.), click “Connections” or “WIFI” depending on the device (3.), then press the button on the Wi-Fi line to turn it blue for “ON” (4.).

If the Wi-Fi network has never been set up on your phone, you will need to enter the log in details:

To do so, open the Settings menu and press the Wi-Fi line (not on the ON/OFF button) (5.).

Press then on the name of the network you want to connect to (6.) The name of the TP-Link router will be supplied with the equipment as well as the password. Enter the password in the pop-up that appears (7.), and click on “Connect”: 
1.
2. 
3. Connections
4. Wi-Fi
5. Blue
6. TP-LINK_0225
7. Enter password

Connections
Wi-Fi, Bluetooth, Data usage

Sounds and vibration
 Sounds, Vibration, Do not disturb

Notifications
 Block, allow, prioritise

Display
 Brightness, Blue light filter, Home screen

Wallpapers and themes
 Wallpapers, Themes, Icons

Advanced features
 Games, one-handled mode

Device maintenance
 Battery, Storage, Memory, Device security

Apps
 Default apps, App permissions

Lock screen
 Screen lock type, Clock style

Biometrics and security
 Face Recognition, Find My Mobile, Secure Folder

Cloud and accounts
 Samsung Cloud, Backup and restore, Smart Switch

Wi-Fi
ON

DATA USAGE

Flight mode
Turn off calling, messaging, and Mobile data.

NFC and payment
ON

Mobile Hotspot and Tethering

Mobile networks

SIM card manager

Location
High accuracy

More connection settings

LOOKING FOR SOMETHING ELSE?
SAMSUNG CLOUD

FREEBOX_ANNE_SOPHIE PX
FreeWifi
FreeWifi_secure
Moulinet13
Pub St Michel
Livebox-645E
orange
Rives de Notre Dame
SFR-7140
ZyXEL_0439
Add network

TP-LINK_0225
Connected

Password
Enter password

Show password
Auto reconnect
Show advanced options

1 2 3 4 5 6 7 8 9 0
q w e r t y u i o p
a s d f g h j k l
z x c v b n m

#1

English (UK)
II.2. Configure ODK Collect

Open ODK Collect. Press the menu key of the phone: on the Sony Aqua, it is the top right button on with the three dots (1.). Three options will appear, “About”, “Admin Settings” and “General Settings”. Press on “General Settings” (2.).

Select “Server” and “URL. Then enter the IP address of the server, it will be http://192.168.0.100

Username and password will also be supplied with the equipment.

III. Using ODK Collect

For more detailed information on installing and using ODK Collect on your device please check the following document Tool6 - Training Enumerators (Slide 20).
IV. Troubleshooting

If the mobile device does not connect successfully when downloading forms please check the following:

- “http://” precedes the IP address in the ODK collect settings and there should be no text following it. Do not use “https://”.
- Make sure that the telephone is still connected to the router and has not automatically reverted to another network or entered airplane mode.
- Test the connection within close proximity to the router in case the issue is a weak signal due to a large distance between the mobile device and router.

V. Connect your laptop to the router (shortcut if you want to access the server only)

This step needs to be done only to access ODK Aggregate. This is only necessary for users who will manage user access, export data or control the publication of new forms. More information on using ODK Aggregate can be found here: https://docs.opendatakit.org/aggregate-use/

To connect your laptop please follow the steps below:

Connect your laptop to the mini router by clicking the wifi symbol usually at the bottom right hand corner of the screen (second image below). The precise name of the TPlink router and its password will be supplied with the equipment.

Access the ODK Aggregate interface by opening your browser and typing the following IP address http://192.168.0.100

- Your screen should now appear like the first image below. If the IP address cannot be found, please ensure that you are still connected to the router and that the laptop has not automatically reverted to another connection with internet access.

Please note that unlike tools such as KOBO, forms can be uploaded to ODK aggregate in xml format only. (Further details can be found at https://docs.opendatakit.org/aggregate-use/)