

A woman in the foreground is smiling broadly, looking towards the right. She is wearing a grey and white striped blazer over a vibrant pink and orange patterned shawl with gold sequins. She is holding a white smartphone. In the background, two other people are seated at a table, also smiling. The setting appears to be an indoor community meeting or training session with warm, natural lighting.

## Using ODK: A user guide to setting up community mobile monitoring

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# Contents

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1. [Chapter 1: Overview](#)
2. [Chapter 2: ODK the start: How to set up an App Engine account and an aggregate site](#)
3. [Chapter 3: Setting up and Using ODK on your phone](#)
4. [Chapter 4: Designing, building and testing an ODK form](#)
5. [Chapter 5: Retrieving and sending data from phones](#)
6. [Chapter 6: Aggregate - downloading and managing data](#)
7. [Chapter 7: Technological considerations](#)
8. [Chapter 8: Guide to choosing and training data collectors](#)
9. [Chapter 9: Frequently asked questions](#)
10. [Chapter 10: Troubleshooting](#)



# Chapter 1

## Overview and Tips for success

# What is ODK?

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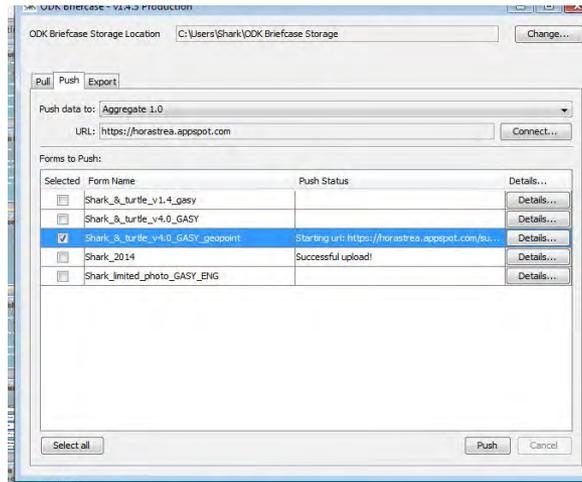
- ODK stands for Open Data Kit – an online data collection tool.
- It only works on Android phones or tablets.
- It's free and easy to use.
- A data collection form is created and then downloaded to the device using the free app “ODK Collect”.
- The form can be filled in using mobile phones or tablets.
- If mobile internet is available, data are sent from phones to the online storage website (ODK Aggregate).
- If mobile internet isn't available, data can be transferred to a computer offline and then transferred using internet at a later time using ODK Briefcase.
- Once uploaded it can be downloaded, analysed and distributed.



# Definitions



**ODK Collect:**  
App on the phone used to fill in the data collection form.



**ODK Briefcase:**  
Software for sending data copied from the phones onto a computer, to upload at a later date when internet is available.

**ODK Aggregate:** Uploading forms for ODK Collect & online data storage.

<span style="margin-left: 20px;">Submissions</span> <span style="margin-left: 20px; border: 1px solid black; padding: 2px;">Form Management</span> <span style="float: right;">Log Out fran@blueventures.org   </span>									
<span style="margin-right: 20px;">Forms List</span> <span style="margin-right: 20px;">Published Data</span> <span style="margin-right: 20px;">Submission Admin</span>									
<span style="margin-right: 20px;">Add New Form</span>									
Title	Form Id	Media files	User	Downloadable	Accept Submissions	Publish	Export	Delete	
<a href="#">Shark &amp; turtle v4.0 Belalanda</a>	Shark_&_turtle_v4.0_Belalanda	4	anonymousUser	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Publish	Export	Delete	
<a href="#">Safidy v1.21_ENG</a>	Safidy_v1.21_ENG	0	anonymousUser	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Publish	Export	Delete	
<a href="#">Shark &amp; turtle v4.0 GASY</a>	Shark_&_turtle_v4.0_GASY	4	anonymousUser	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Publish	Export	Delete	
<a href="#">Shark &amp; turtle v4.0 BELO</a>	Shark_&_turtle_v4.0_BELO	4	anonymousUser	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Publish	Export	Delete	
<a href="#">Shark_PRACTICE</a>	Shark_PRACTICE	0	anonymousUser	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Publish	Export	Delete	
<a href="#">Shark &amp; turtle v1.4 gasy</a>	Shark_&_turtle_v1.4_gasy	9	anonymousUser	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Publish	Export	Delete	
<a href="#">Shark &amp; turtle v4.0 GASY geopoint</a>	Shark_&_turtle_v4.0_GASY_geopoint	4	fran@blueventures.org	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Publish	Export	Delete	
<a href="#">Shark and turtle v1.1 Belo gasy</a>	Shark_and_turtle_v1.1_Belo_gasy	6	anonymousUser	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Publish	Export	Delete	
<a href="#">Safidy v2.1 ENG</a>	Safidy_v2.1_ENG	0	anonymousUser	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Publish	Export	Delete	

# Process Overview

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Step 1: Set-up Google Engine appspot and Aggregate and download ODK Collect

Step 2: Design the data collection form

Step 3: Testing and finalising the form

Step 4: Training for users

Step 5: Start data collection in the field

Step 6: Send data using the phone or ODK briefcase

Step 7: Data can be downloaded from the online storage website or basic graphs can be created online



# Step 1 overview: Setting-up ODK Aggregate and Collect

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- Before you can start collection data you must know how you want the data storage end of the system put together.
- Ensure you know what appspot and aggregate site you are going to use, generate the site administrator and data collector logins.
- See [chapter 2](#) for further details on this process.
- The phones will also need to have these details entered in the settings.
- See [chapter 3](#) for details on downloading ODK and setting up phones.

# Step 2 overview: Designing the form

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This topic is covered in more detail in [chapter 4](#).

- It's important to carefully plan the questionnaire and define the exact data you want to collect before you start working with ODK.
- ODK allows you to collect a variety of data (GPS coordinates, text and photos) in a variety of different ways (text entry, multiple choice etc).
- It can be helpful to define the possible answers to your questions (eg. a list of village names).
- ODK allows multiple languages for the same questionnaire.
- You can include constraints in the form. Such as:
  - A question is only asked if you answered 'yes' to a previous question
  - Different options show up according to a previous selection e.g. village
  - You can only enter a number of 1-100
- The questionnaire/form needs to be created in Excel and then be converted online to an XLM file to upload to ODK Aggregate.

# Step 3 overview: Testing the form and training users

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- See chapters 4 and 8 for further details and tips.
- Test the forms in the office, in the field, and with the final users e.g. community members.
- Make edits based on feedback.
- Training should be given according to the capability of the user.
- Community member users may benefit from training in stages.
- Training community members may take much longer than expected.
- Regular follow-ups are important.

# Step 6 & 7 overview: Sending and analysing data

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- Chapters [5](#) and [6](#) have more information.
- Finalised forms are stored in the app on the phone until they are sent or deleted.
- These can be sent immediately, at the end of monitoring or when you have an internet or Wi-fi connection using either the phone or ODK Briefcase.
- [ODK Briefcase](#) can be downloaded and used to send data from a computer if the phones are in an 'offline' location.
- Data can be exported as CSV files which can be opened in Excel, R, Tableau or published directly as google tables or fusion tables for further analysis and manipulation.

# Tips for success

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## Things to think about before you start:

- What questions do you need answers to, what do you want to find out?
- Who will be collecting these data?
- Why do you want to use phones instead of paper forms?
- Are phones suitable for the context and users?
- What do you want to do with the data?

## Form design:

- Carefully designed, short, simple forms are always better.
- Consider the best way to capture complex information e.g. date and time. Don't take for granted that community users will understand the 24 hour clock or be able to calculate periods of time.
- Drop-down lists of predefined answers can save time and reduce entry errors.

## Equipment/Infrastructure:

- Choose your equipment carefully - e.g. consider waterproof covers; screen size and battery capacity.
- Ensuring the phone has the correct settings and installing phone security is important
- Phone chargers - provide robust solar chargers and ensure problems are reported.
- Ensure there is regular credit on the phone to prevent blocked SIMs.

## Data collectors:

- Choose collectors wisely according to your project needs - e.g. literacy, their position in the village, are they familiar with phones and technology?
- Provide appropriate training and follow-up support, including reference materials.
- Do not take anything for granted - e.g. numeracy/times/24 hour clock
- Sign a contract - outline responsibilities, who owns the equipment (usually remains property of organisation) and procedures and responsibilities if the equipment is lost or stolen.

## Chapter 2

ODK the start: How to set up an App Engine account and an aggregate site

# Ona.io - Alternative to Aggregate

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- An alternative option to Aggregate and therefore no App Engine set-up required
- Before you start setting up an App Engine and Aggregate instance it is worth looking at the functionality of Ona.io to see if this meets your requirement as this will save a lot of time with the initial set-up and has some nice features as part of the basic (free) package, including;
  - 500 free submissions a month
  - 1 private project
  - 15 private forms
  - Basic data visualisations which you can export
  - Webform version of your form.
  - For further details see the site:
  - <https://ona.io/home/>

# Warning

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- Google changes its interface quite frequently. If these instructions are out of date please email [us](mailto:us) to let us know which steps are no longer correct.
- Keep track of all the usernames and passwords you use to create this account. Also keep track of:
  - Aggregate instance name
  - ODK Aggregate Username (gmail password used to register)
  - Application Identifier (name of application ID to enter when updating)
  - Application Title (name of instance)

# Create a new google account and App Engine

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## Set up a google account

- Create a new generic google account you are happy for others to have the login details to.
- Follow the instructions: <https://accounts.google.com/SignUp>

## Set up a google AppEngine account

- Set up a new App Engine account using the new google account you have created on step 1.  
Make sure you are logged into this google account.
- Follow instructions (and confirm identity if needed): <http://appengine.google.com/>

**NB:** Keep a note of all the details you enter in the following steps as you will need to enter them at later stages or when updating from one version to another.

# Create an application

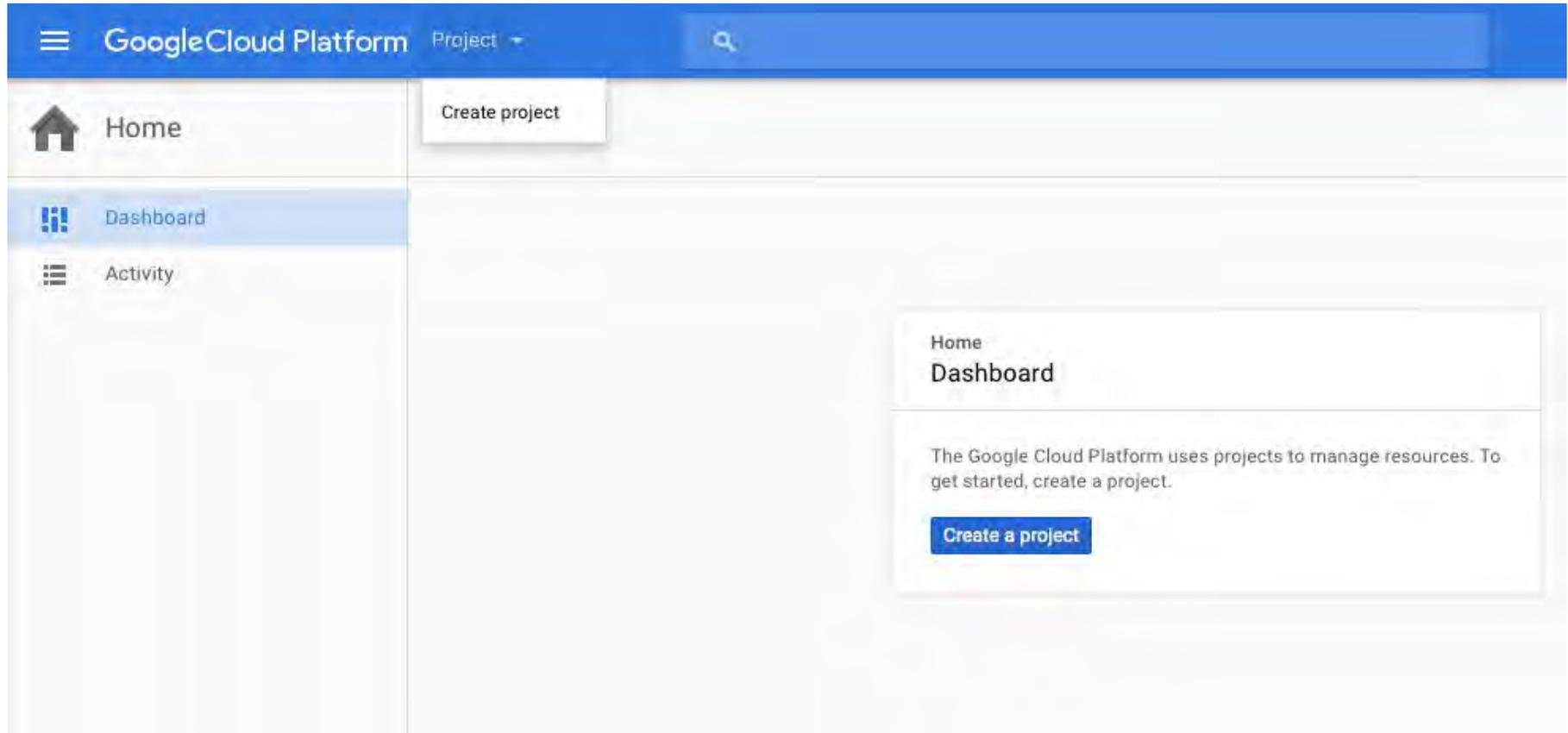
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- Once in the Google Cloud Platform (<https://console.cloud.google.com/home/dashboard><https://console.cloud.google.com/home/dashboard>), link **'Create a project'**, that shows up (see next slide). If this is not the first application created on this account you will need to select the dropdown underneath the name of the current project (see [Create a new project](#)).
- Follow the instructions and give your application a suitable name (see next page).
- If submitted successfully you will be taken to the page with the name of your application at the top.

**N.B.** If you accidentally submit your application before filling in all the data correctly and then have to fill it in again, it may register that your appspot name is already taken. You could try closing the browser window or clearing the cache but you might need to change the appspot name.

# Create a first project

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The screenshot shows the Google Cloud Platform (GCP) dashboard interface. At the top, there is a blue header bar with the text "GoogleCloud Platform" and a "Project" dropdown menu. Below the header, a left-hand navigation sidebar contains three items: "Home" (with a house icon), "Dashboard" (with a grid icon and highlighted in blue), and "Activity" (with a list icon). A "Create project" button is visible in the top right area of the dashboard. The main content area displays a "Home Dashboard" section with the text: "The Google Cloud Platform uses projects to manage resources. To get started, create a project." Below this text is a prominent blue button labeled "Create a project".

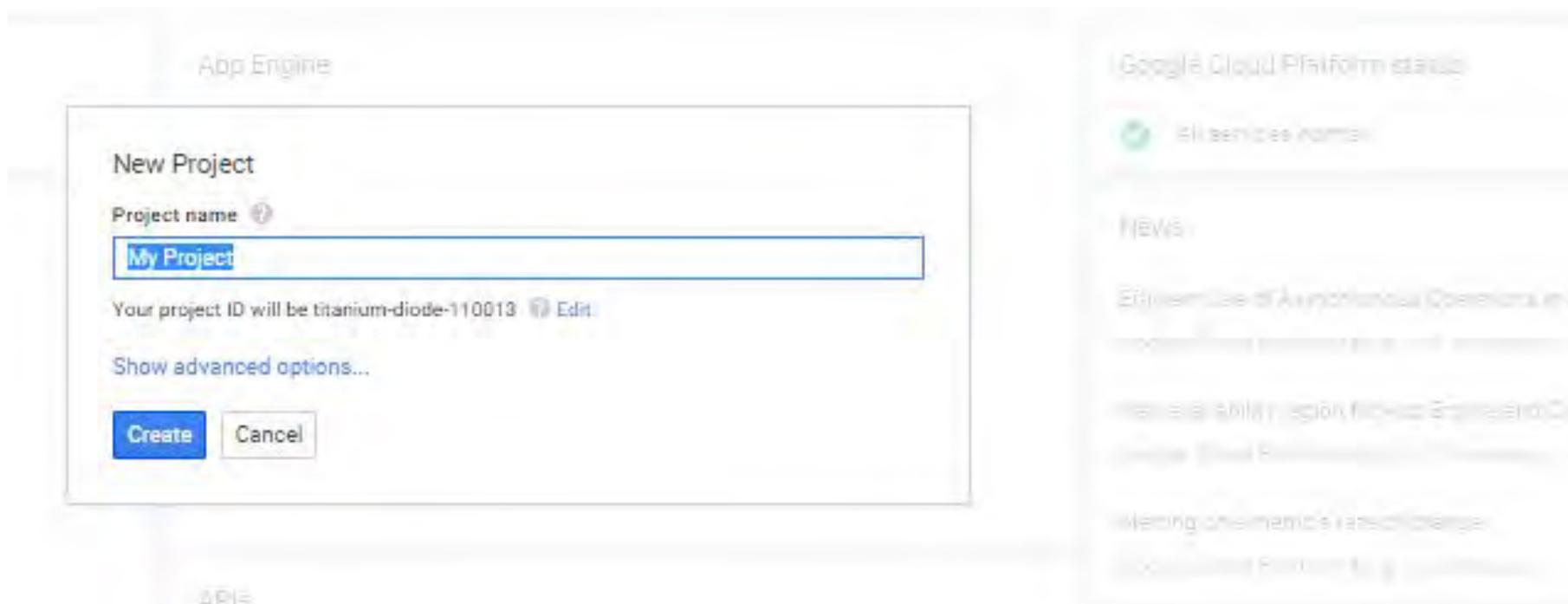
# Create a new project

The screenshot shows the Google Cloud Platform (GCP) interface. The top navigation bar includes the GCP logo, the account name 'bvexped', and a search bar. On the left, a sidebar menu lists various services: App Engine, Dashboard, Services, Versions, Instances, Task queues, Security scans, Quotas, Blobstore, Memcache, Search, and Settings. The 'App Engine' section is active, and a dropdown menu is open, with the 'Create project' option highlighted by a green circle. Below this, a 'RECENT' list shows several projects, with 'bvexped' selected. A 'View more projects' link is also visible. The main content area displays a line chart for 'Total requests' and 'Server (5xx)' over time, with a legend at the bottom. The chart shows a sharp spike in activity around 3:00 PM on August 15th, followed by a drop to zero. The x-axis is labeled with times: Aug 15, 2:45 PM, Aug 15, 3:00 PM, Aug 15, 3:15 PM, and Aug 15, 3:30 PM. The y-axis has values 0.02, 0.04, and 0.06. A legend at the bottom indicates 'Total requests: 0' and 'Server (5xx): 0'. On the right side of the chart area, there are time range filters: 1 hour, 6 hours, 12 hours, 1 day, 2 days, and 4 day.

# Name the new project

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- Keep a note of the name you choose here as you will need to enter it at a later stage. This will determine your appspot name too so be careful (this seems to have changed!). Give your project a name like bvturtledata rather than BV Turtle Data - otherwise your appspot will be bv-turtle-data.appspot.com



# New Instance successfully created

- You will then be redirected to the new appengine page
- You do not need to do anything on this page for now

The screenshot displays the Google Developers Console interface for a project named 'BV Turtle data'. The top navigation bar includes the 'Google Developers Console' logo, a search bar, and user information. The left sidebar shows navigation options: Home, Dashboard (selected), and Activity. The main content area features several cards:

- Project Information:** Project: BV Turtle data, ID: bv-turtle-data (#671004689962).
- Use Google APIs:** A prominent blue card with the text 'Enable APIs, create credentials, and track your usage' and a button labeled 'API Enable and manage APIs'.
- Try App Engine (Managed VM Environment):** A card with a yellow background, describing the use of Managed VMs and providing links to documentation and a Node.js guided walkthrough.
- Try App Engine (Sandbox Environment):** A card with a light blue background, describing the deployment of a Hello World app without infrastructure concerns, with a 'Get Started' button.
- Documentation:** A list of links for Google Cloud Platform Documentation, Google Cloud Solutions, and Google Cloud Tutorials.
- Start with a prebuilt solution:** A card with a light blue background, describing the launch of software packages and a 'Browse packages' button.
- Try Compute Engine:** A card with a light blue background, describing the spin-up of virtual machines and the creation of a guestbook app, with a 'Get Started' button.
- Create a Cloud Storage bucket:** A card with a light blue background, describing the storage of unstructured data with high availability.

An 'Activities (Idle)' window is open in the bottom right corner, showing a successful event: 'Create Project: BV Turtle data' with a green checkmark icon and a 'See all activity' link.

# Download the latest version of ODK Aggregate

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- You will need to download the latest version of aggregate every time you create a new appspot before you can upload details of the new appspot to the developers console.
- Go to: <http://opendatakit.org/downloads/>
- Select the relevant version of Aggregate to download ([ODK Aggregate windows-installer.exe \(534848\)](#) for windows or the osx version if you are using a mac (see next page for mac).
- This will need to be repeated for each new appspot and when updating an existing appspot to a new version.
- Record which version you are running and the date downloaded so you can easily tell if you need to install the next version.

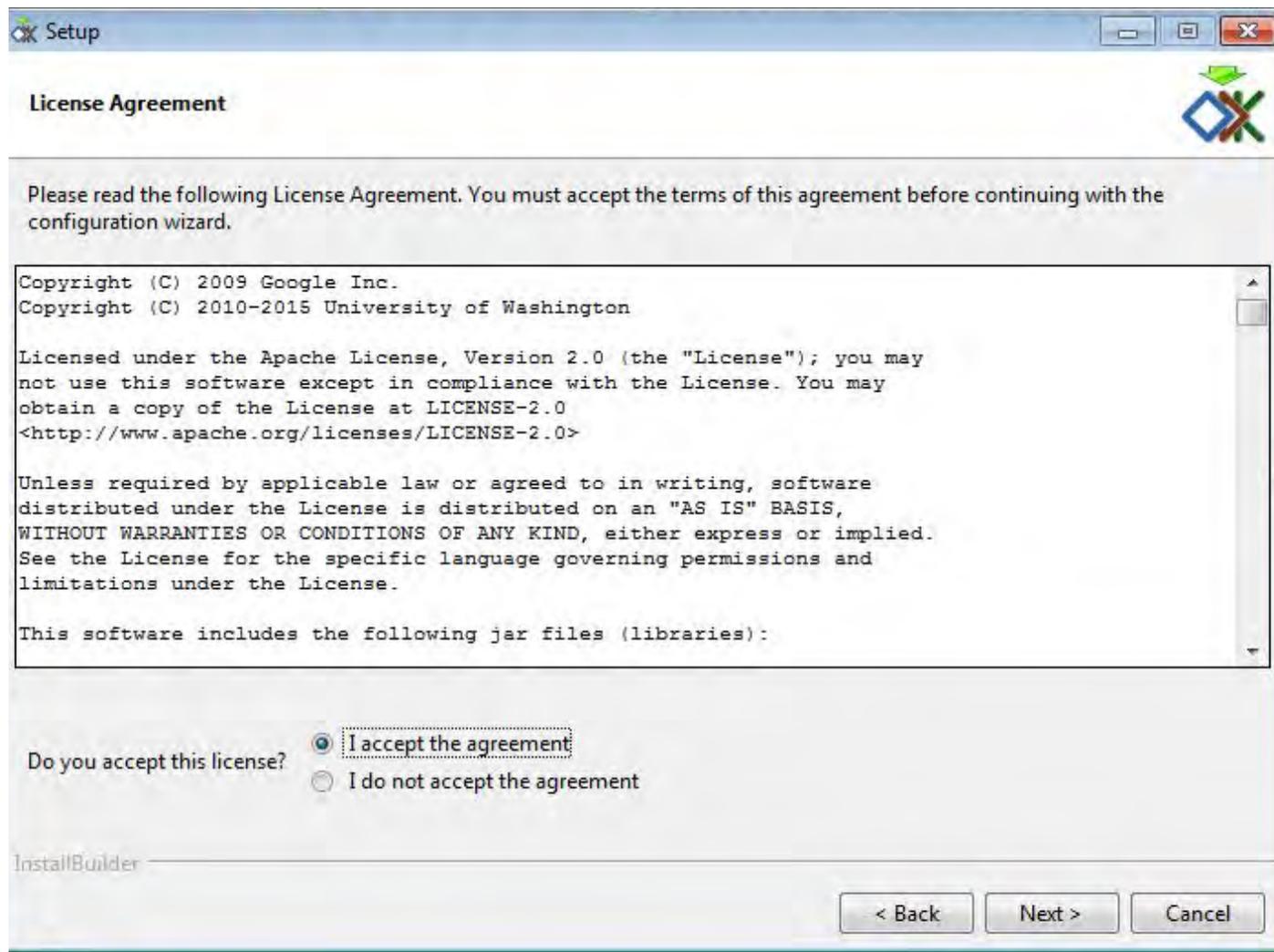
# Installing an Aggregate Instance

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- You will need to have Java installed on your PC to open the file. Install from [www.java.com](http://www.java.com). Open the download and follow instructions to install
- Open the download once complete and. Click on Next and follow the instructions for installation
- Agree to the user agreement.

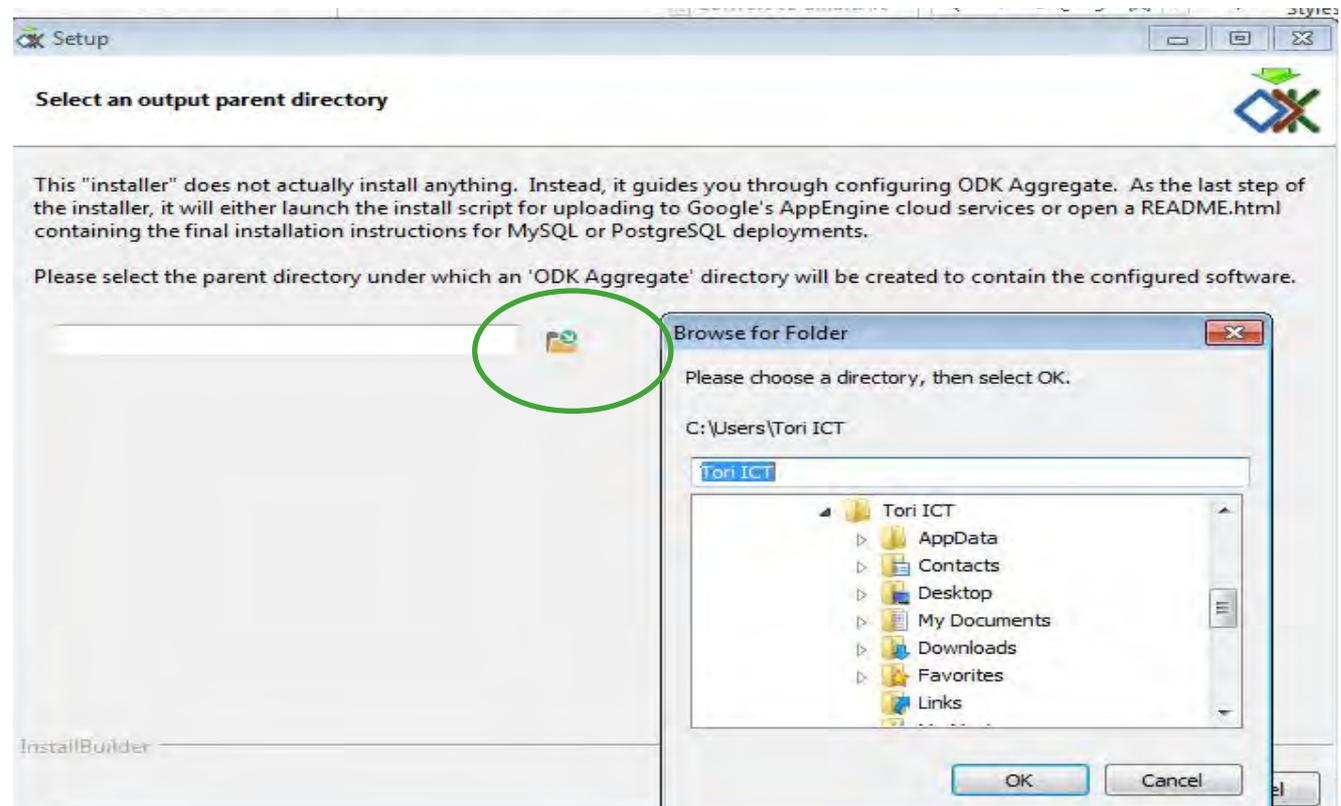


# Accept user agreement

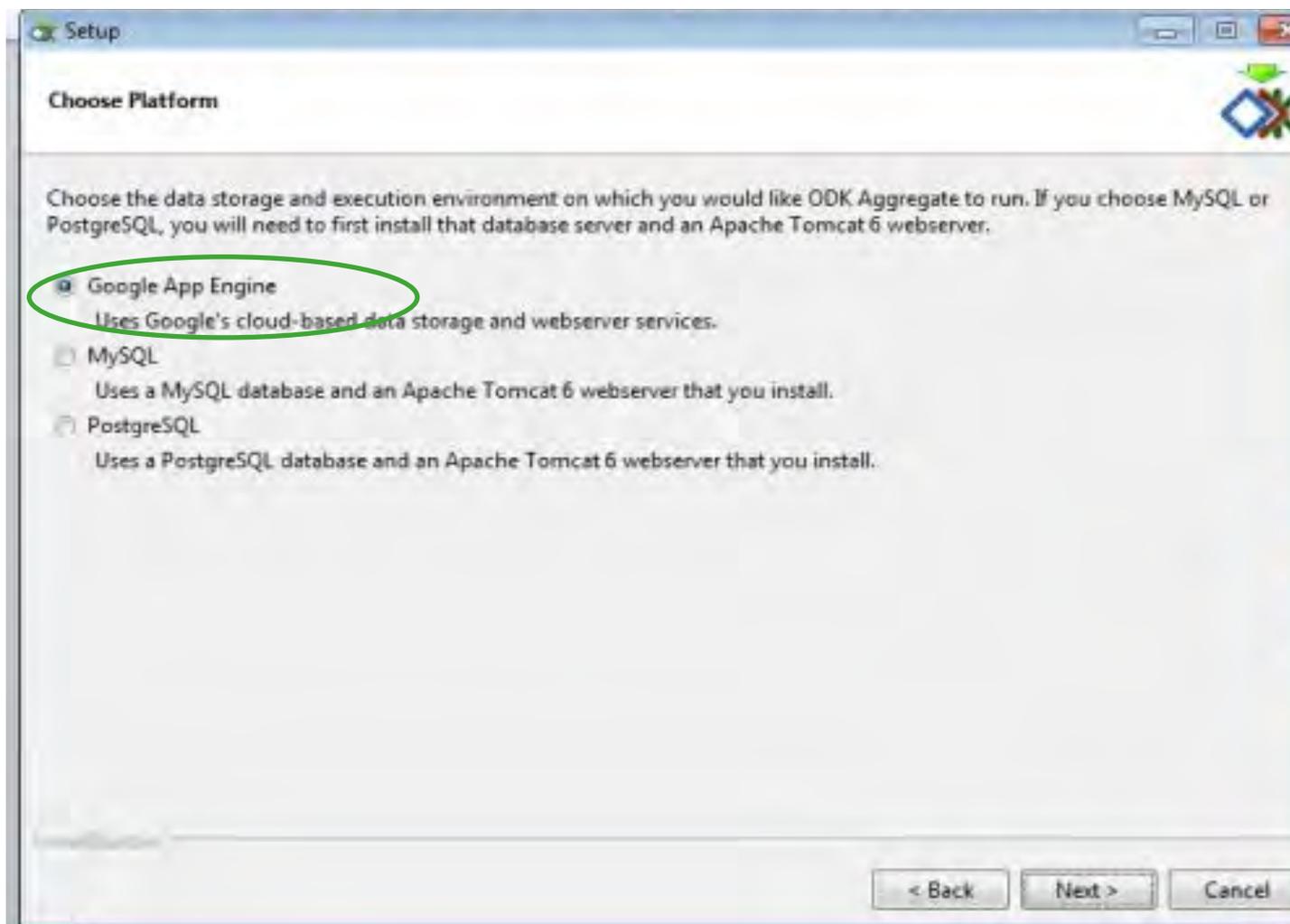


# Installing an Aggregate Instance Continued

- Select parent directory – this can be anywhere on your computer. If you have installed more than one appspot you will need to save this in a different location. The file can be deleted once installation is complete



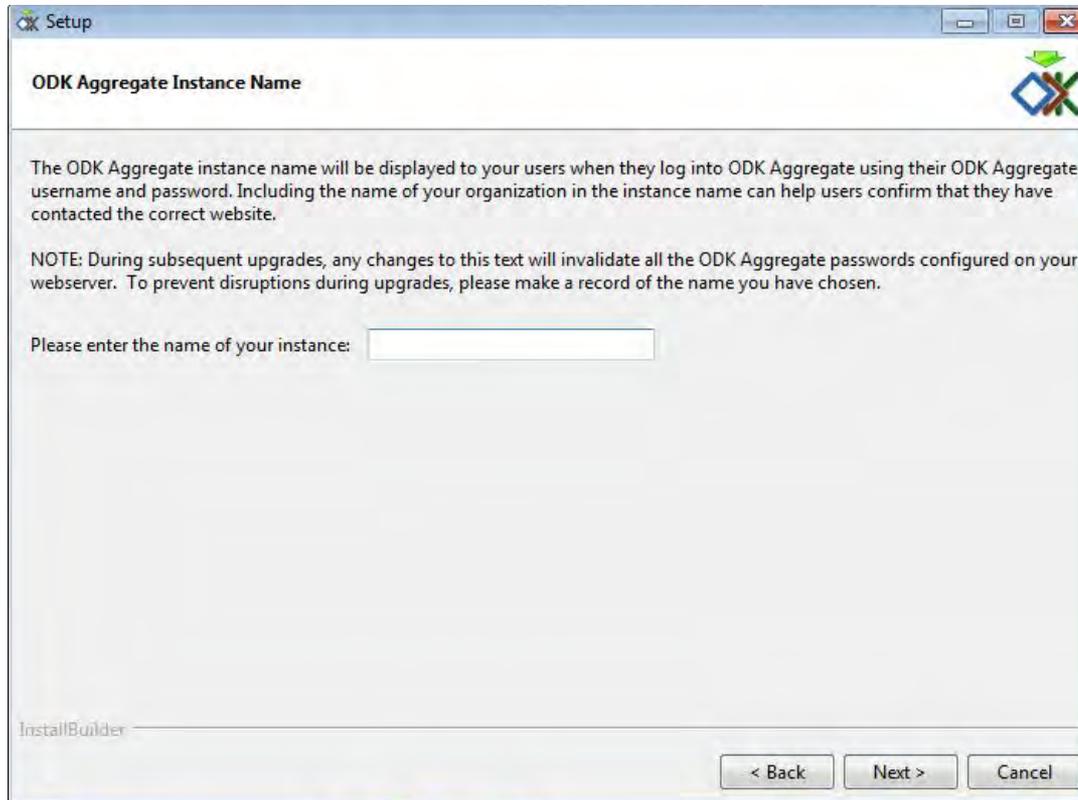
# Select Google App Engine



# Name the 'Instance'

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- Enter name of your instance e.g. BV ODK Demo (the same one you just entered as the name in the Google Developers Console)
- If you are updating your version of aggregate use the name you created when you set it up



The screenshot shows a Windows-style window titled "Setup" with a standard title bar (minimize, maximize, close buttons). The window content is as follows:

**ODK Aggregate Instance Name** 

The ODK Aggregate instance name will be displayed to your users when they log into ODK Aggregate using their ODK Aggregate username and password. Including the name of your organization in the instance name can help users confirm that they have contacted the correct website.

NOTE: During subsequent upgrades, any changes to this text will invalidate all the ODK Aggregate passwords configured on your webserver. To prevent disruptions during upgrades, please make a record of the name you have chosen.

Please enter the name of your instance:

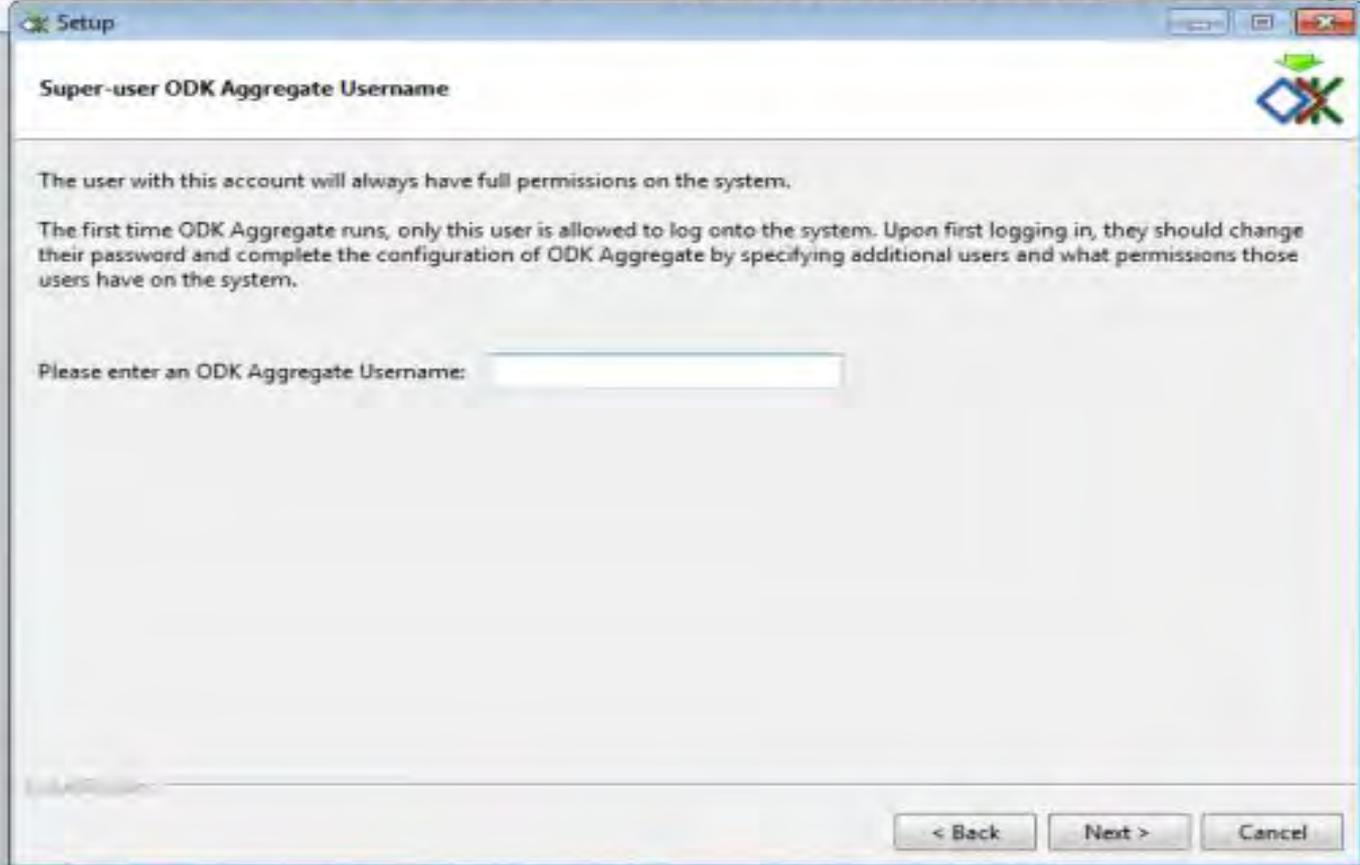
InstallBuilder

< Back    Next >    Cancel

# ODK Aggregate Username

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- Enter the Odk Aggregate username. This is the username of the gmail account created in the first stages e.g. youraccount@gmail.com



The screenshot shows a Windows-style window titled "Setup" for ODK Aggregate. The window has a title bar with standard minimize, maximize, and close buttons. The main content area is titled "Super-user ODK Aggregate Username" and contains the following text:

The user with this account will always have full permissions on the system.

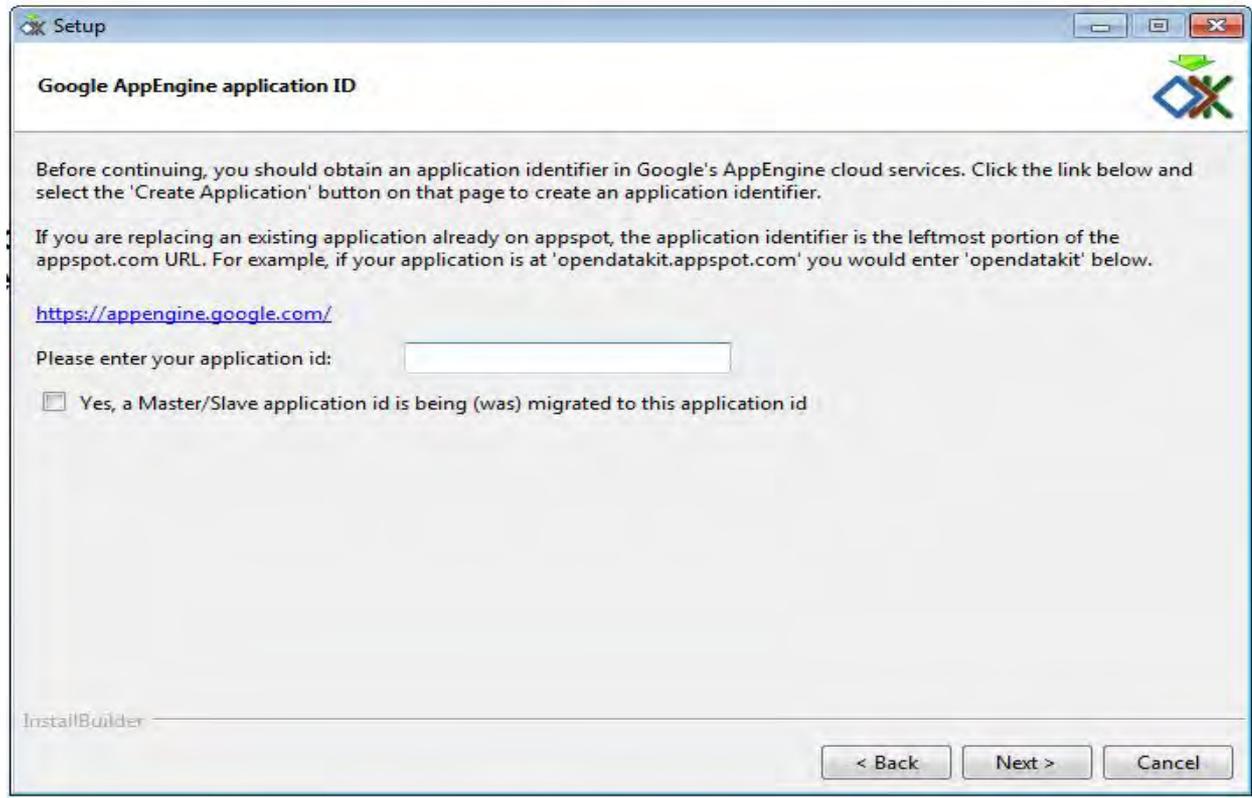
The first time ODK Aggregate runs, only this user is allowed to log onto the system. Upon first logging in, they should change their password and complete the configuration of ODK Aggregate by specifying additional users and what permissions those users have on the system.

Please enter an ODK Aggregate Username:

At the bottom right of the window, there are three buttons: "< Back", "Next >", and "Cancel".

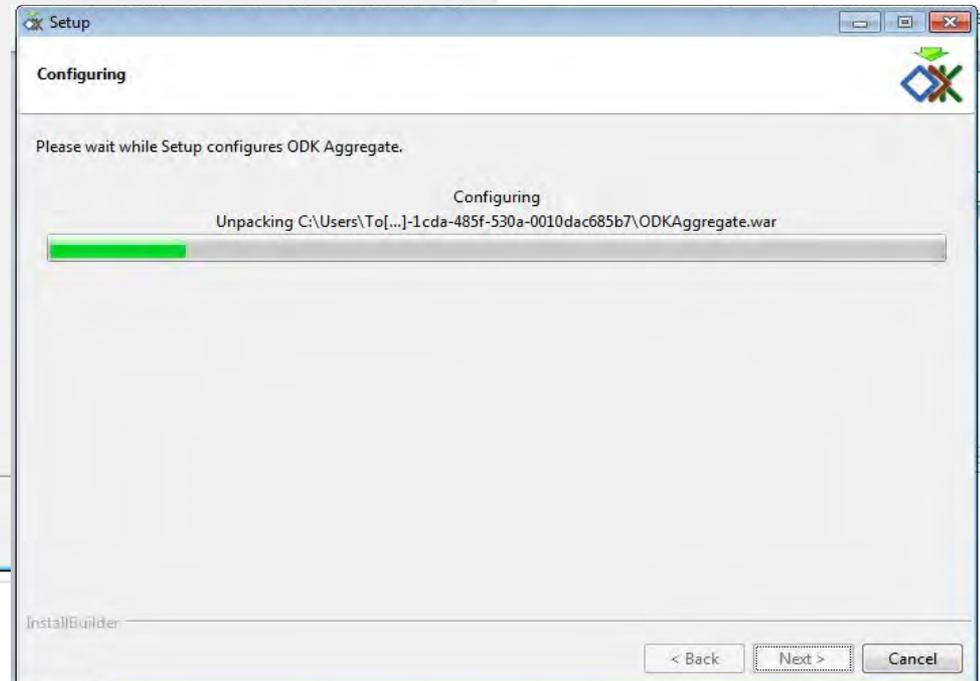
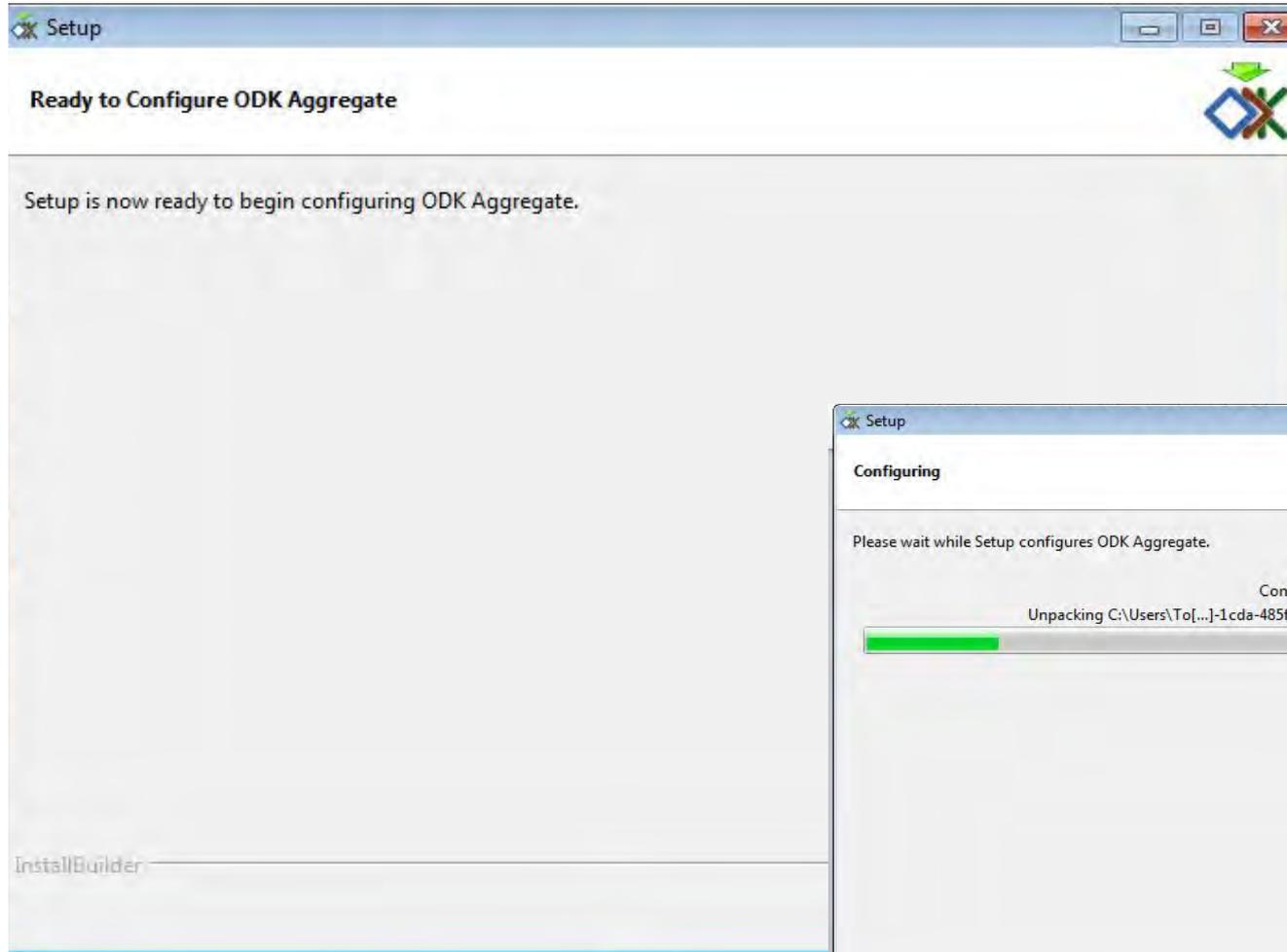
# Application ID

- Enter application ID
- This is what you want the the appspot address to be but without the @appspot.com part e.g. yourprojectname

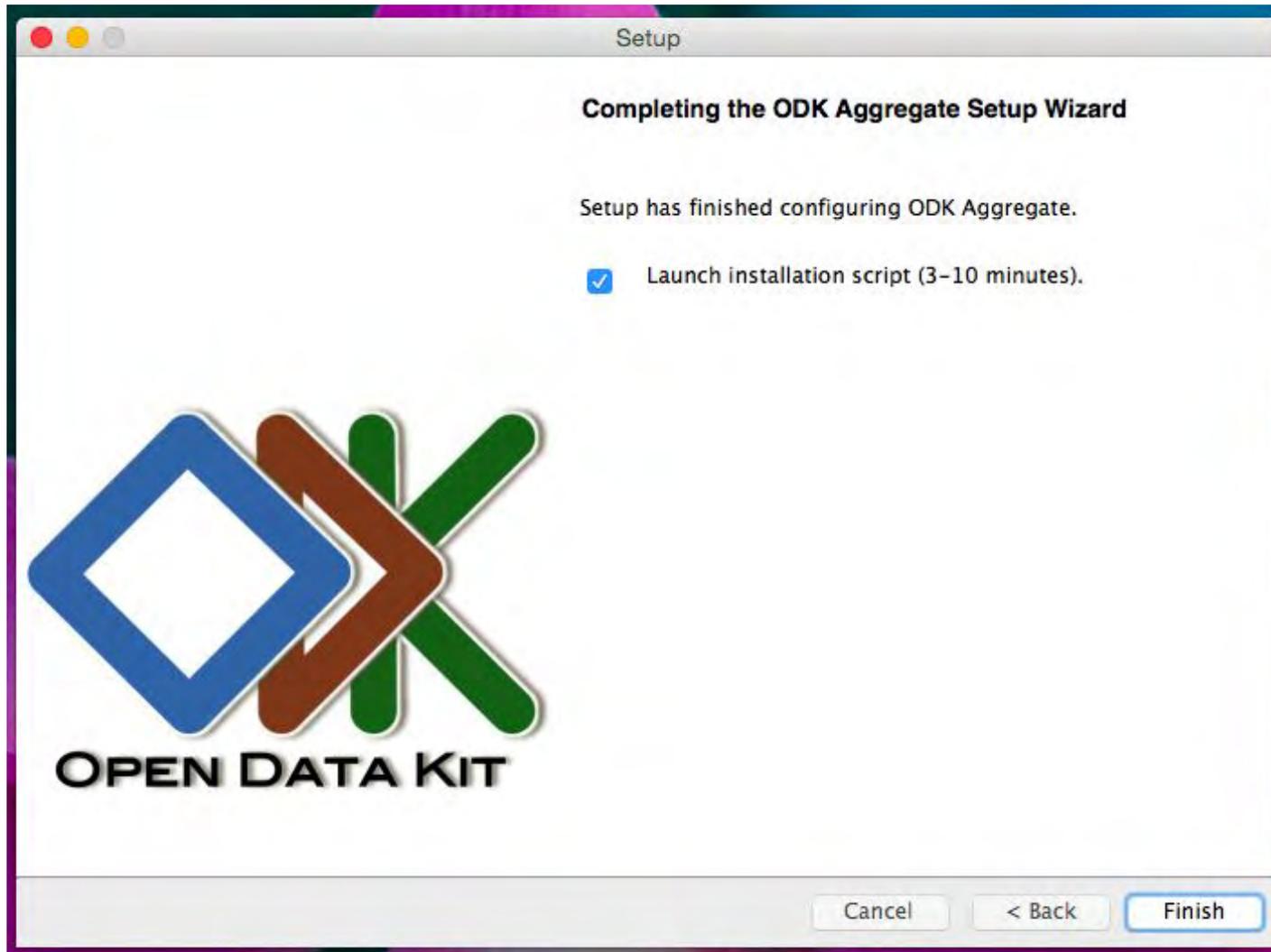


The screenshot shows a Windows-style window titled "Setup" with a standard title bar (minimize, maximize, close). The window content is titled "Google AppEngine application ID" and includes a small icon of a blue diamond with a green arrow and a red 'X' in the top right corner. The main text reads: "Before continuing, you should obtain an application identifier in Google's AppEngine cloud services. Click the link below and select the 'Create Application' button on that page to create an application identifier." Below this, it says: "If you are replacing an existing application already on appspot, the application identifier is the leftmost portion of the appspot.com URL. For example, if your application is at 'opendatakit.appspot.com' you would enter 'opendatakit' below." A blue hyperlink "<https://appengine.google.com/>" is provided. The prompt "Please enter your application id:" is followed by a white text input field. Below the input field is a checkbox labeled "Yes, a Master/Slave application id is being (was) migrated to this application id". At the bottom left, the text "InstallBuilder" is visible. At the bottom right, there are three buttons: "< Back", "Next >", and "Cancel".

# Configuration



# Wait....



# Using the AppEngine Updater - 'Get token'

- Enter the email used to create the App Engine
- Click on 'Get token'



ODK Aggregate App Engine Updater - version 2016-04-21

Email of Google Cloud Platform account (the owner of your App Engine):

Code from Google's account authorization web page (granting access for Google App Engine appcfg):

After entering the Email address, Click on "Get Token."

You will be redirected to a browser to obtain a code from Google's account authorization web page. Copy that code into the pop-up window that will appear, and click OK to proceed.

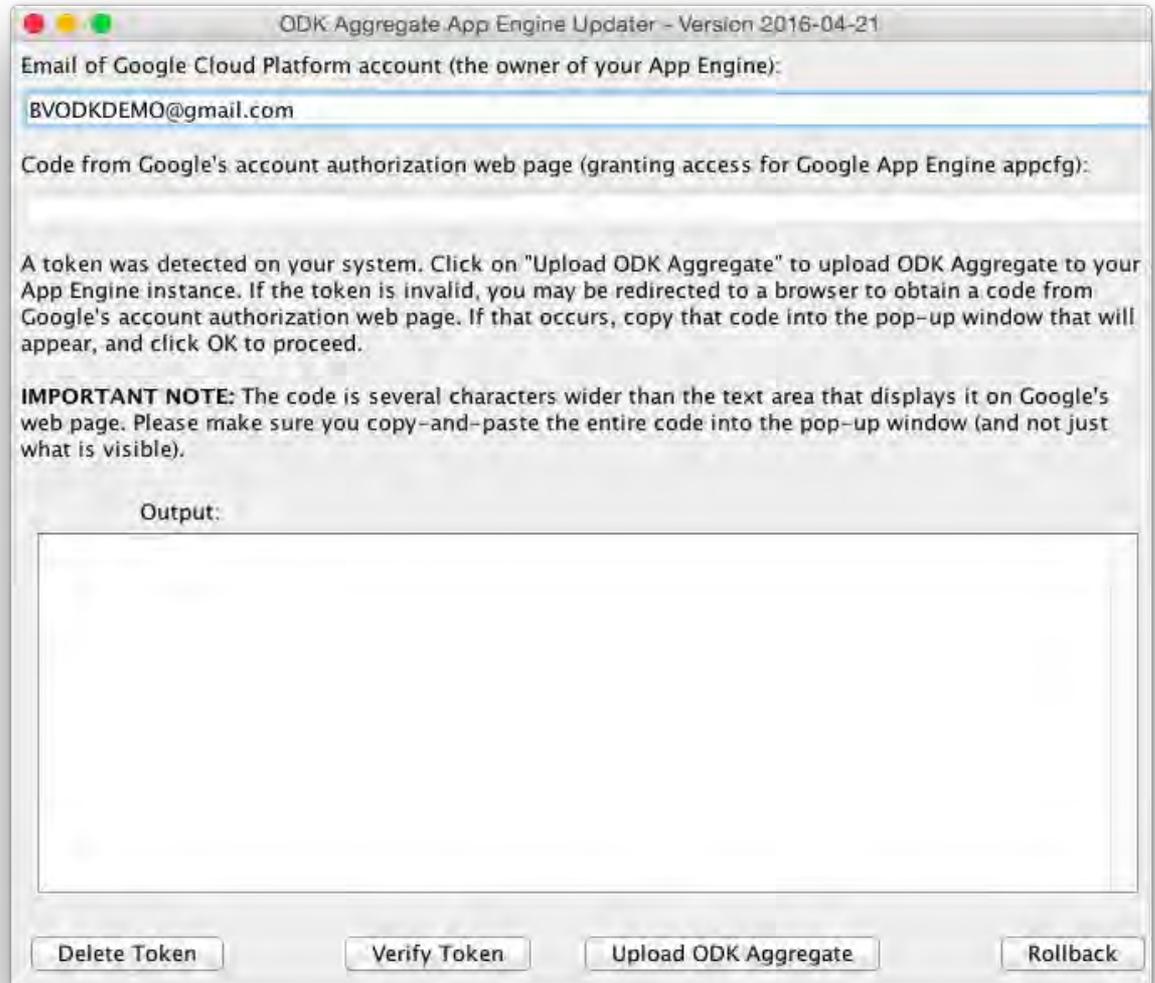
**IMPORTANT NOTE:** The code is several characters wider than the text area that displays it on Google's web page. Please make sure you copy-and-paste the entire code into the pop-up window (and not just what is visible).

Output:

Delete Token    Get Token    Upload ODK Aggregate    Rollback

# Verifying token if token already exists

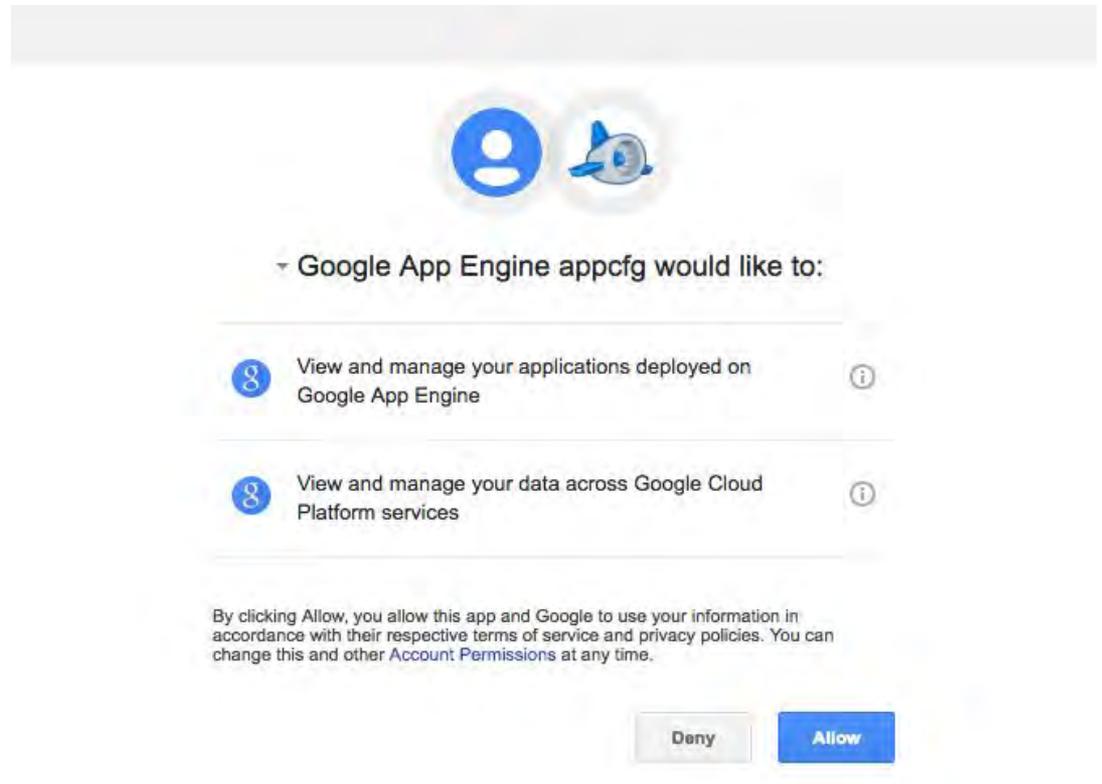
- If you have uploaded an instance before it may detect an existing token.
- If the option to 'Get token' is not available click 'Verify token'.
- Some text will appear in the Output box. If this ends with an error message then press 'Delete token' and then 'Get token' again.



# Google app permissions

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- A new browser window should pop-up asking for Google App permissions.
- If you are logged into google with multiple accounts click on the correct Google account (same as the one you entered in the box).
- Click 'Allow'



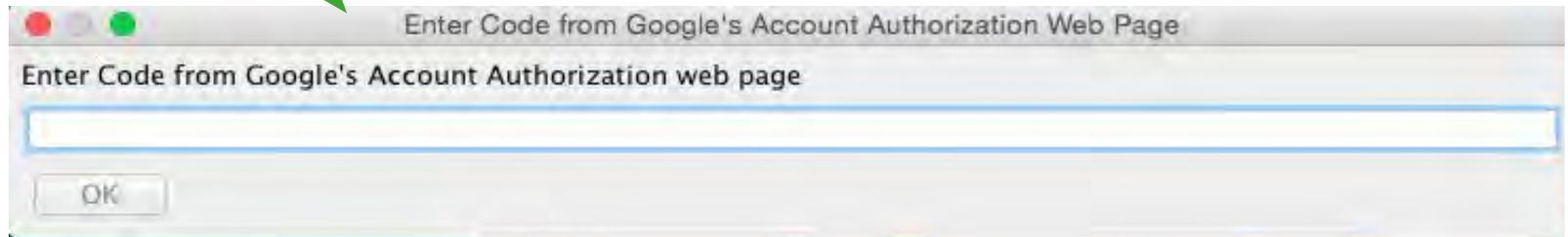
# Application code

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- Then a screen with the application code will appear, as well as another screen to copy and paste the text into.



Please copy this code, switch to your application and paste it there  
4/yI4dEzNtOBzaSQMtXOaUDXE\_NW9cp4\_5kAzD0Ocg3v8

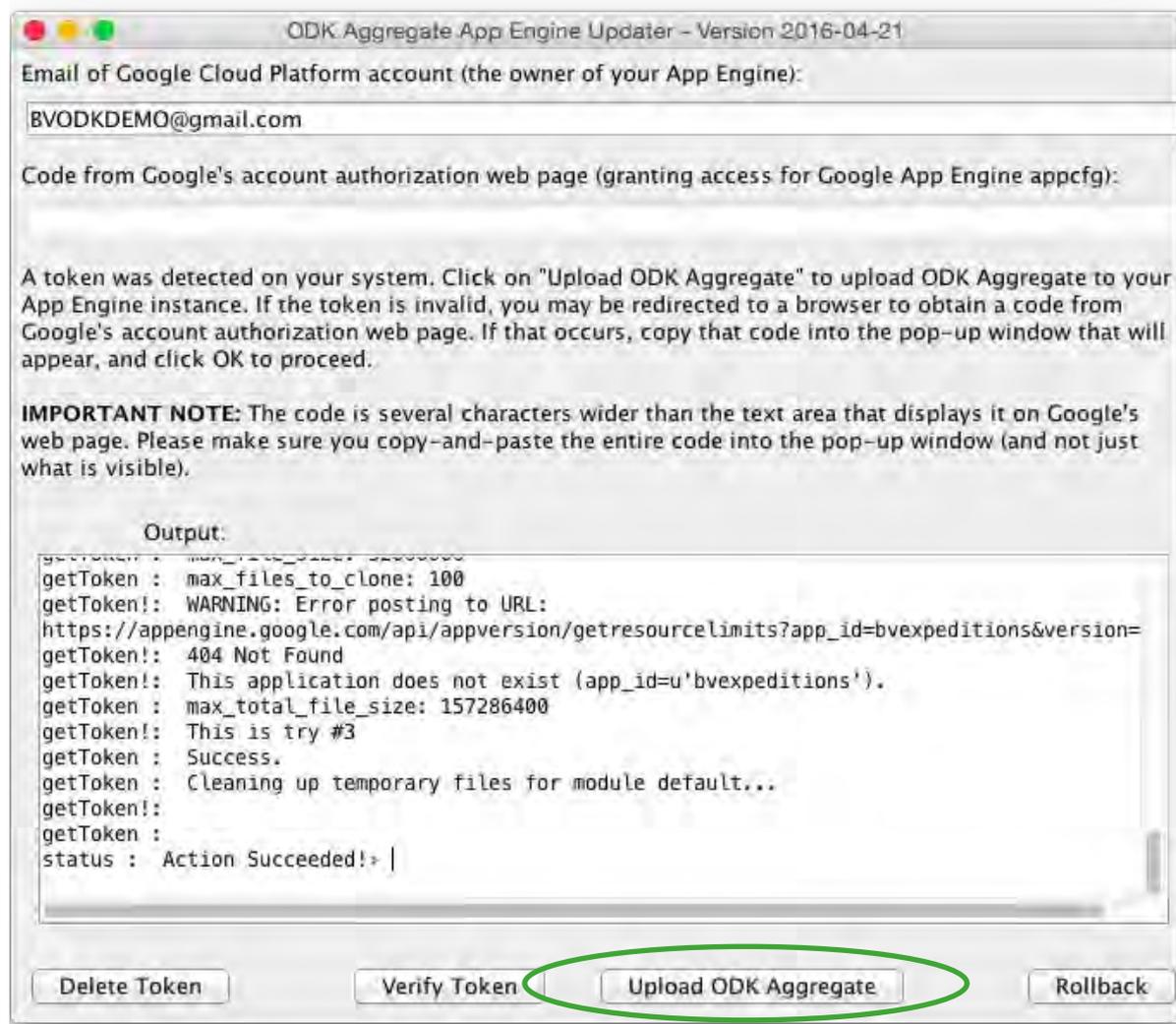


# Troubleshooting - for 'Get token'

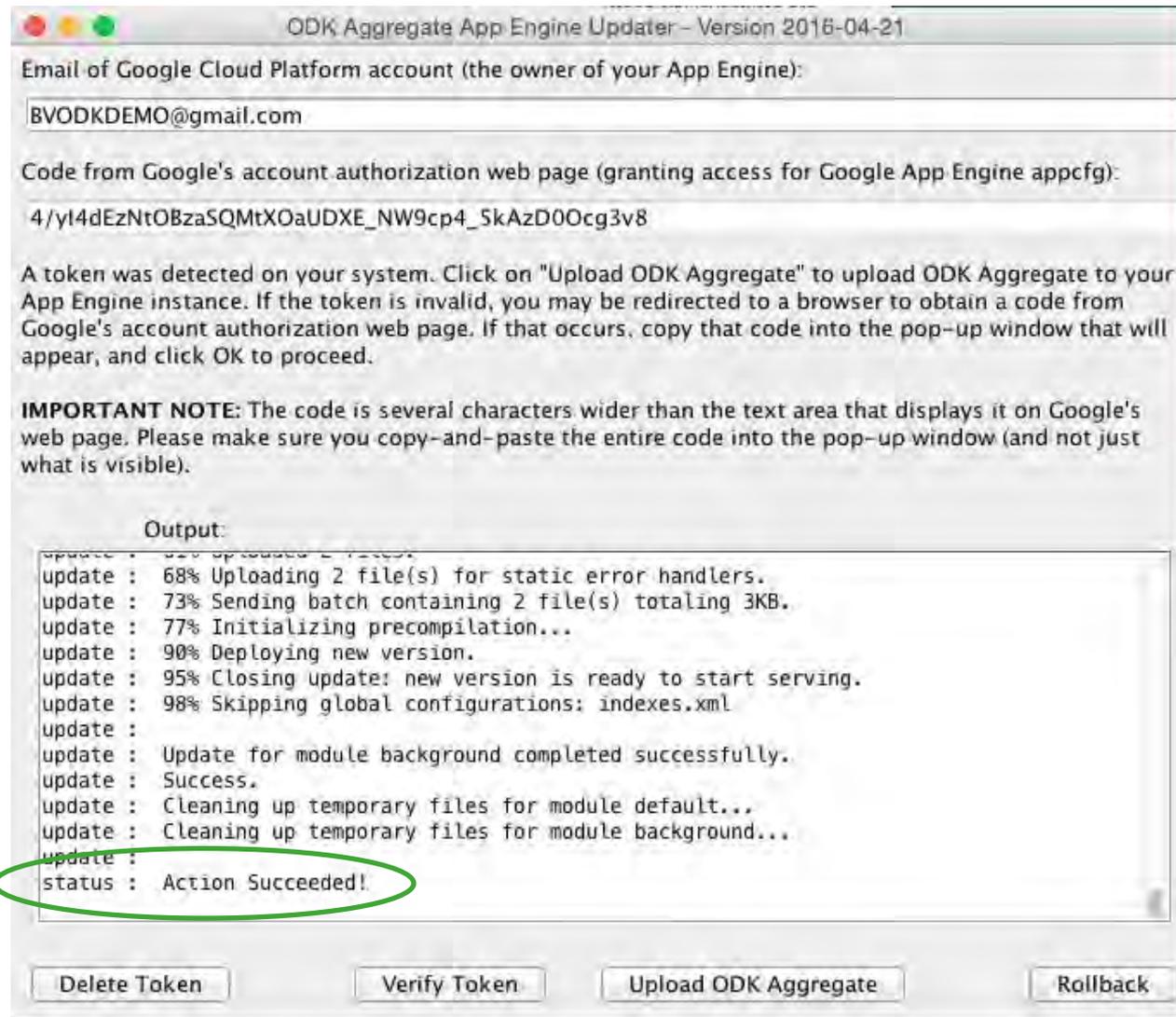
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- If the pop-out window doesn't open then close the Java window and reopen it again from the ODK aggregate site (see next slide for the correct file to open).
- If the pop-out window doesn't open the first time (I had problems on a Mac) close the java window and navigate to where you saved the ODK Aggregate folder (in the first few steps).
- Open the file called ODK Aggregate...updater. This will open the Java window again.
- Click on 'Get token' and hopefully the pop-up window should open.
- If when you reopen the window and a token is already detected, click on 'Forget token' and repeat the 'Get token' process.

# Upload ODK Aggregate

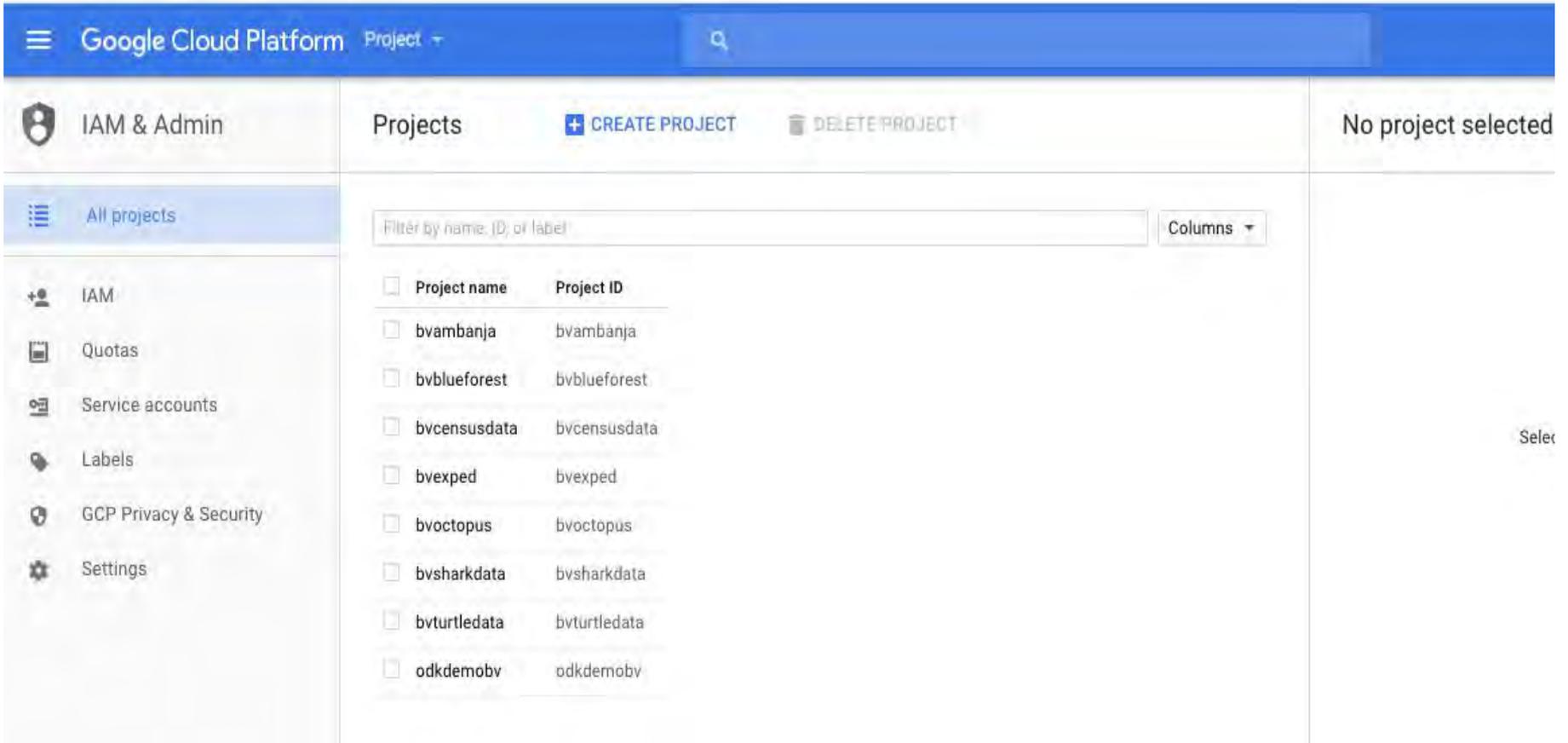


# Successfully uploaded



# First time installation: Check on the Application now shows up in your list of projects

Go to :<https://console.cloud.google.com/iam-admin/projects?authuser=2> and check your new appspot shows up under the list of projects:



The screenshot displays the Google Cloud Platform IAM & Admin console. The top navigation bar includes the Google Cloud Platform logo, a search bar, and a 'Project' dropdown. The left sidebar shows the 'IAM & Admin' menu with options for 'All projects', 'IAM', 'Quotas', 'Service accounts', 'Labels', 'GCP Privacy & Security', and 'Settings'. The main content area is titled 'Projects' and features a '+ CREATE PROJECT' button and a 'DELETE PROJECT' button. A search filter is present with the text 'Filter by name, ID, or label'. Below the filter is a table listing projects with columns for 'Project name' and 'Project ID'. The table contains ten rows of project data, each with a checkbox in the 'Project name' column. The right side of the console shows 'No project selected' and a 'Select' button.

<input type="checkbox"/>	Project name	Project ID
<input type="checkbox"/>	bvambanja	bvambanja
<input type="checkbox"/>	bvblueforest	bvblueforest
<input type="checkbox"/>	bvcensusdata	bvcensusdata
<input type="checkbox"/>	bvexped	bvexped
<input type="checkbox"/>	bvoctopus	bvoctopus
<input type="checkbox"/>	bvsharkdata	bvsharkdata
<input type="checkbox"/>	bvturtldata	bvturtldata
<input type="checkbox"/>	odkdemobv	odkdemobv

# If updating: login to your appspot

---

- Login to your appspot to check your update has worked (e.g. <https://yourproject.appspot.com>).
- In the site admin tab, under preferences you will be able to see what version you are running. If the update was successful, this should now be the same as the version you downloaded and installed



## Version Information

v1.4.11 Production

## Google API Credentials

See <http://opendatakit.org/use/aggregate/oauth2-service-account/> for instructions on obtaining and supplying these values.

### Simple API Access Key

undefined

Recommended for accessing Google Maps.

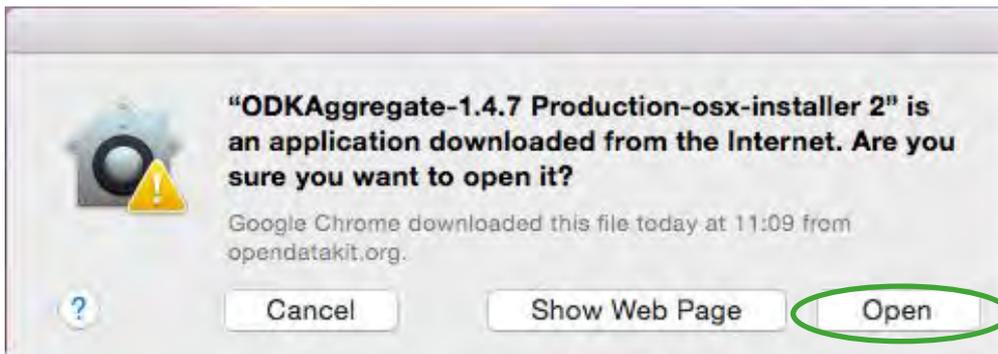
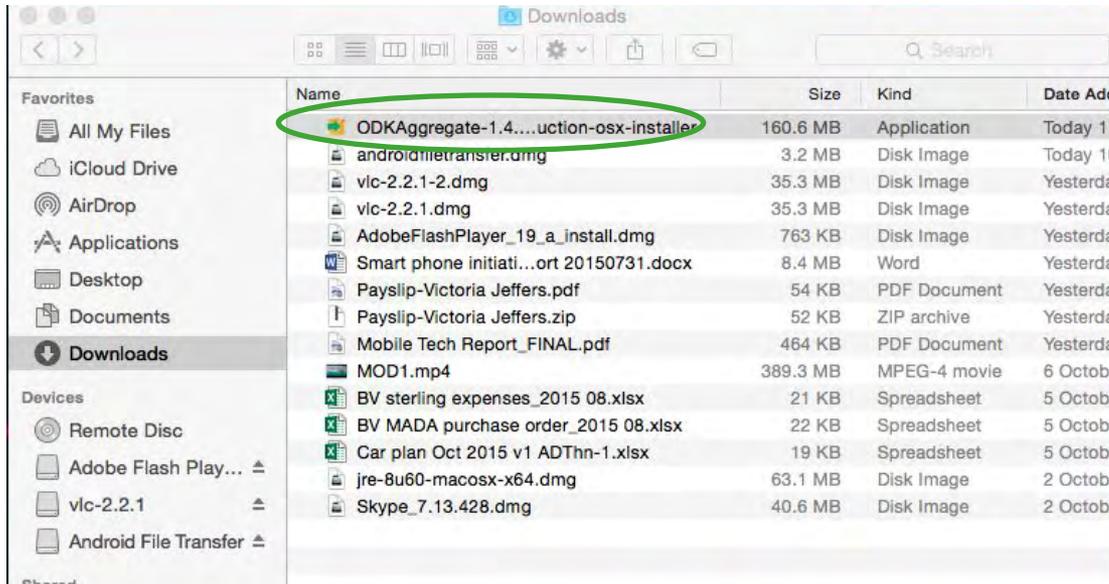
### Google OAuth2 Credentials

undefined

Necessary for publishing to Google Spreadsheets and Fusion Tables

# Aggregate installation on Mac

# Mac installation



- Follow instructions on slides [23-32](#)
- First ensure that you have java 7 installed on your Mac.
- This process seems much easier on a PC so if you have the option use a PC.
- If you do not have the correct version of java install the Java development pack: Java SE Development Kit (JDK) for Mac OS X.
- Downloads will need to be opened directly in 'Finder' in the downloads folder in order to install it.
- Select install when prompted after opening the file.
- Select Open when prompted in the warning screen

# Mac only - errors

---

- You must have already installed the Java runtime environment plugin and Java development pack to be able to do this. They can be downloaded from here:

[http://www.java.com/en/download/mac\\_download.jsp](http://www.java.com/en/download/mac_download.jsp)

Otherwise you will receive a warning message (see next page):

- If you press enter you will then be instructed to fix the problems and given a link to follow once the problems are resolved.
- Ensure your version of java is up to date and you have entered all details correctly in the setup-process.
- Once you have corrected the mistakes follow the link you are given.

Logging into the appspot for the first time

# Logging in to the appspot for the first time

---

- When the scripts have finished running (either Mac or PC), confirm that your appspot is set up correctly by visiting your AppEngine URL (e.g. <https://yourproject.appspot.com>).
- When you first login you must select sign in with Aggregate Password and sign-in with the superuser email (see next page).



## Log onto Aggregate

**Sign in with Aggregate password**

Click this button to log onto Aggregate using the username and password that have been assigned to you by the Aggregate site administrator.

**Anonymous Access**

Click this button to access Aggregate without logging in.

# Logging in for the first time

---

- The superuser email will be the gmail account created at the beginning of this process.
- The password will always be **aggregate** the first time you sign into an Aggregate account (or after an update).
- If you are already viewing with anonymous access select login in the right hand corner of the appspot.
- Select 'Sign in with Aggregate Password' and sign-in with the superuser email.



# Changing the password after first login

- At the top of the webpage it will say: **This server and its data are not secure! Please change the super-user's password!**



The screenshot displays a web application interface with a security warning message at the top. The message, "This server and its data are not secure! Please change the super-user's password!", is highlighted with a green oval. The interface includes a navigation bar with "Submissions" and "Form Management" tabs, a "Log In" button, and a "Filter Submissions" section with dropdown menus for "Form" and "Filter". The "Submissions" section contains buttons for "Save", "Save As", and "Delete", a "Submissions per page" dropdown set to "100", and a "Filters Applied" section with an "Add Filter" button and a "Display Metadata" checkbox.

# Changing the password after first login

---

- Make sure you are logged in as the superuser
- Go to the site Admin tab (see next pages)
- Click 'change password' for the superuser email address, enter new password and save changes.
- Make a note of it somewhere and email relevant users.

**NB:** if you updating Aggregate (i.e. this is not the first installation of Aggregate) you will need to change the passwords of **all** logins that have full access to the site (i.e. those that have the same access as the superuser)

# Changing the password of superusers



Submissions

Form Management

Site Admin

Permissions

Preferences

## Configure Site Access

### Users access the site either

- anonymously (i.e., as the *anonymousUser*), or
- via an OAuth 2.0 token (requires an Email account (e.g., user@gmail.com) and an OAuth 2.0 token issued by Google with access to userinfo.email), or
- via an ODK account, with a username and password that a site administrator has configured for them.

### Capabilities are as follows:

- Data Collector - able to download forms to ODK Collect and submit data from ODK Collect to ODK Aggregate. Only ODK accounts and the *anonymousUser* can be granted Data Collector rights. The *anonymousUser* must be granted Data Collector rights to accept submissions from unidentified sources (e.g., from ODK Collect 1.1.5 and earlier, or from ODK Collect 1.1.7 and later if not authenticating).
- Data Viewer - able to log onto the ODK Aggregate website, filter and view submissions, and generate csv or kml files for download.
- Form Manager - all the capabilities of a Data Viewer plus the abilities to upload a form definition, delete a form and its data, and upload submissions manually through the ODK Aggregate website.
- Synchronize Tables - able to download, upload and alter data records within ODK Tables as restricted by table-access privileges granted to the user.
- Administer Tables - able to administer tables and table-access privileges from the ODK Tables website.
- Site Administrator - all the capabilities of a Form Manager plus the ability to add users, set passwords, and grant these capabilities.

### Edit Users

Change usernames, delete usernames, grant capabilities and set passwords for ODK accounts below.

	Username	Full Name		Account Type	Data collector	Data viewer	Form manager	Site administrator
	BVDEMO	BVDEMO	Change Password	ODK ▼	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	BVODKDEMO@gmail.com	BVODKDEMO@gmail.com	Change Password	ODK ▼	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	al@blueventures.org	al	Change Password	ODK ▼	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	andy.jeffrey@gmail.com	andy.jeffrey	Change Password	ODK ▼	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	fran@blueventures.org	fran	Change Password	Google ▼	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	steve@blueventures.org	steve	Change Password	Google ▼	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	victoria@blueventures.org	victoria	Change Password	ODK ▼	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	anonymousUser	Anonymous Access	Change Password		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Allow anonymous retrieval of images, audio and video data (needed for GoogleEarth balloon displays)

Save Changes

Change Password for BVODKDEMO@gmail.com  
Password:   
Password (again):

# Adding viewers/administrators to the appspot

---

- Under the site admin tab you can now add in other users that can access the site or submit data (see next slides).
- To grant access to the Aggregate site: add the user's email address in **Add Users box**, click **Add**, then once added, select **Account Type: ODK**.
- Then select the level of access you want them to have (viewer, form manager, site administrator) by ticking the relevant boxes.
- You will need to set the password for this person and send them the password.
- If they have site admin access they will be able to change their passwords themselves, otherwise only the site administrator will be able to change their password.

# Adding users

---

- Enter the email address of the new user in the text box
- Then click 'Add'

Allow anonymous retrieval of images, audio and video data (needed for GoogleEarth balloon displays)

**Save Changes**

---

**Add Users**

Enter the usernames (for ODK accounts) or e-mail addresses (for Google OpenID accounts) to add to the list of users in the above table

**Add**

- Select Account Type ODK. Then save changes
- Then 'Change Password'
- Remember to make a note of the new password and email the users concerned
- Check the appropriate boxes for the right level of access

**Configure Site Access**

Users access the site either

- anonymously (i.e., as the *anonymousUser*), or
- via an OAuth 2.0 token (requires an Email account (e.g., user@gmail.com) and an OAuth 2.0 token issued by Google with access to user:info:email), or
- via an ODK account, with a username and password that a site administrator has configured for them.

Capabilities are as follows:

- Data Collector - able to download forms to ODK Collect and submit data from ODK Collect to ODK Aggregate. Only ODK accounts and the *anonymousUser* can be granted Data Collector rights. The *anonymousUser* must be granted Data Collector rights to accept submissions from unidentified sources (e.g., from ODK Collect 1.1.5 and earlier, or from ODK Collect 1.1.7 and later if not authenticating).
- Data Viewer - able to log onto the ODK Aggregate website, filter and view submissions, and generate csv or kml files for download.
- Form Manager - all the capabilities of a Data Viewer plus the abilities to upload a form definition, delete a form and its data, and upload submissions manually through the ODK Aggregate website.
- Synchronize Tables - able to download, upload and alter data records within ODK Tables as restricted by table-access privileges granted to the user.
- Administer Tables - able to administer tables and table-access privileges from the ODK Tables website.
- Site Administrator - all the capabilities of a Form Manager plus the ability to add users, set passwords, and grant these capabilities to other users.

Edit Users

Change usernames, delete usernames, grant capabilities and set passwords for ODK accounts below:

	Username	Full Name		Account Type	Data Collector	Data Viewer	Form Manager	Site Administrator
	<input type="text" value="BVDEMO"/>	<input type="text" value="BVDEMO"/>	<input type="button" value="Change Password"/>	<input type="text" value="ODK"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="text" value="BVODKDEMO@gmail.com"/>	<input type="text" value="BVODKDEMO@gmail.com"/>	<input type="button" value="Change Password"/>	<input type="text" value="ODK"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	<input type="text" value="al@blueventures.org"/>	<input type="text" value="al"/>	<input type="button" value="Change Password"/>	<input type="text" value="ODK"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	<input type="text" value="andy.jeffrey@gmail.com"/>	<input type="text" value="andy.jeffrey"/>	<input type="button" value="Change Password"/>	<input type="text" value="ODK"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	<input type="text" value="fran@blueventures.org"/>	<input type="text" value="fran"/>	<input type="button" value="Change Password"/>	<input type="text" value="Google"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	<input type="text" value="steve@blueventures.org"/>	<input type="text" value="steve"/>	<input type="button" value="Change Password"/>	<input type="text" value="Google"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="text" value="victoria@blueventures.org"/>	<input type="text" value="victoria"/>	<input type="button" value="Change Password"/>	<input type="text" value="ODK"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	<input type="text" value="anonymousUser"/>	<input type="text" value="Anonymous Access"/>	<input type="button" value="Change Password"/>	<input type="text" value="ODK"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Allow anonymous retrieval of images, audio and video data (needed for GoogleEarth balloon displays)

# Creating a general ODK Collect login for data collectors

---

- Data collectors do *not* need to have their email addresses added to the site admin tab.
- Instead you can create a general data collector Username and Login that you enter on phones in ODK Collect so they can access the forms and send data.
- This should be set as 'data collector' when the options for access are selected. E.g:

	Username	Full Name		Account Type	Data Collector	Data Viewer	Form Manager	Site Administrator
	<input type="text" value="BV1"/>	<input type="text" value="blueventures"/>	<a href="#">Change Password</a>	ODK ▼	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	<input type="text" value="ST1"/>	<input type="text" value="ST1"/>	<a href="#">Change Password</a>	ODK ▼	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

# Creating a general login for data collectors continued

---

- This can be done as per the instructions on the previous pages:
  - Under **Add Users** add in the username you want. Eg. Octopus
  - Click **Change Password** and choose a password.
- These are the details you will need to enter as the username and password in general settings when you set up ODK Collect on data collectors' phones.

# Updating Aggregate

---

- Aggregate needs to be updated when a new version is released.
- Check on the downloads page for updates - check the release date and compare this with the version you are running (in Site Admin, Preferences Tab):  
<https://opendatakit.org/downloads/download-info/odk-aggregate-windows-installer-exe/>
- Set yourself a monthly reminder to check for updates.
- To update from one version of aggregate to another repeat the instructions from slide 6 onwards: 'Downloading ODK aggregate'.
- Enter the details you originally entered when setting up the appspot.
- The new version will overwrite the old version.
- All data should remain untouched but it may be good to backup/download data if you have not already done so.

# Updating Aggregate through multiple versions

---

- If you are updating through multiple versions it is advisable to export and save the data somewhere as a back-up.
- When you next login as superuser you will need to login using the generic password 'aggregate' as the password is reset when you update it.
- Login and change the password (you can change it back to what it was previously or something different).
- You will need to change/re-enter passwords for all site admin users.

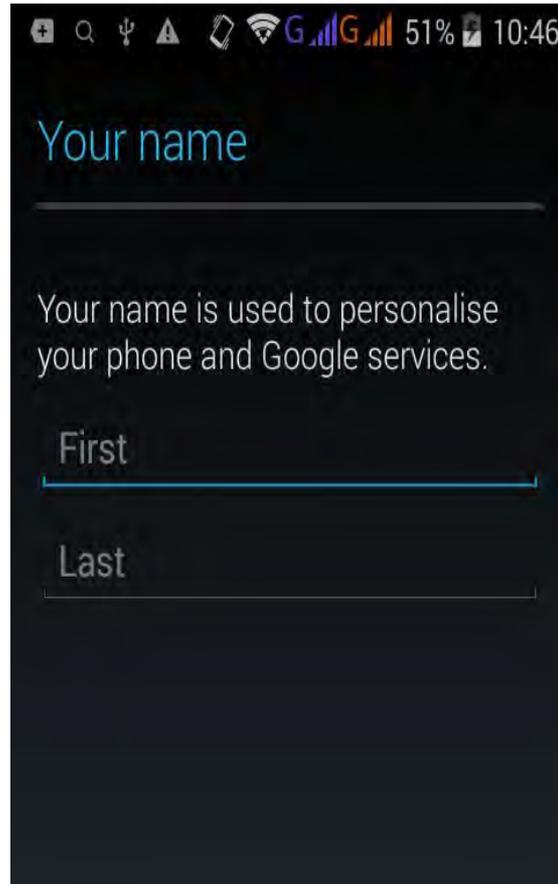
# Chapter 3

## Setting up and Using ODK on your phone

# Downloading ODK Collect to new phones

---

- First add a Gmail account:
  - The phone will guide you through this process automatically when you try to connect to Google Play.
  - Create a new Gmail account, or add an existing email account.
  - This account is to allow access to the Google Play store and is **NOT** related to the account used to create the appspot, or to access aggregate.



Your name

---

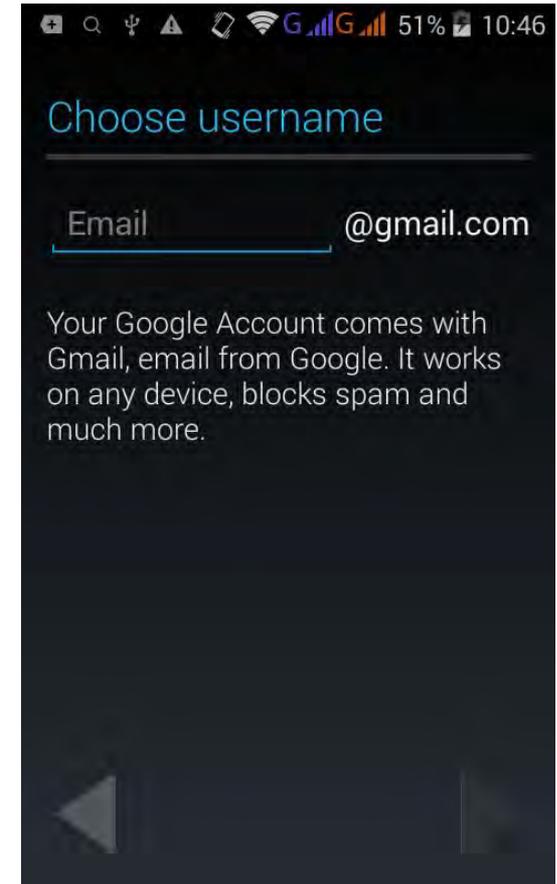
Your name is used to personalise your phone and Google services.

First

---

Last

---



Choose username

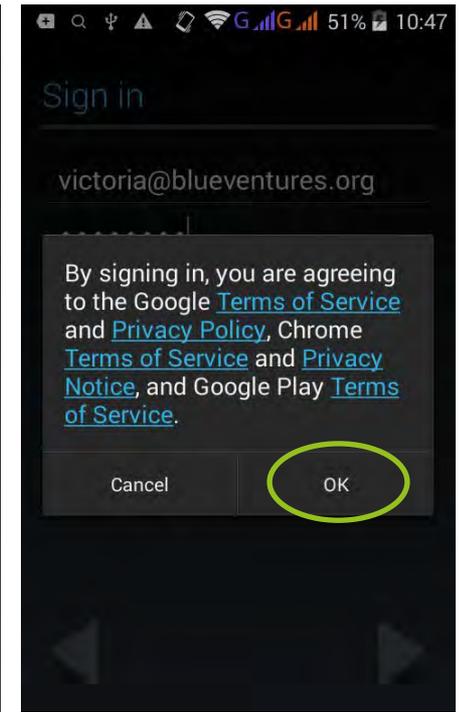
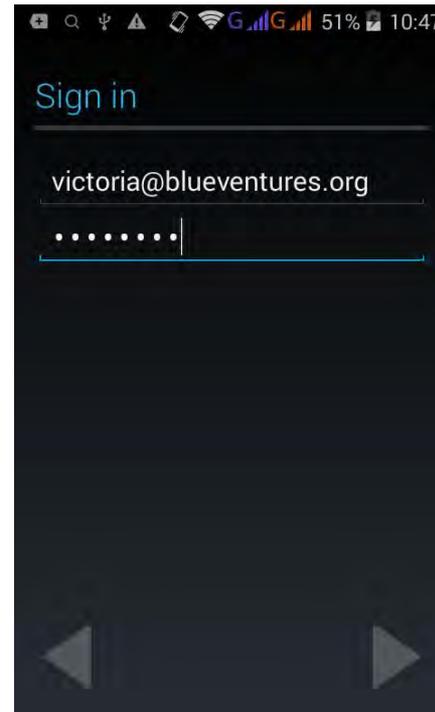
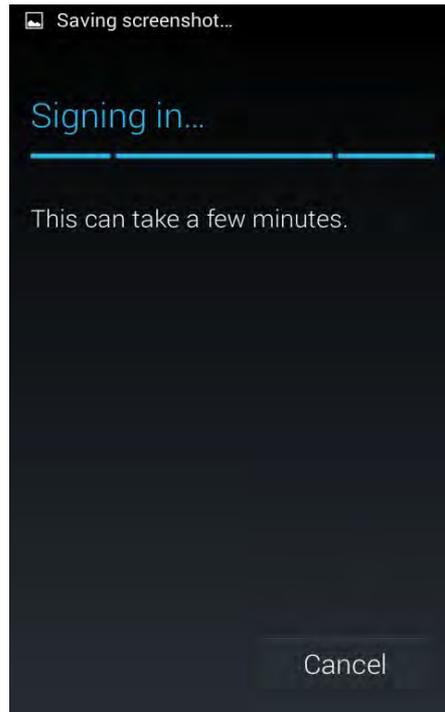
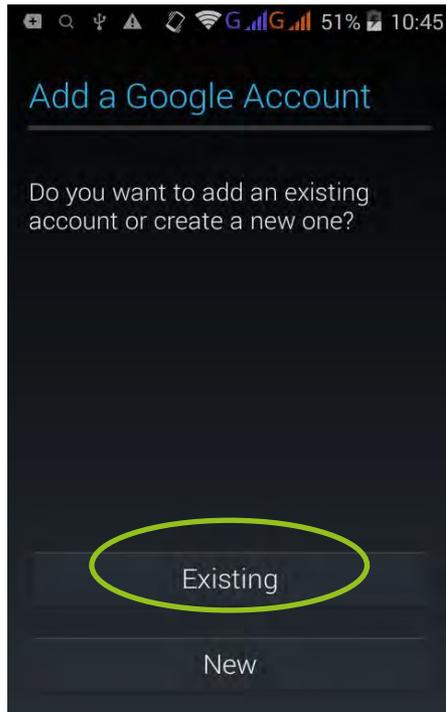
---

Email \_\_\_\_\_ @gmail.com

Your Google Account comes with Gmail, email from Google. It works on any device, blocks spam and much more.

# Or add an existing account

- If this is your own personal phone you can use your own gmail account.
- Do not use your own account for phones to be given to community data collectors.



# Choosing an email address

---

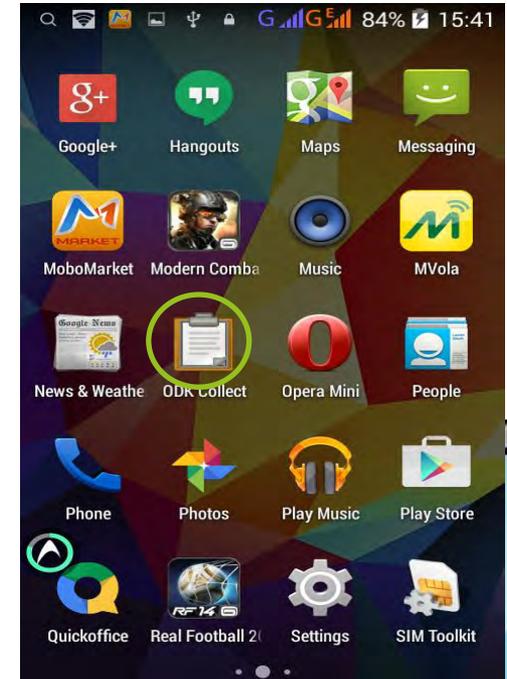
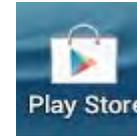
- This can be a separate email address for each phone, or the same generic email address for each phone.
- However, if you want to use the Gmail account to identify or track the phone in another application (such as [Android Device Manager](#)) use a separate gmail account for each phone.
- It may be easier to use generic email addresses such as projectname1@gmail.com, projectname2@gmail.com, etc.
- You can choose any email and password but please save them in a spreadsheet so you can keep track.
- As part of the process you will be asked to enter a backup email address. It is best to use a generic email address in case of staff changes
- Connect to the Play Store
  - The phone will need to be connected to the internet (mobile or wifi) to access the Play Store and allow downloads (see [chapter 5](#) for more details on connecting to the internet) and the next page for further details.

# Downloading and setting up ODK Collect

1. Go to Play Store and search for ODK Collect.
2. Download (it's free).
  - Once downloaded an ODK icon will appear on the list of apps in the main app menu.
  - It's a good idea to create a shortcut on the home screen. To do this press and hold the icon and then drag to the home screen.
  - Once you have a form downloaded you can also create a shortcut to the form by adding a widget (press and hold home screen), choosing ODK and the the correct form

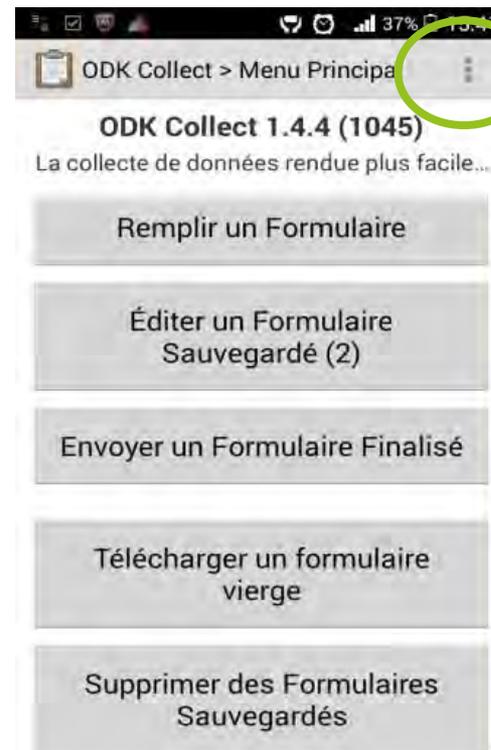
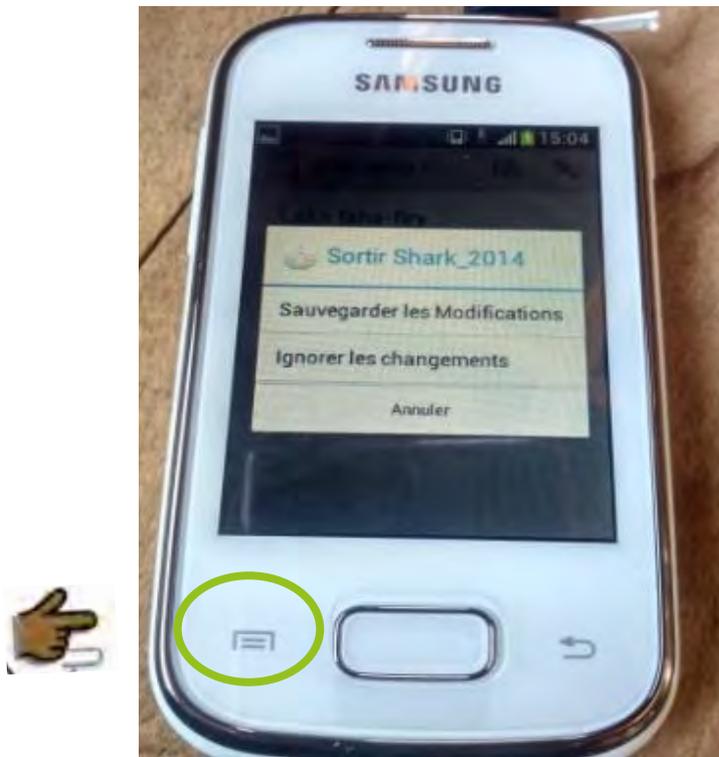
**NB:** You will need to have background data turned on to access the Play Store but a warning will appear if it is not switched on.

It is a good idea to download the ODK offline installer file to your computer when you have good internet in case you need to install or re-install ODK from your computer when internet is not available (see [installing offline](#) for further details and the link to download the file).



3. Open the ODK app and find 'General settings' available in the menu.

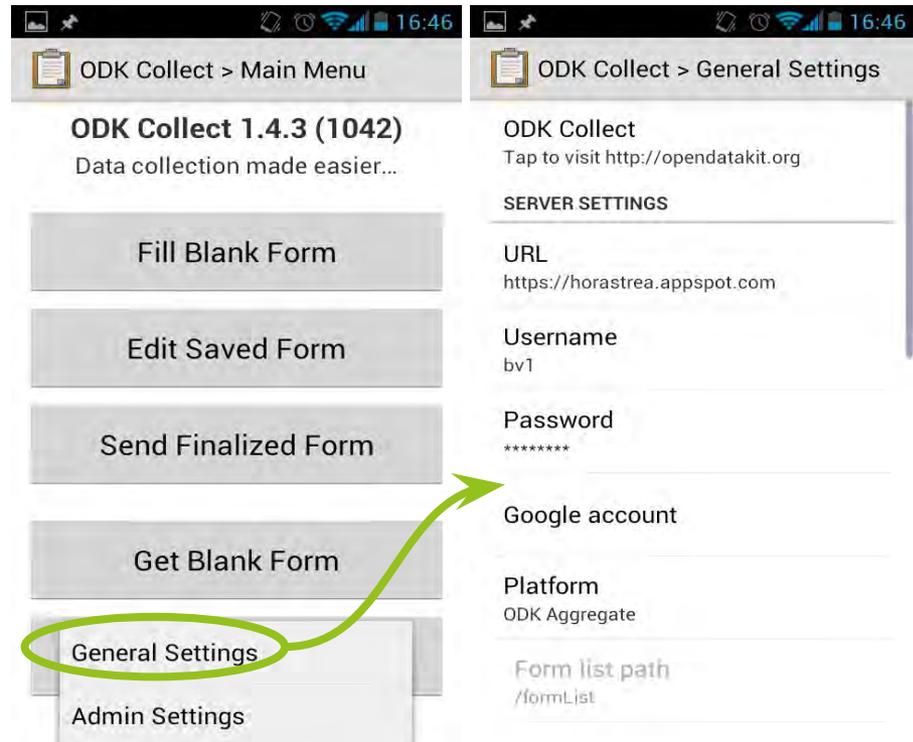
This will depend on the phone but it is usually a three dot symbol in a corner of the screen or the menu button on the phone, usually located to the bottom left of the phone.



4. In order to link your app to appspot: under general settings go to 'Configure Platform Settings'
- Fill in URL, Username and Password
  - These will be created when you create an appspot for your project or if you are using Ona.io they will be your account details.

- E.g:
  - **URL:** <https://your.project.appspot.com>
  - **Username:** created in set-up
  - **Password:** created in set-up
- Or for Ona the url is: <https://odk.ona.io>
- Under 'Google account' there should be no account selected
- Under 'platform' ODK Aggregate should be selected

**NB:** Nothing else needs to be ticked in the settings to make the system work at this point.

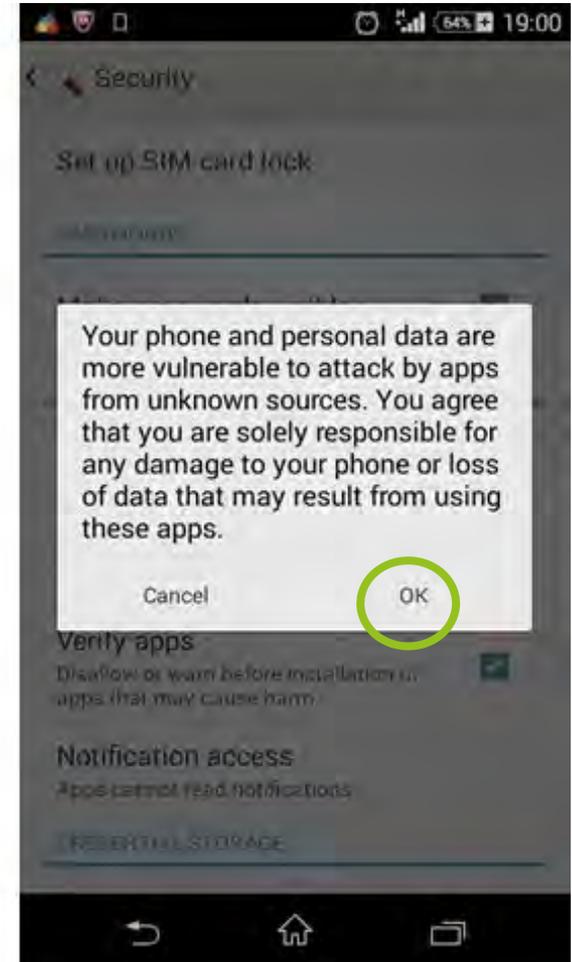
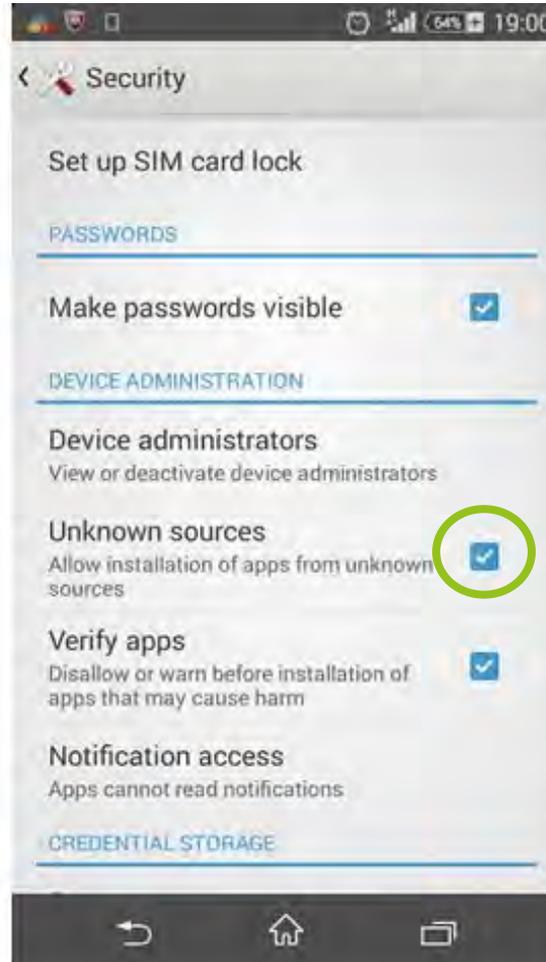
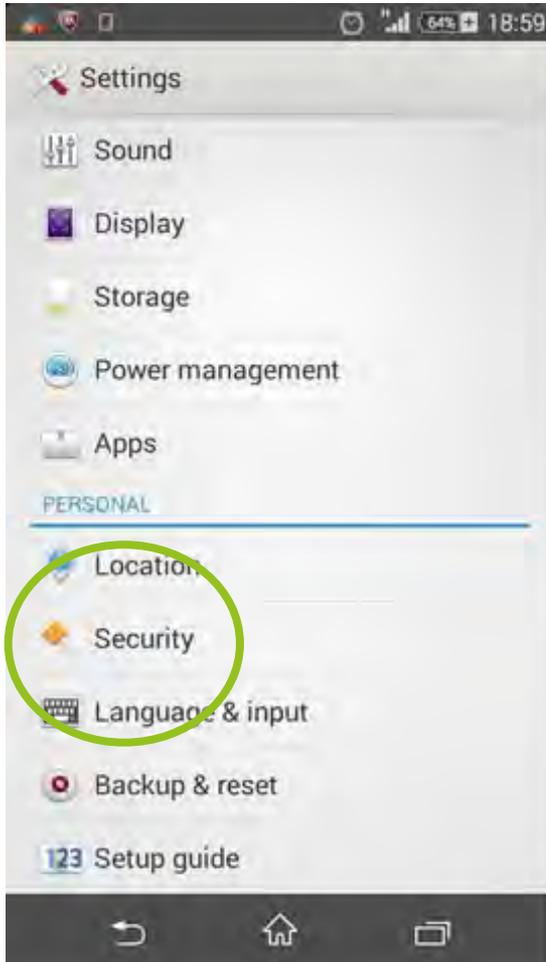


# How to install ODK Collect offline

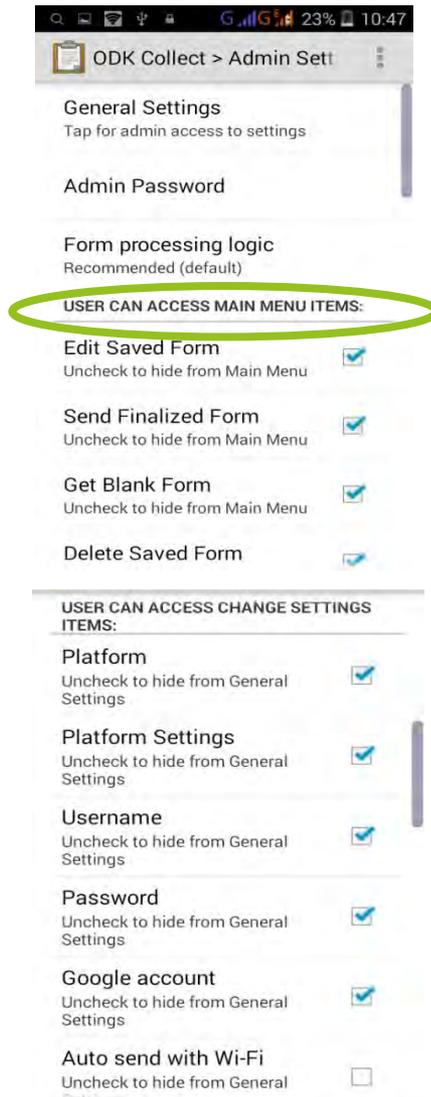
---

- It is possible to copy the ODK installation file straight to a phone from a computer, or download directly from the internet if you can not access the Play Store.
- The file to allow offline installation is available to download here:  
<http://apk-dl.com/download/android/org.odk.collect.android/>
- Change the phone settings to allow installations from unknown sources. The location of this will vary but it can usually be found in security (see next page).
- Check the box to allow this.
- Remember to uncheck the box once you are finished so this is not a security risk.
- Copy the offline installer file to a place accessible directly on the phone. 'Download' or 'downloads' is usually a good option.
- Use the phone's file manager system to navigate to the location you copied the file to.
- Open the file and install it.
- You can then add form files directly to the ODK file that will be created on the phone (see next page) rather than having to connect to the internet .
- Then follow directions as in [previous slides](#) to put the correct settings into ODK Collect.

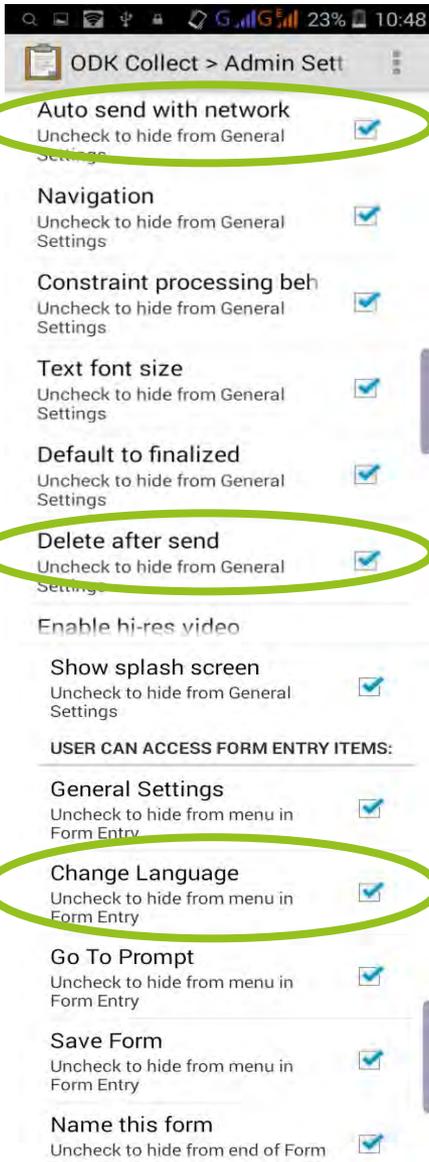
General phone settings>security>Unknown sources (allow installations from unknown sources).



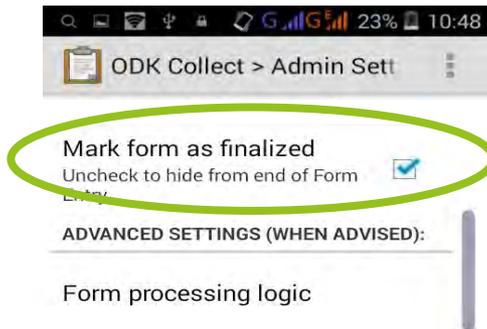
# In ODK Collect: Admin settings menu



- In the Admin Settings menu you can control what the user can access from both the main menu and within the form.
- Most things are ticked automatically.
- To adjust what the user can see on the ODK Collect home screen deselect items in the list 'User can access main menu items'.
- It is a good idea to remove the 'Delete Saved Form' option for new users so that template forms or saved data are not accidentally deleted.

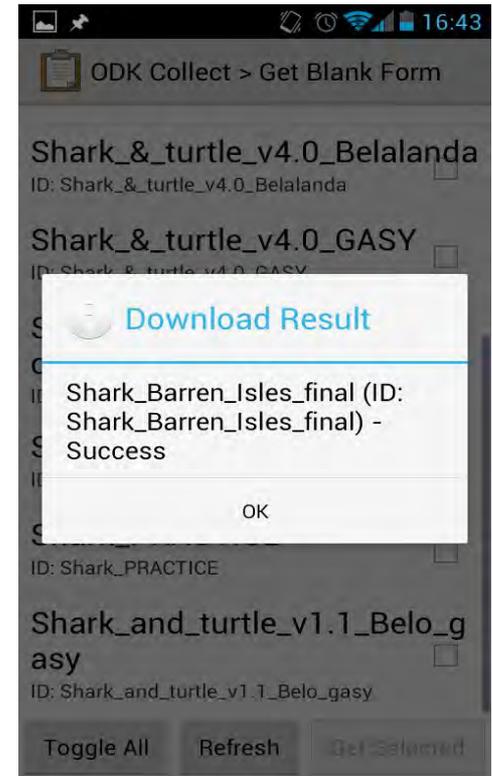
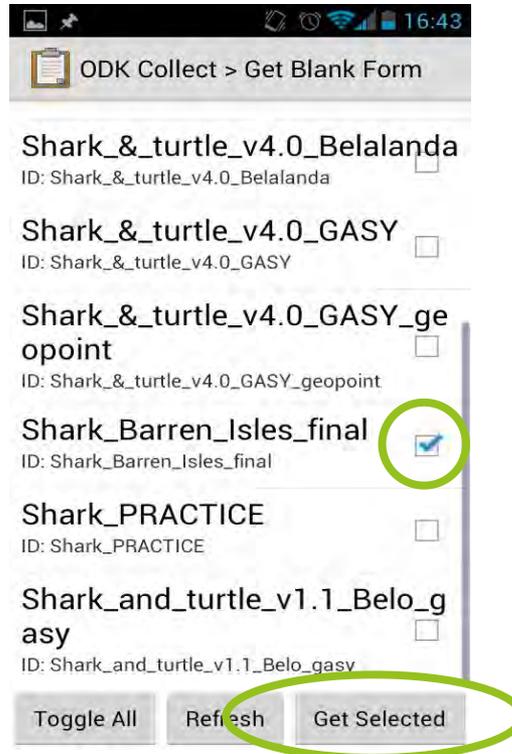
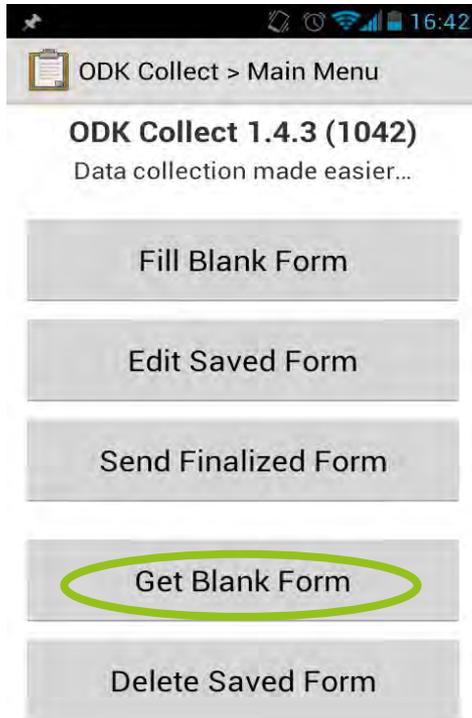


- It is a good idea to turn OFF (untick) auto send with network otherwise it will try and send forms automatically and could send practise data, use battery and use credit.
- It is a good idea to un-tick 'Delete after send' to avoid data being accidentally deleted if not sent successfully and for cross-checking with any paper records.
- To be able to change the language in the form this also has to be ticked



- Make sure 'Mark form as finalised' is ticked.
- This will ensure all saved forms are marked as finished and ready to send.
- If forms are not marked as finalised they will not appear in the 'Send Finalised Form' menu option.

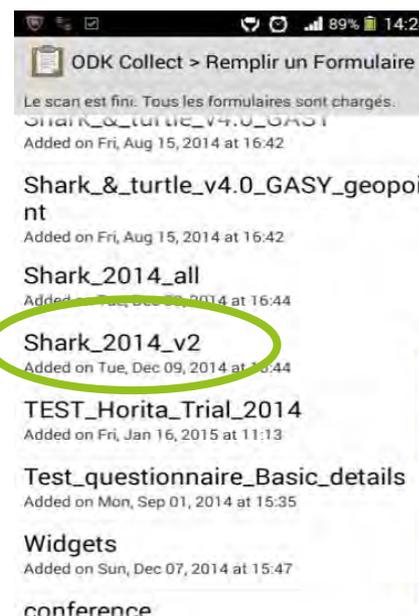
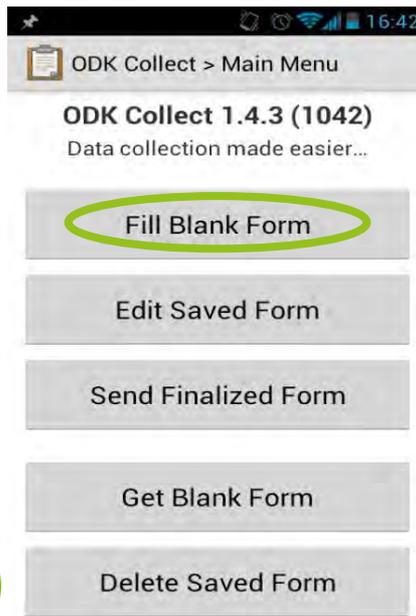
# Finding and downloading a new form



1. Go to 'Get blank form' on the main page (must be connected to internet)
2. All available forms under the appspot URL you entered will be listed. Choose the form you need for your project.
3. Press 'Get Selected'
4. The form will download and a message will appear when it has successfully downloaded.
5. The form will now be available from 'Fill blank form'

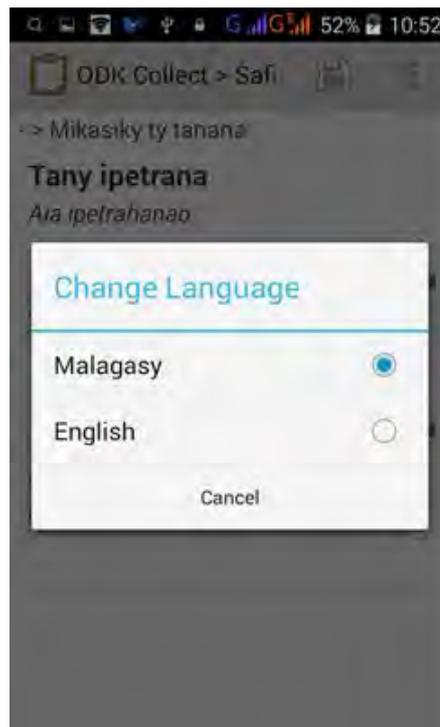
# Entering Data – opening a new form

1. Find ODK on the homepage of your phone or in the list of applications
2. Go to 'Fill blank form' (depending on the language settings of the phone)
3. Open the form you want to use
4. Swipe to change screen



# Changing the language

- If the form has been programmed with multiple languages the display language of the form can be changed by clicking on the menu button either on the phone itself or the three dot symbol when inside the form. The ability to do this is set up when the original form is designed ([chapter 4](#)).



# Question Types

---

- The way a question is answered is decided when the form is designed.
- It is possible to decide this on a question-by-question basis.
- Answers can be text, numbers, list options, photos, tables and more.
- The text or numbers that are entered can be constrained during form design.
- Predefined answers or dropdown lists can be added.
- These features are all built into the form in the design stages (see [chapter 4](#)).
- The following pages will give some examples of different question types, but please see [chapter 4](#) for more details.

# Text and numbers

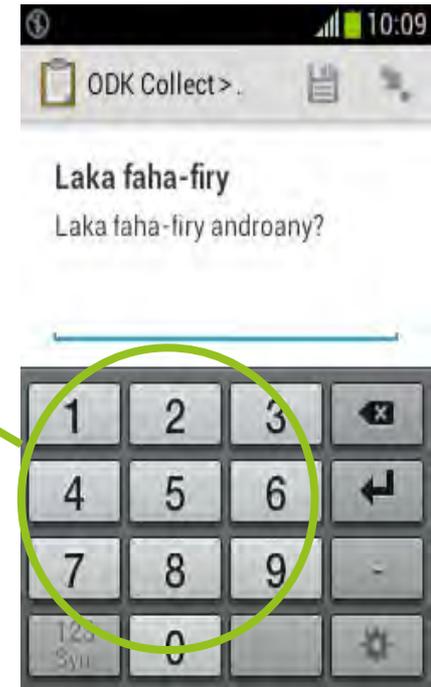
## Entering text



Use the keypad to enter text

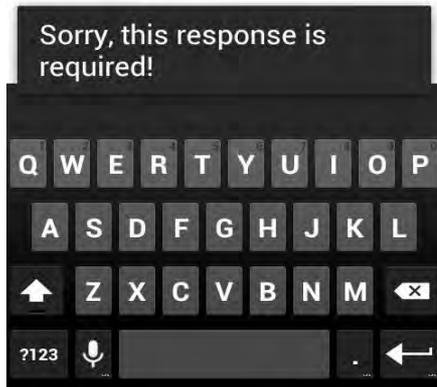
Use this button to delete any mistakes

## Entering numbers

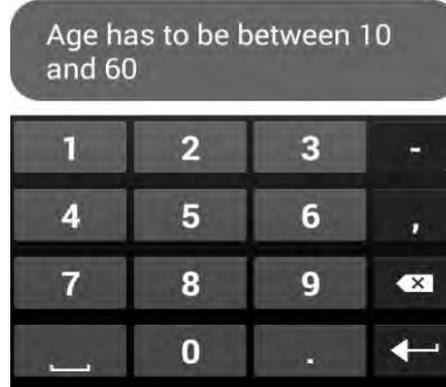
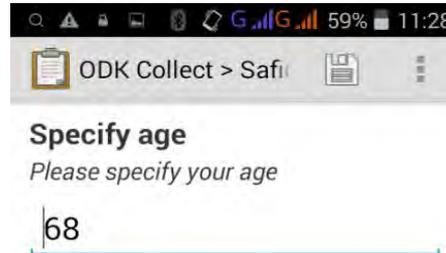


# Question Constraints

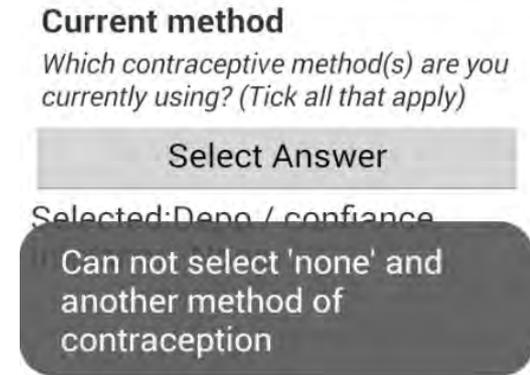
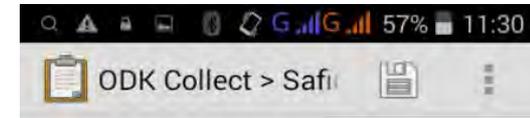
It is possible to constrain the answer to a question when building the form. For example:



Ensuring questions are answered by requiring a response. It is then not possible to progress to the next question until the current question it is completed.

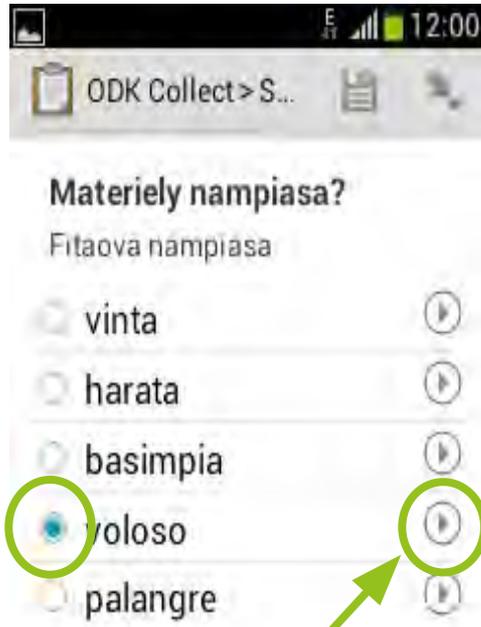


Place a constraint on the numerical range that is allowed.



Prohibit certain options being selected together in multiple response questions.

# Lists



These questions will automatically move to the next screen.



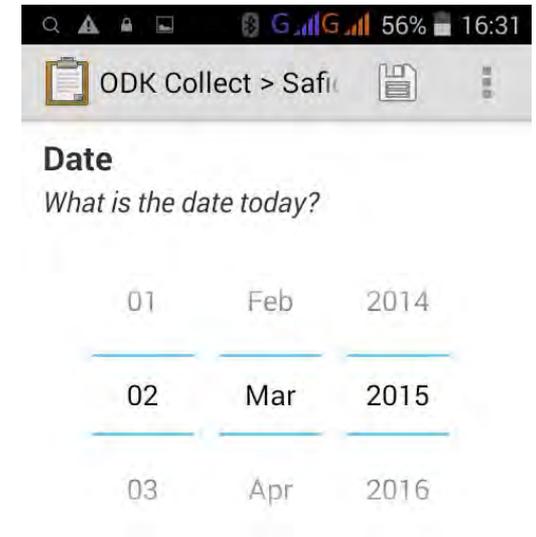
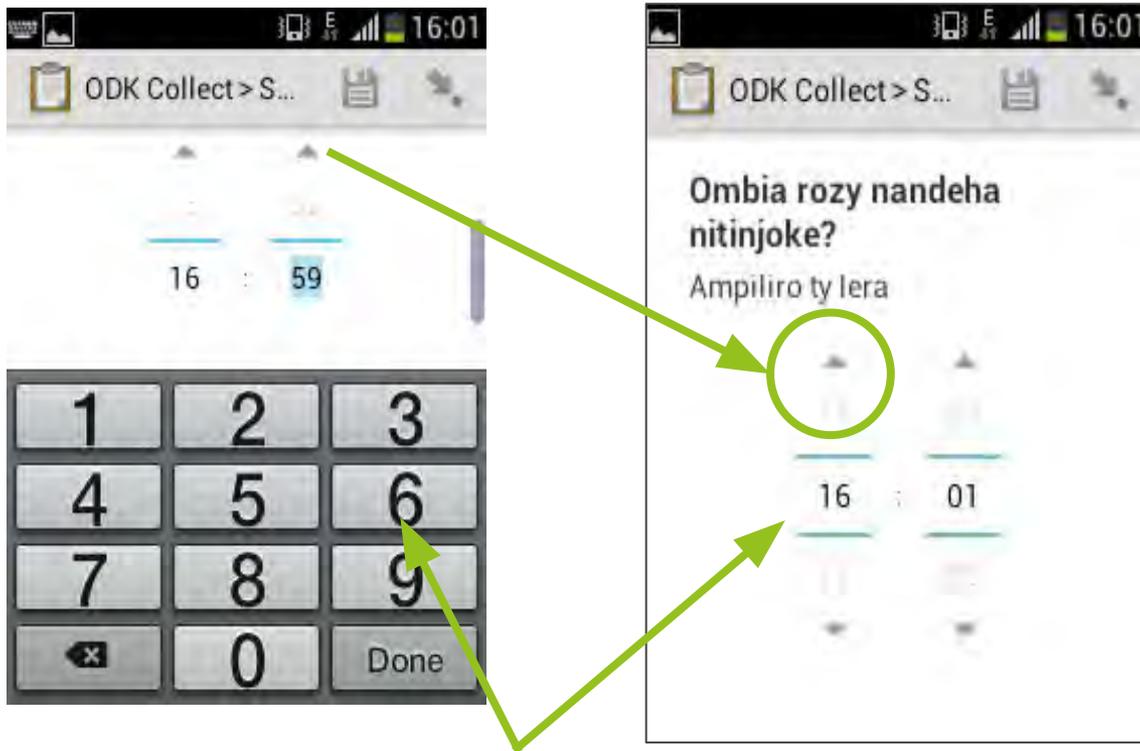
These questions will display a drop down list of answers.



Swipe to find the correct item on the list and select it.

# Dates and times

Use the arrows

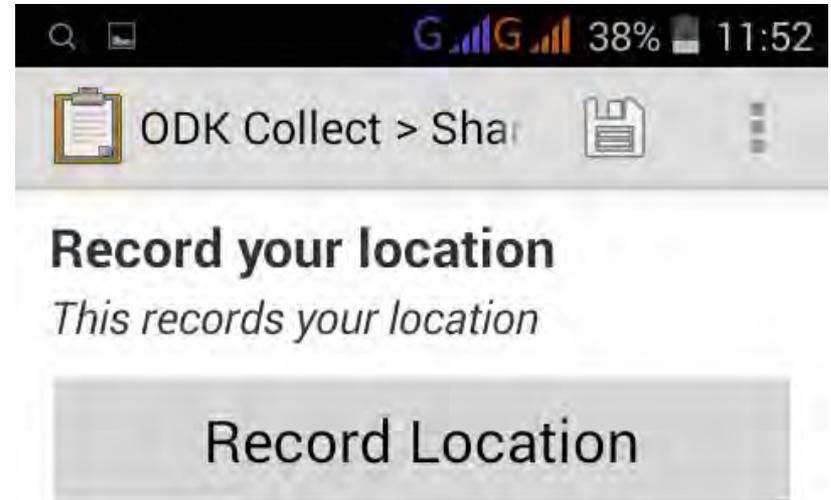


Or click on the numbers and enter them manually

# Geopoint: Record Location

---

- This question records the location of the phone, and data can then be georeferenced to some degree to Google Earth.
- You will need to ensure the phone's GPS is switched on.
- This question shouldn't require mobile data connectivity but in reality it often does not work without connection. It therefore often doesn't work in remote places or without phone signal or data connectivity.



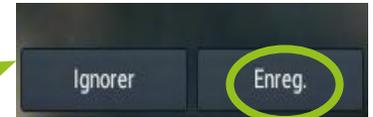
# Taking a photo

Focus on the subject you want to take a picture of. The way to do this will depend on the phone, but usually involves touching the screen where you want to focus. Make sure you hold the camera steady (highlight this in training too: see [chapter 8](#) for more tips on training).

How to confirm you are happy with the picture in different ways either by symbols or a message:



Some phones may have a flash if needed

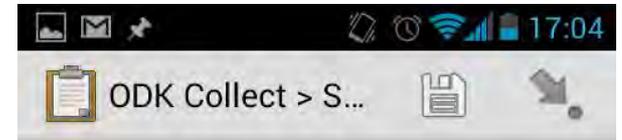


OR



# Completing a Form

- When you or the data collector get to the end of the form, they should: Click “Save Form and Exit”.
- You can then go back to “Fill Blank Form” to fill in another form e.g. for the next client, fisherman or boat.
- It is a good idea to ensure the forms are marked as finalised automatically in the Admin settings (see Admin settings slide for more details).



**You are at the end of  
Shark\_Barren\_Isles\_final.**

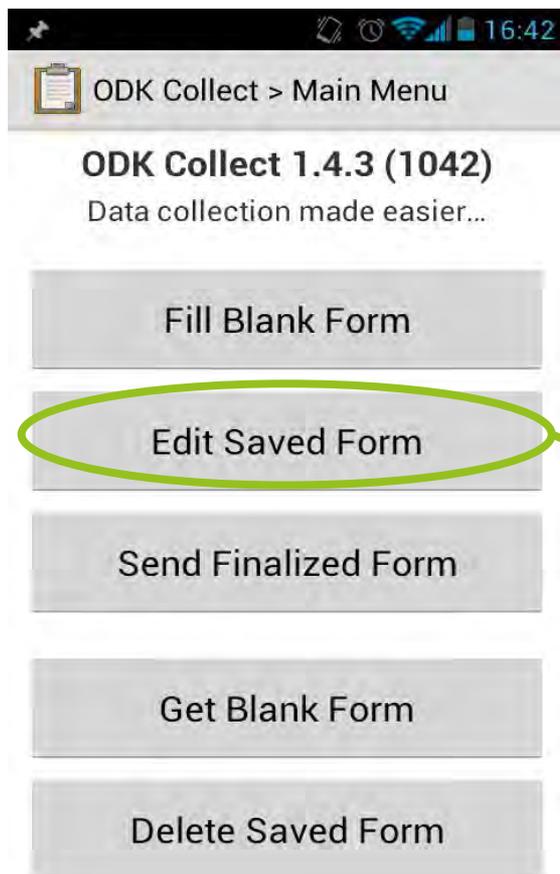
Name this form

Shark\_Barren\_Isles\_final

Mark form as finalized

Save Form and Exit

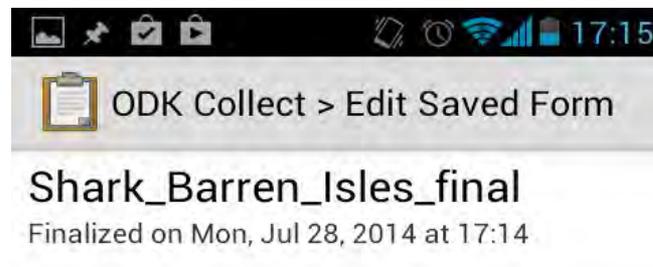
# Editing Forms before sending



You can check and edit any finalised forms before sending by clicking on “Edit Saved

You may want to do this if you realise you have made a mistake, have saved an incomplete form, or accidentally exited the form halfway through completing it.

All finalised forms should be displayed here.



The saved form is displayed as a summary list of questions.

The image shows two screenshots of an ODK Collect form. The left screenshot, titled 'ODK Collect > Shark\_2014', shows a list of questions: 'Laka faha-firy', 'Isan'ny akio', 'Mombamomba ity akio ity', 'Anaran'ny mpihaza voalohany', and 'Firy ty mpihaza an-daka?'. The 'Go To Start' and 'Go To End' buttons at the bottom are highlighted with dashed green circles. A green arrow points from the 'Go To End' button to the right screenshot. The right screenshot, titled 'ODK Collect >', shows the same form scrolled to the end, with the 'Go To End' button highlighted. A green arrow also points from the 'Go To End' button in the left screenshot to the 'Go To End' button in the right screenshot.

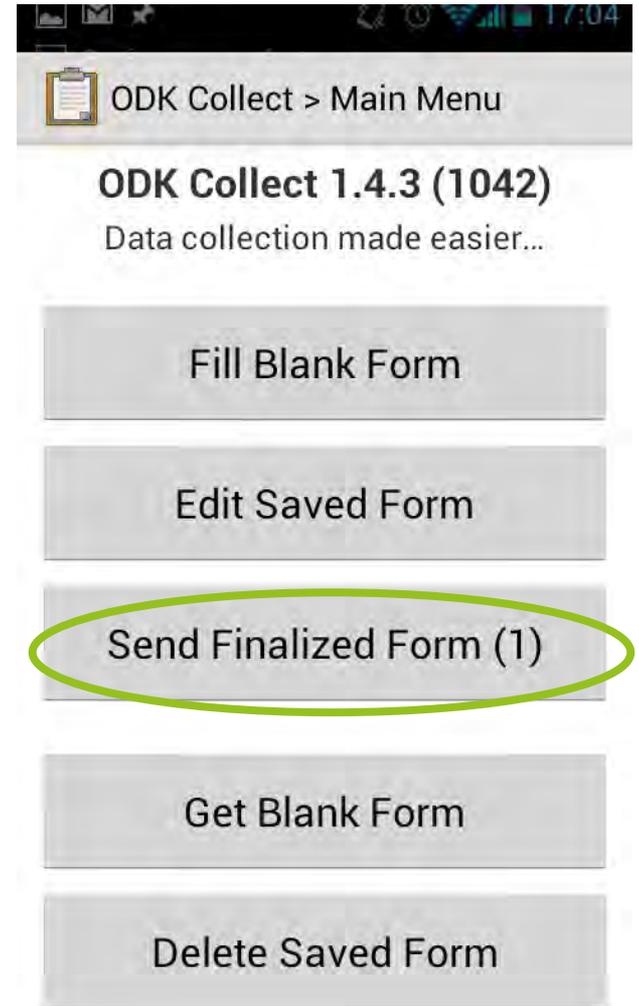
Either (1) go to the start if you want to check the whole form or edit a mistake near the start

Or (2) go to the end - if a form is not finalised it is easier to work from the back forwards to see what is missing, why it is not finalised and whether they are real data not a test

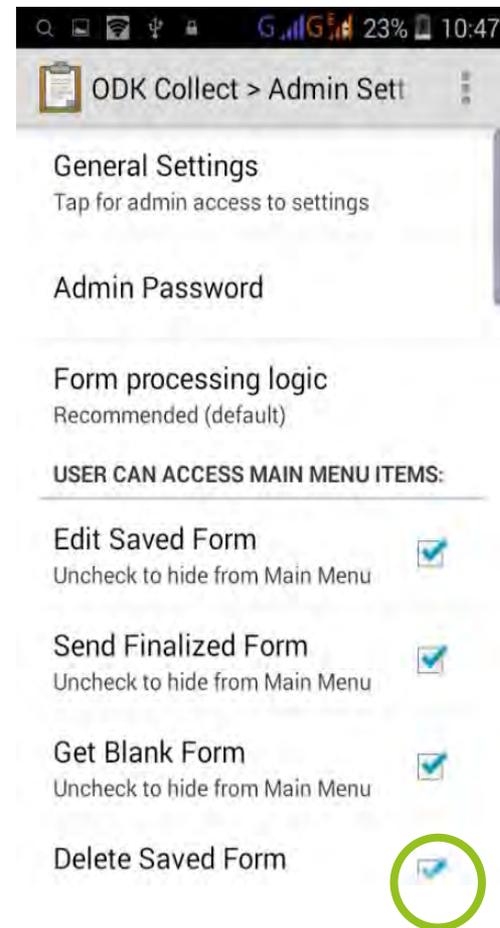
# Sending Forms

---

- All finished forms will be saved in the folder “Send Finalized Form”.
- They will be stored here until sent or deleted.
- They can be sent whenever it is easiest or best with mobile internet.
- See [chapter 5](#) for more details on sending data.

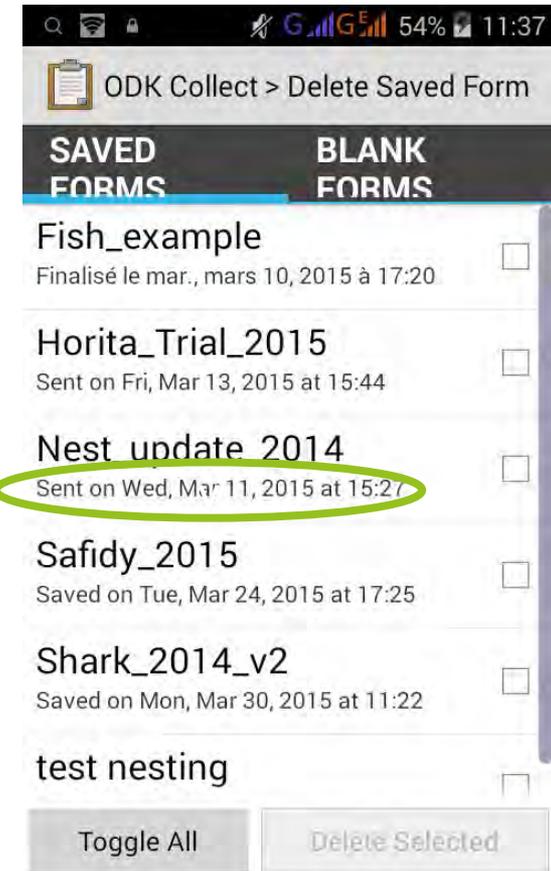
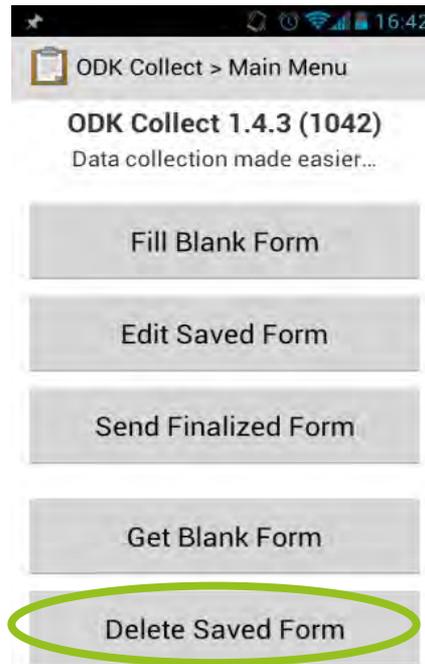


# Adding the delete option to the main menu if missing



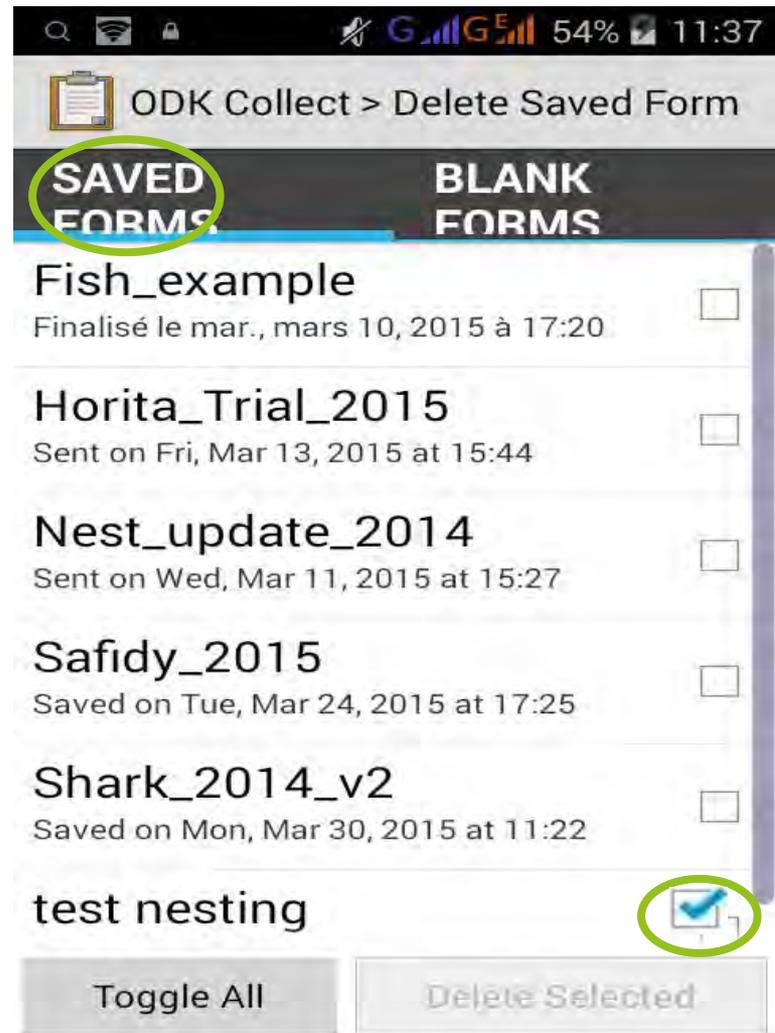
# Deleting old forms

- You can delete old forms by going to “Delete Saved Form”.
- Decide if you want to delete completed (‘saved forms’) or template forms (‘blank forms’).
- All completed or part completed forms will appear here:  
Finalised, Sent and Saved (unless the option to delete after sending is selected in the admin settings)
- The status of the form will appear under the form name with time and date



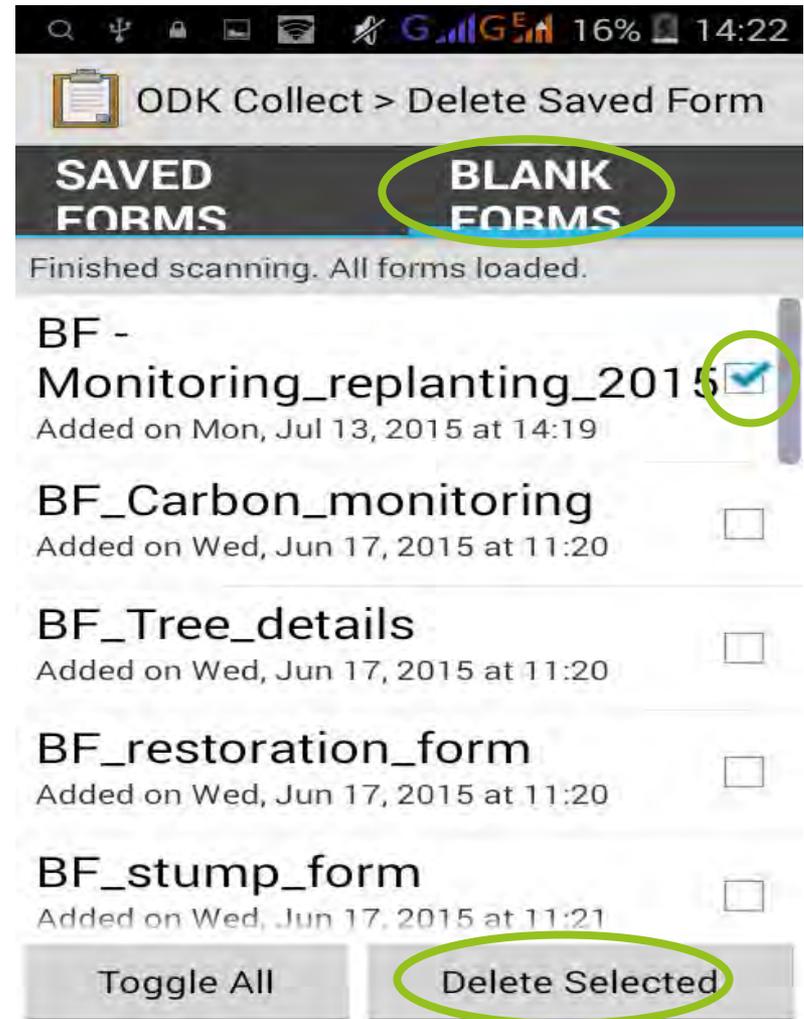
# Deleting Saved Forms

- You can delete old finalised forms (once you've added data into).
- You might want to delete practise data or those that were saved incorrectly by the data collector.
- Select the forms you want to delete or 'Toggle All' and then 'Delete Selected'.



# Deleting Blank Forms (templates)

- You can delete old blank forms too.
- You might want to delete these if it is an old version of a form and you already have all the data uploaded from it.
- It is recommended to keep only the most recent version of the form on the phone to avoid confusion (unless the data have not yet been sent/copied for the form you wish to delete).
- Select the blank template forms you want to delete.
- Delete selected



# Chapter 4

Designing, building and testing an ODK form

# Designing an ODK form

---

- It is important to carefully plan the questionnaire and define the exact data you want to collect before you start working with ODK. Speak to your Monitoring and Evaluation Manager.
- ODK allows you to collect a variety of data (GPS coordinates, text, photos and more) in a variety of different ways (text entry, multiple choice etc.).
- It can be helpful to define the possible answers to your questions (e.g. a list of village names or age categories) as this makes analysis easier and avoids spelling mistakes/differences.
- ODK allows multiple languages for the same form but questions will need to be translated first (see [Multiple languages](#)).

# Structuring the questionnaire

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- Think about the order of the questions. It may be necessary to ask certain questions first or add extra questions to define the next set of questions.
- For example, you may ask for age and then ask people in different age groups a different subset of questions; or you may need to know the number of octopus that have been caught to determine how many times the next group of questions should be repeated – such as size or weight.
- You can include constraints in the form. Such as:
  - A question is only asked if you answered ‘yes’ to a previous question

# Testing your ODK Form

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- Thoroughly test it in the office and the field. This should be an iterative process and be prepared for changes.
- Run a small trial with a few people in the field – this may highlight further improvements for the form.
- Review the form and make necessary changes.
- Provide tailored training for those that will use it, perhaps in stages.
- Be prepared to teach people phone basics and give them a few weeks/months to practise before they start sending data. See [chapter 8](#) for more tips on training.



# Creating the form in Excel and file conversion

# Writing the questionnaire

---

- It is possible to write a form directly as HTML but if you are not familiar with this code then it is easier to create a form using excel first or [ODK build](#) if your form is simple. Forms for aggregate will need to be converted to xml, forms for Ona can be uploaded as excel files
- The questionnaire needs to be written in excel with standard headings (see the template form in appendices).
- There should be three tabs in your excel sheet named – **survey**, **choices** and **settings**:
  - The **survey** tab contains the questions that will appear in the form.
  - The choices sheet contains any choices for predefined multiple choice questions.
  - The **settings** tab contains the name of the form and the submission URL and version number.
- Refer to the next pages and the example spreadsheet for more details.

# Survey tab

---

The spreadsheet is divided into columns each with a different heading determining the function of the column, to build the final code of the form. The following is a list of useful headings. Those that are required as minimum for a very simple form are starred (\*).

## Headings in the spreadsheet:

- **Type\***: defines the question type . E.g. select\_one, select\_multiple, text, integer, note
- **Name\***: describes the name of the question e.g. client\_name. Needs to be lowercase and spaces replaced with an underscore (\_)
- **Label\***: Will appear in the final form and is the label or the question . E.g. Enter the shark measurement
- **Hint**: Will appear in the final form and describes the label or question. E.g. Measure total length of the shark (cm)
- **Jr:count**: denotes the number of times a group should be repeated e.g. \${number\_sharks} will repeat this group of questions according to the number of sharks entered in the 'number\_sharks' question.
- **Constraint** : Constraints can be added e.g. age should be between 10 and 60.

# Survey tab continued

---

- **Constraint** : [Constraints](#) can be added e.g. age should be between 10 and 60.
- **Constraint message**: the message to be displayed when a value outside the constraint parameters are entered (and supports multiple languages).
- **Required**: defines whether this question requires an answer? If yes, simply enter 'yes' in the box. If the respondent tries to skip to the next question they will be unable to and an error message will be displayed.
- **Appearance**: determines how the question will appear - e.g as a calendar

**Note:** See '[Question types](#)' for a breakdown of the options for each part of the questionnaire and the associated 'code'. Code or names will be written as it should be entered and should be entered into the excel sheet exactly as typed, except where *listname* is typed where you should replace with the name of your list

# Choices tab

---

- This is where all the choices for the dropdown or multiple choice lists are stored.
- The `list_name` will be the same for all the choices and must match up with the name on the survey tab.
- For example if you want to choose from a list of species, the **Name** in the survey tab would be **species**, and the **list\_name** on the choices tab would also be **species**.
- It is possible to associate an image with the choice - see '[Adding Images as list choices](#)'.
- The text in the **Name** column will appear as the heading in the final data sheet (i.e. the exported data) so make sure these are concise but relevant and easy to understand.
- The **label** is the text that will appear in the form itself so make sure this is clear for users.

# Settings tab

---

- This is where the settings for the form are stored and is how the form will be linked to the correct aggregate server.
- The name of the form (display name) and the form ID are determined here. It is usually easier to keep these the same. Spaces should be replaced by underscores in the form ID. For example, the form title could be Fish ID and form id would be Fish\_ID.
- The default language can be set here for multiple language forms.
- Add a version to number to avoid having to create an entirely new form separate to the last one every time you make a small change. Version numbers should be the date and the version number in the following format so that later versions will always be larger numbers: 2015091201 – which is 2015/09/12 version 01
- Specify the form submission name (when data are sent) by adding a column called instance\_name with fields from the form (e.g. site name):  
e.g. `concat(${date_record}, '-', ${site_name}, '-', uuid())` names a filled form with date and site name selected, followed by a unique ID

# Creating the form

---

- After the questionnaire/form has been created in Excel the xls file needs to be converted online to an XLM file to be used on the phone by uploading it here:  
<http://23.21.114.69/xlsform/>
- The name of the file cannot contain any spaces or special characters but you can use underscores (\_\_) instead of spaces.
- The website will tell you if there are errors in the spreadsheet and will not convert it. The most common are mismatched parenthesis, mismatched groups or missing labels.
- Another option is to download an offline converter, e.g. <https://gumroad.com/l/xlsform-offline> will also point out errors etc. See the ODK website for [more details](#).

# XML Converter Error screen

---

- If you are using Ona as your server you do not need to convert forms
- Often the error message will give a line number if the error relates to a certain line.
- This error message indicates there is a problem in form named Octopus\_questionnaire\_new2.2 at the line where it refers to method and Mitino.
- Sometimes a bit of trial and error is necessary if the problem is not immediately obvious or set out clearly in the error message.

File:  No file chosen

Error: ODK Validate Errors:

XForm Parse Error: Encountered a problem with display condition for node [/Octopus\_questionnaire\_new2.2\${equipment4}] at line: selected( /Octopus\_questionnaire\_new2.2/method , Mitino'), Couldn't understand the expression starting at this point: ...method , Mitino?')

org.javarosa.xform.parse.XFormParseException: Encountered a problem with display condition for node [/Octopus\_questionnaire\_new2.2\${equipment4}] at line: selected( /Octopus\_questionnaire\_new2.2/method , Mitino'), Couldn't understand the expression starting at this point: ...method , Mitino?')

>> XForm is invalid. See above for the errors.

Result: Invalid

# Uploading the form to Aggregate

- In the Form Management tab click on Add New Form.

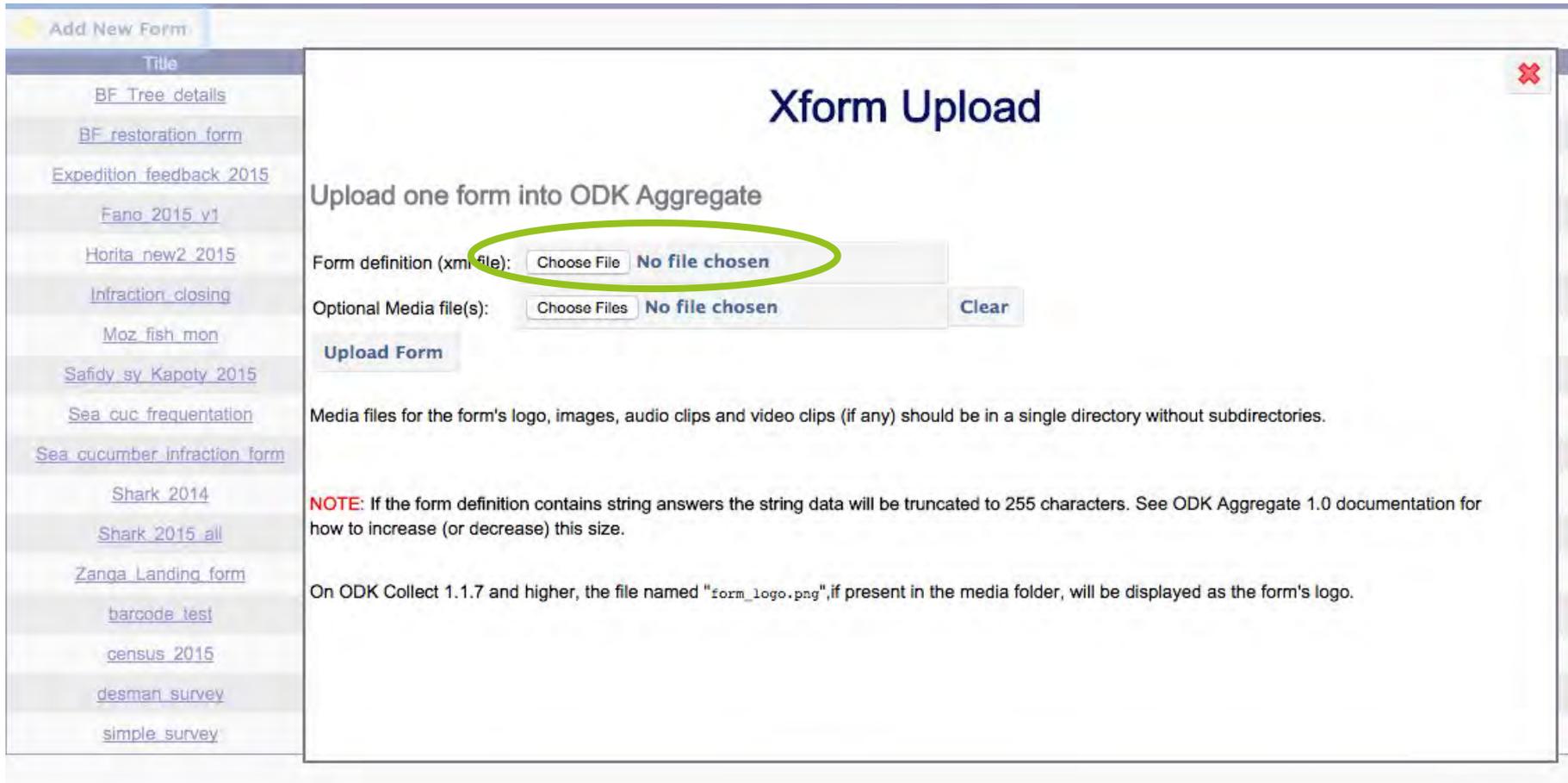


The screenshot shows a web interface with a navigation bar at the top. The 'Form Management' tab is selected and highlighted. Below the navigation bar, the 'Add New Form' button is circled in green. The main content area displays a table of existing forms with columns for Name, Form Id, Media files, User, Downloadable, and Accept Submissions.

Name	Form Id	Media files	User	Downloadable	Accept Submissions
<a href="#">BF Tree details</a>	BF_Tree_details	3	BVODKDEMO@gmail.com	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<a href="#">BF restoration form</a>	BF_restoration_form	0	BVODKDEMO@gmail.com	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<a href="#">Expedition feedback 2015</a>	exped_feedback_2015	1	BVODKDEMO@gmail.com	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<a href="#">Fano 2015 v1</a>	Fano_2015_v1	1	thierry@blueventures.org	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<a href="#">Horita new2 2015</a>	Horita_new2_2015	0	victoria@blueventures.org	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<a href="#">Infraction closing</a>	Infraction_closing	0	victoria@blueventures.org	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<a href="#">Moz fish mon</a>	Moz_fish_mon	0	victoria@blueventures.org	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<a href="#">Safidy sy Kapoty 2015</a>	Safidy_sy_Kapoty_2015	0	BVODKDEMO@gmail.com	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<a href="#">Sea cuc frequentation</a>	Sea_cuc_frequentation	0	victoria@blueventures.org	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<a href="#">Sea cucumber infraction form</a>	Sea_cucumber_infraction_form	0	victoria@blueventures.org	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

# Choose the files to upload

- In the pop-out window click on choose file



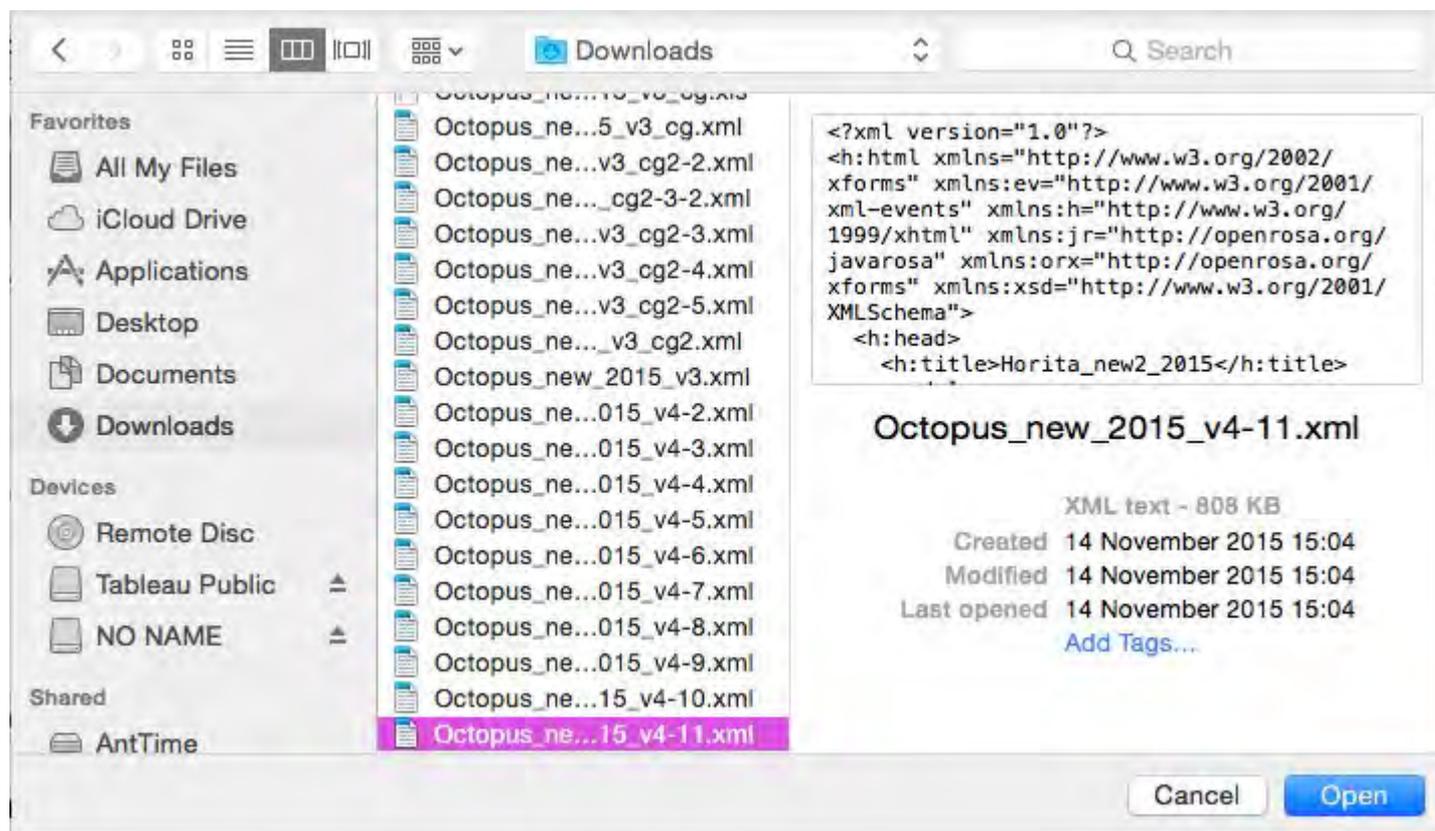
The screenshot shows a web interface for uploading Xform forms. On the left is a table with a 'Title' column and various form names. On the right is a pop-out window titled 'Xform Upload' with a close button in the top right corner. The window contains the following elements:

- Title:** Xform Upload
- Instruction:** Upload one form into ODK Aggregate
- Form definition (xml file):** A text input field with a 'Choose File' button and the text 'No file chosen'. This button is circled in green.
- Optional Media file(s):** A text input field with a 'Choose Files' button, the text 'No file chosen', and a 'Clear' button.
- Upload Form:** A button.
- Media files note:** Media files for the form's logo, images, audio clips and video clips (if any) should be in a single directory without subdirectories.
- NOTE:** If the form definition contains string answers the string data will be truncated to 255 characters. See ODK Aggregate 1.0 documentation for how to increase (or decrease) this size.
- ODK Collect note:** On ODK Collect 1.1.7 and higher, the file named "form\_logo.png", if present in the media folder, will be displayed as the form's logo.

Title
<a href="#">BF_Tree_details</a>
<a href="#">BF_restoration_form</a>
<a href="#">Expedition_feedback_2015</a>
<a href="#">Fano_2015_v1</a>
<a href="#">Horita_new2_2015</a>
<a href="#">Infraction_closing</a>
<a href="#">Moz_fish_mon</a>
<a href="#">Safidy_sy_Kapoty_2015</a>
<a href="#">Sea_cuc_frequentation</a>
<a href="#">Sea_cucumber_infraction_form</a>
<a href="#">Shark_2014</a>
<a href="#">Shark_2015_all</a>
<a href="#">Zanga_Landing_form</a>
<a href="#">barcode_test</a>
<a href="#">census_2015</a>
<a href="#">desman_survey</a>
<a href="#">simple_survey</a>

# Navigate to the file

- Navigate to the xml ([already converted online](#)) where it is saved on your computer, select the file and click on Open.
- Repeat this process to add images with the form. ([see adding images](#))



# Question Types

# Question appearance

---

You can decide how you want the question to appear in the appearance column.

Options include:

- Automatically change to next screen (quick)
- Pop-out lists (minimal)
- Multiple questions on a screen (field-list) need to be in a group
- Table (table-list)
- no-calendar (will display dates without a calendar)

Examples will be given of all of these on the following pages.

# Question Types

---

- ODK supports a range of question types, examples of the most useful questions types will be given in this chapter. To determine what kind of question you would like, enter one of the following e.g 'text' into the 'type' column of the excel template:
- See [odk website](#) for full list of question types

text	Text input.
integer	Integer (ie, whole number) input.
decimal	Decimal input.
select_one [options]	Multiple choice question; only one answer can be selected.
select_multiple [options]	Multiple choice question; multiple answers can be selected.
note	Display a note on the screen, takes no input.
geopoint	Collect GPS coordinates.
image	Take a photograph.
barcode	Scan a barcode, requires the barcode scanner app is installed.
date	Date input.
datetime	Accepts a date and a time input.
audio	Take an audio recording.
video	Take a video recording.
calculate	Perform a calculation; see "calculates" below.

# Text questions

---

- Requires a free text answer
- Type: text
- Length of the text box will be standard 256 characters unless you expand it.
- Please note the form will allow users to add more characters than this but it will be truncated when uploaded to aggregate.

## Changing the size of text boxes:

(see ODK website for any updates to this):

- Add a column to your form called bind::odk-length
- In that column add the number of characters needed for each text question you want to change the text box size for e.g. 1000 (MySQL systems can not hold more than 16,000 characters).
- Convert your form to xlm and you will see the following warning:  
XForm Parse Warning: Warning: 1 Unrecognized attributes found in Element [bind] and will be ignored: [odk-length] Location:  
Problem found at nodeset: /html/head/model/bind  
With element <bind nodeset="/choice/hh/name" odk-length="600" required="true()" type="string"/>  
Problem found at nodeset: /html/head/model/bind  
With element <bind nodeset="/choice/hh/name" odk-length="600" required="true()" type="string"/>

# Text continued

---

- This is expected and you can ignore it.
- Download the form and edit the xlm file in a text editor in the following way:
  - At the very top of the form, add: `xmlns:odk="http://www.opendatakit.org/xforms"` to the `<h:html ...>` line (2nd line in file) in a manner similar to the other xmlns directives in that line
  - Search and replace `odk-length` with `odk:length`
- Save your changes.
- Download and run ODK validate on this file.
- You should get warnings similar to the ones reported by the XLSFORM convertor but with the bind line reading 'length' not `odk:length` or `odk-length`.
- Upload to Aggregate.

**NB:** the field-length specification is ignored if this is an updated version of an existing form (e.g. you are only changing the version number and overwriting an old form). The field-length specification is only used the first time a form is uploaded to ODK Aggregate. After that, all changes to this setting in subsequent versions are ignored because the table structures and storage have already been allocated.

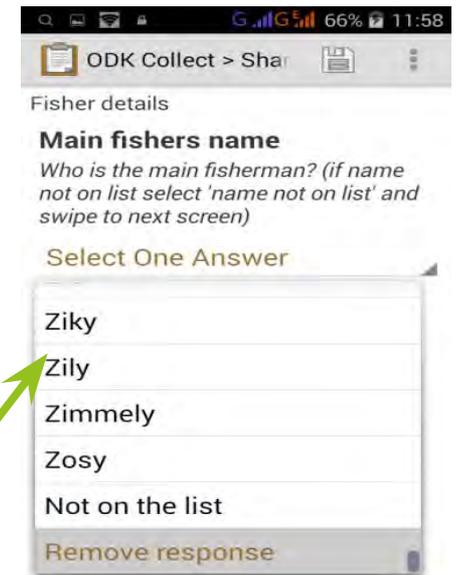
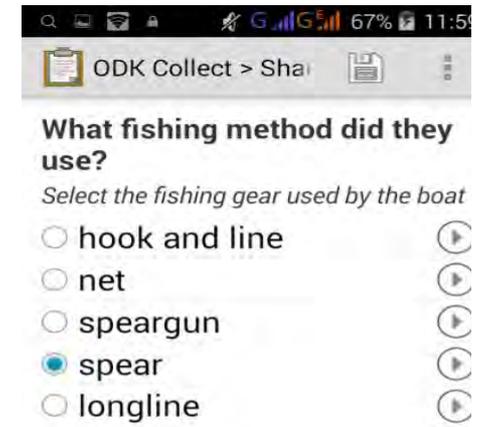
# Types of lists

**Single choice list options:** allows one choice only

- Type: `select_one listname`
- Appearance: quick
- Gives a visible list and the page change when an option is selected
- E.g `select_one methods` is the 'type' and in the name column is typed 'methods' and the different choices: `hook_and_line` etc. will be listed as methods on the choices tab.

**Alternative appearance:**

- Type: `select_one listname`
- Appearance: minimal
- Gives a pop-out list of choices



# Types of lists

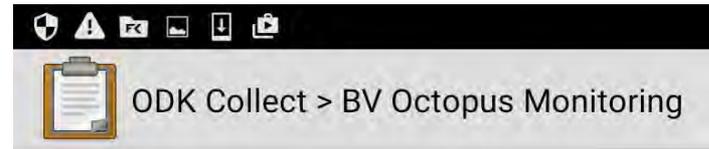
**Multiple choice lists:** allow multiple answers

- Type: `select_multiple listname`

**Alternative appearance:**

- Type: `select_multiple listname`
- Appearance: minimal (for pop-out list)

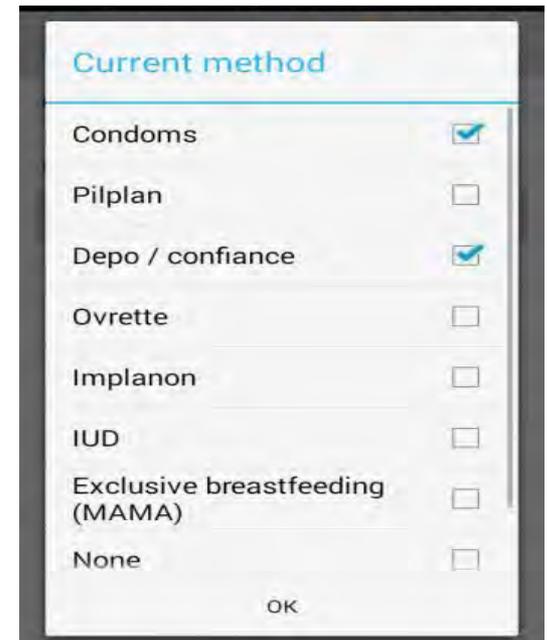
**NB:** *listname* should be replaced with your list name (text in the Name column for that question, this will also be the same name given to the list of options on the choices tab) for example: `select_one species` (it is ok to put a space between `select_one` and the *listname*)



Went fishing

**What method(s) did they use**

- Free-diving
- Gleaning
- Snorkelling



# Predefined list choices

---

- Options for lists should be recorded on the choices tab (see template excel sheet).
- Lists of options in the [choices tab](#) should be given the same name as the [name](#) in the survey tab. E.g. if your question is select\_one surveyor\_names the choices relating to this question should all have the list\_name surveyor\_name:
- It is also possible to have images as choices (see [Adding images](#) as list choices).
- To restrict what can be entered or selected together see [constraints](#).

list_name	Name
surveyor_name	Bernico
surveyor_name	Farakely
surveyor_name	Samba
surveyor_name	other

# Automatically Specify 'other' options

- Adding `or_other` to the **type** of any `select_one` or `select_multiple` question will automatically add 'other' to the list of choices appearing, and prompt you to specify 'other' if selected:

**NB:** `or_other` function does not work when a **choice filter** is in place. The automatic extra question to specify the 'other' options is always in English (irrespective of the phone or form language settings).

**type**

```
select_one site_name or_other
```

Select village/site

- Lalane
- Malindi
- Other

Specify other.



# Manually adding 'other' options

---

- Alternatively: manually add 'other' as an option in the [choices list](#)
- Use [skip logic](#) to ask for additional details in the same way you would for any other question where the question is only [relevant](#) when 'other' is selected:

type	name	label	relevant
text	landing_site_other	Specify other.	selected(\${landing_site}, 'other')

# Numbers

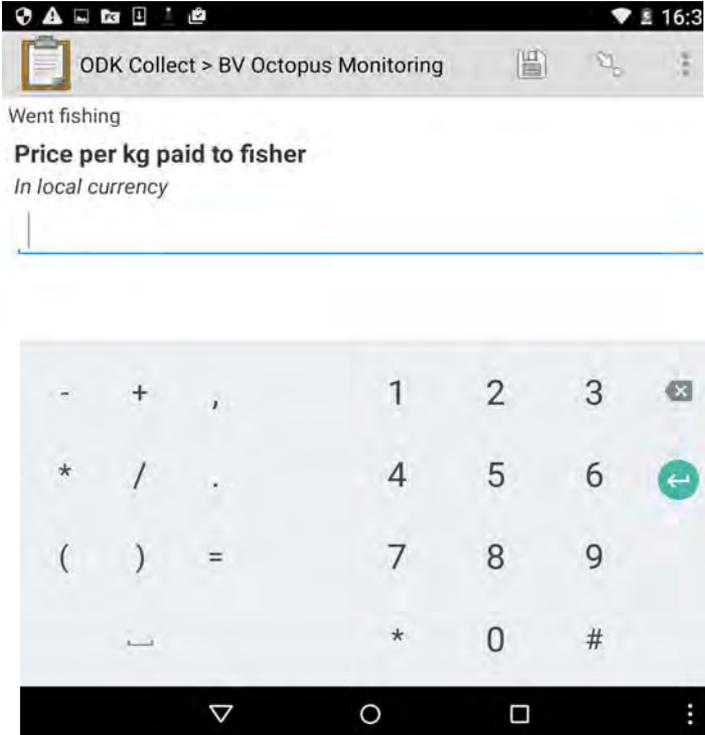
- If a question requires a value rather than text
- Type: integer
- The number keypad will be displayed
- Constraints can be added
- Number answers can be used to determine how many times a set of questions should be repeated (see repeats).

## Decimal places

- If the question requires an answer with decimal places.
- Type: decimal

## Calculations

- Calculations may be useful if you want to make a calculation based on previous answers and ask the user to check it, or you want to give instructions or information.



The image shows a mobile application interface for ODK Collect. The title bar reads 'ODK Collect > BV Octopus Monitoring'. Below the title bar, the text 'Went fishing' is visible. The main question is 'Price per kg paid to fisher' with the subtitle 'In local currency'. A numeric keypad is overlaid on the screen, showing digits 0-9, a decimal point, and various mathematical symbols like +, -, \*, /, =, and #. The keypad also includes a back arrow and a clear button (X).

**Example:** the octopus form works out the weight in KG from the weight entered in grams and asks the user to confirm this is correct.

# Validations

---

- It is possible to validate the answer to one question based on a previous answer.
- For example, in the octopus form we ask for the weight to be entered twice to try and prevent mistakes.
- On the second weight entry, a constraint was added to ensure the weights match.
- After the second weight has been entered the form will not allow you to progress unless the two entries match.
- In the constraint code the `{weight}` refers back to the name used in the first question.

constraint	constraint_message::English
<code>.=({weight})</code>	The two weights entered don't match please go back and check

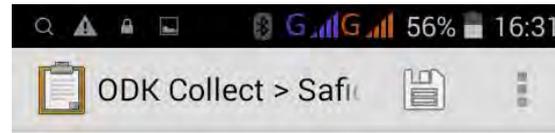
# Some useful code for calculations and constraints

---

+	Addition	6 + 4
-	Subtraction	6 - 4
*	Multiplication	6 * 4
div	Division	8 div 4
=	Equal	price=9.80
!=	Not equal	price!=9.80
<	Less than	price<9.80
<=	Less than or equal to	price<=9.80
>	Greater than	price>9.80
>=	Greater than or equal to	price>=9.80
or	or	price=9.80 or price=9.70
and	and	price>9.00 and price<9.90

# Dates

- Type: date
- Appearance: no-calendar, year or month-year depending what you need.
- If you do not set appearance as no-calendar a calendar will show. This is very small and quite fiddly on mobile devices so is not recommended
- Type: datetime
- This will require a date and a time on the same page.
- Some users find entering both on one screen difficult.



## Date

*What is the date today?*

01	Feb	2014
02	Mar	2015
03	Apr	2016



# Take a picture

- Type: image
- Everything else in the excel sheet is the same as a normal question.
- If you want an example picture as part of the question then the picture name should be entered in the image column image\_name.jpg with no spaces.
- The image saved on your computer that relates to this should be labelled with exactly the same name.
- For examples the code to create this question would be:



type	name	label::English	hint::English	required	image
image	image_shark_one	Photograph shark's head	Take a photo of the underside of the shark's head	yes	shark_photo_head_small.jpg



This is the question type : take a picture

This adds the example picture to the question



# Adding images

---

- Images can be added to the form, as part of a question, as in the previous example, or a logo can be added to the start of the form.

## Logos

- To add a logo simply upload a file with the name logo.png onto aggregate when you upload the form (see [uploading forms](#) for more details)

## Pictures in questions:

- Add the image name to the image column with file name type. E.g. you would type shark.jpg into the image column.
- The actual picture file should have the same name e.g. shark and it will be a jpg.

All photos should be uploaded to Aggregate with the finalised form (see [uploading forms](#))

# Adding images as list choices

- Images can be added to illustrate the choices for a question
- The question can be designed as usual but another column must be added to the choices tab, called image.
- In this column the pictures associated with each choice (e.g. Dead 1), should be added as the name of the file and the type e.g. dead1.jpg.
- The picture should be named with exactly the same name as you entered into the choices tab.

**NB:** for some reason it seems that if you have multiple languages in your form you need to add an image column for each language and these should be labelled as: image::English

ODK Collect > BF\_

### Dead

What stage of dead is the tree

Dead 1



Dead 2



Dead 3



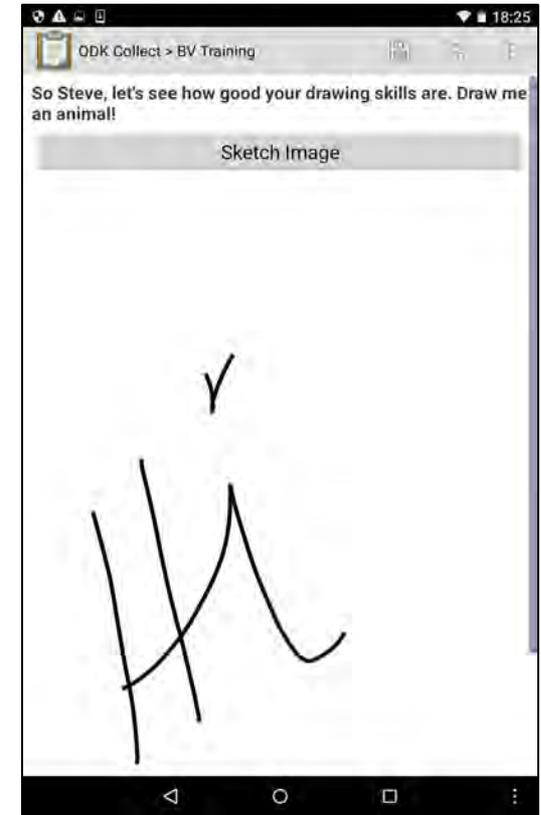
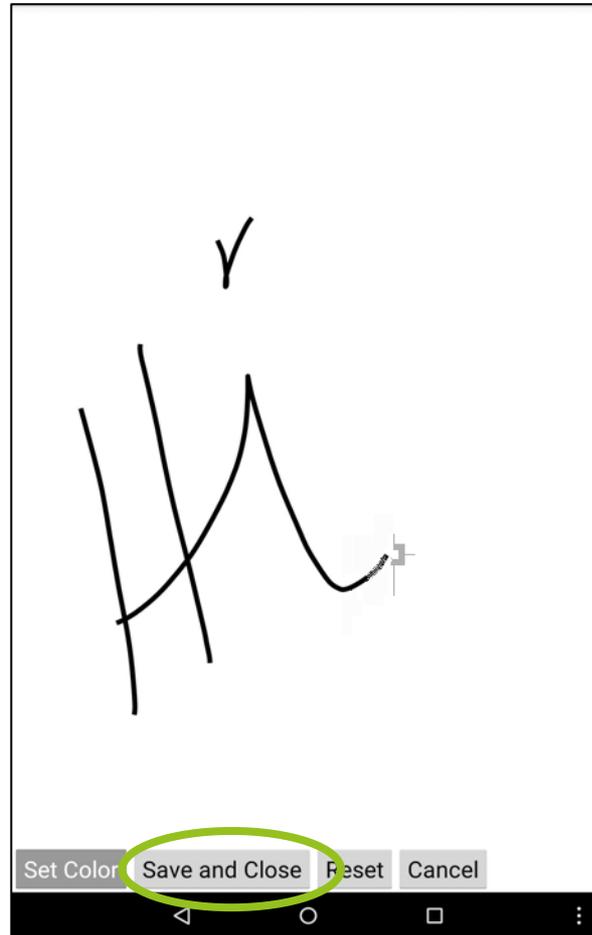
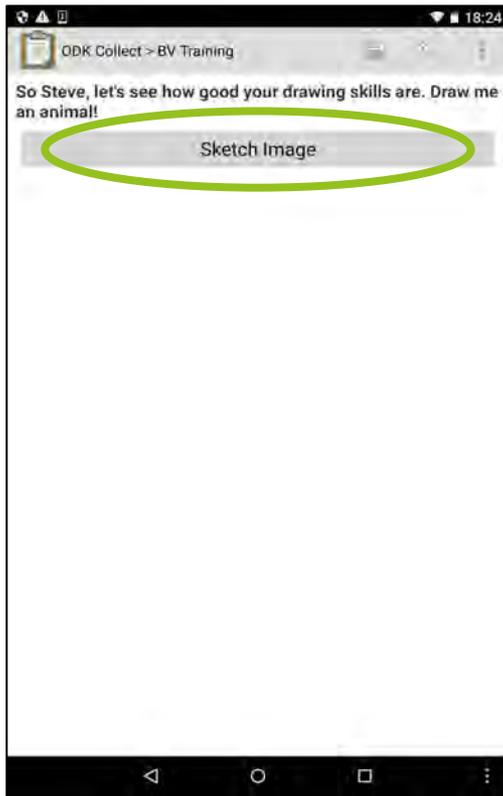
# Add images to appear as icons

- To make pictures appear without the names of the options so that they look like icons enter either compact (or quickcompact if you want the screen to move on automatically) in the appearance column for that question.



# Drawing questions

- Type:image
- Appearance:draw



# Notes or prompts

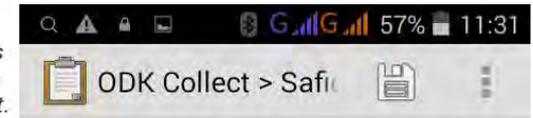
- Type: note
- Notes can be added if a note, reminder or instruction is needed without requiring a response.
- Notes can be added to pages with other questions, for example if an instruction is required. See [grouping questions](#) for more details.



Implanon referral

## Refer client to the next Marie Stopes outreach clinic for implanon

*You should attend the Marie Stopes outreach clinic to receive implanon. Please use condoms while you wait.*



With children > Breastfeeding details

## Breastfeeding for baby's health

*Please refer to CBD guidelines and explain benefits of exclusive breastfeeding until 6 months old, after which other foods can be added*

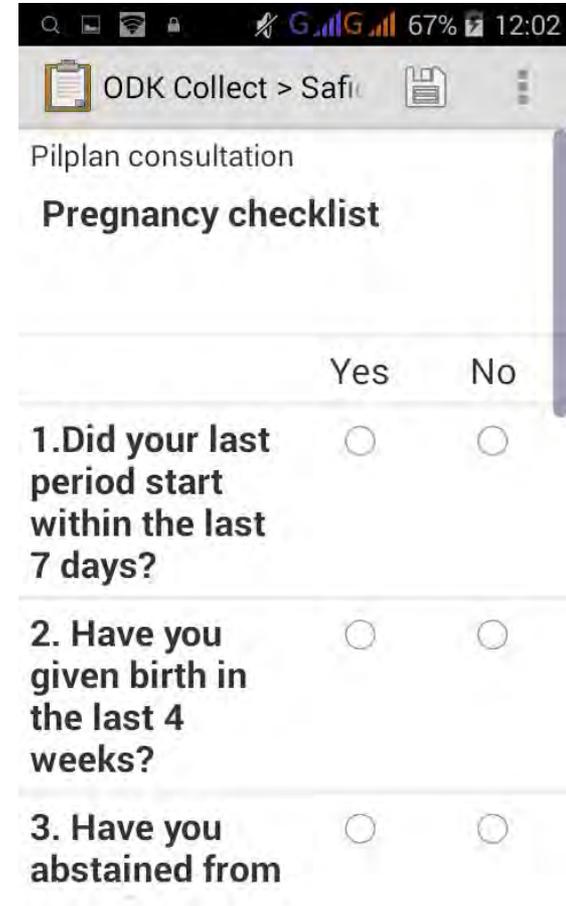
### Breastfeeding

*How are you currently breastfeeding?*

- Breastfeeding exclusively
- Breastfeeding but adding other food and drink
- Not breastfeeding at all

# Tables

- Type: table-list
- This will display questions in a table on the same page.
- The questions will need to be in a group (see the page on [grouping questions](#)).
- Appearance: table-list should be entered in the appearance column of the begin\_group row.



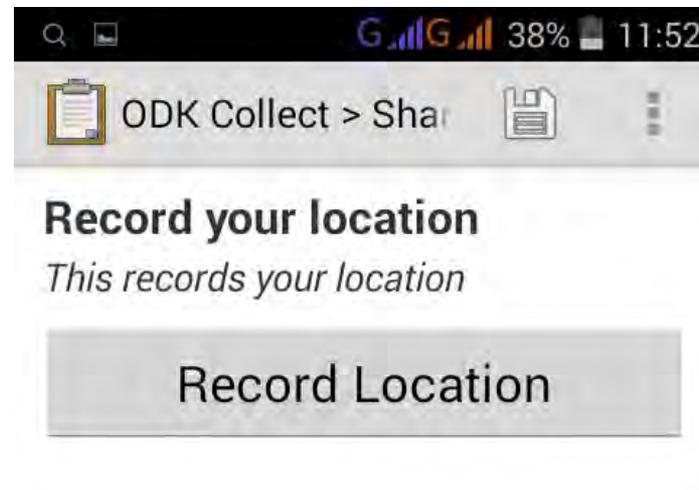
The screenshot shows a mobile application interface for ODK Collect. The title bar indicates the application is running on a Safar browser. The main content area displays a form titled "Pilplan consultation" with a sub-section "Pregnancy checklist". The form is structured as a table with three rows of questions and two columns for "Yes" and "No" responses. Each question has a radio button next to each response option.

	Yes	No
1. Did your last period start within the last 7 days?	<input type="radio"/>	<input type="radio"/>
2. Have you given birth in the last 4 weeks?	<input type="radio"/>	<input type="radio"/>
3. Have you abstained from	<input type="radio"/>	<input type="radio"/>

# GPS

---

- The GPs on the phone can be used to record location.
- Type: geopoint
- This will simply ask you to record location and the language will be based on the settings of the phone.
- Make sure the GPS on the phone is switched on.



# Grouping questions

---

- Grouping questions can be useful for organising related questions.
- It is also necessary if you want to add in tables or multiple questions on the same page.
- To group questions use the following construct:

type	name	label::English	hint::English	jr:count	
begin_repeat	shark_measurements	Shark information		\${number_sharks}	
begin_group	shark_details	Shark details			
select_one shark	shark	Select shark species	What kind of shark was caught?		
select_one sex	sex	Select sex of animal	Was it female or male?		
end_group					
end_repeat					

- In this example the form will ask these question according to the number of sharks specified in a previous question using the jr:count functionality

# Same page questions

- Create a group as per previous page
- Add 'field-list' in the appearance column
- Example: the page with three questions on the right is structured like this in the excel sheet:

Village details

**Village where they live**  
*Which villages does she live in?*

**Tampolove**

**Village where they were born**  
*Which village was she born in?*

**Vorehe**

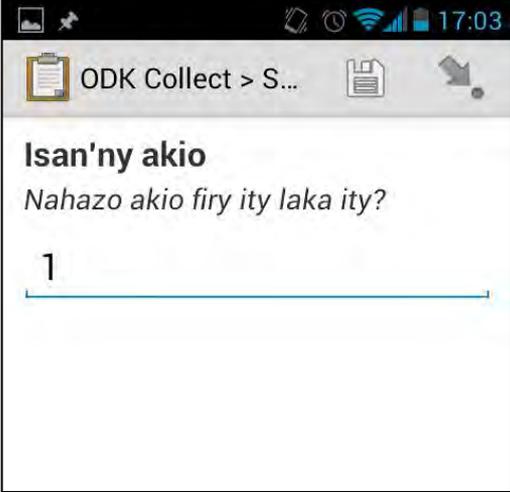
**Mother's name**  
*What is the name of her mother?*

type	name	label::English	hint::English	required	appearance
begin_group	village_ALL	Village details			field-list
select_one home_village	home_village	Village where they live	Which villages does she live in?	yes	minimal
select_one birth_village	birth_village	Village where they were born	Which village was she born in?	yes	minimal
text	client_mother_name	Mother's name	What is the name of her mother?	yes	
end_group	village_ALL				

# Repeats

---

- Type: begin\_repeat
- Followed by begin\_group then the question(s) then end\_group to group the questions ([see previous pages](#) on grouping questions)
- Questions can be repeated a number of times based on an answer to a previous question, or it can be undefined and the user will be asked to “Add Group” if they want to enter a new set of the repeat questions.
- If left undefined the form will prompt the user to add a new group at the start of the repeat section.
- The question in the image is the start of a repeat group.
- Whatever number of sharks they put in here, the next set of questions will then repeat that many times.

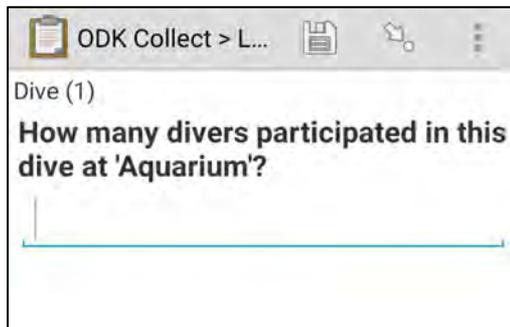


The image shows a screenshot of an ODK Collect form on a mobile device. The status bar at the top indicates the time is 17:03. The form title is "ODK Collect > S...". The main content of the form is a question in Swahili: "Isan'ny akio" followed by "Nahazo akio firy ity laka ity?". Below the question is a text input field containing the number "1".

# Repeats

---

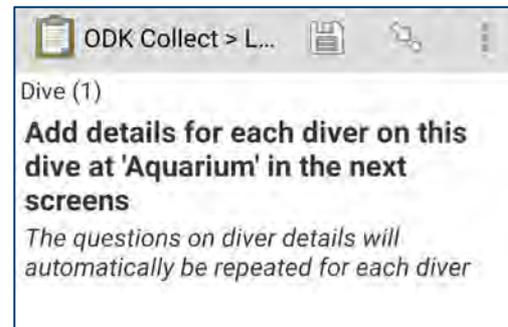
- Type: begin\_repeat
- A set of questions can be repeated a number of times based on the answer to a previous question by adding `#{previous question}` to the `jr:count` column.
- Otherwise it can be defined a set number of times by adding a number to the `jr:count` column or left undefined (see next page)
- The question in the image is the start of a repeat group.
- Whatever number of divers they put in here, the next set of questions (in this case details of each diver) will then repeat that many times.



ODK Collect > L...

Dive (1)

**How many divers participated in this dive at 'Aquarium'?**



ODK Collect > L...

Dive (1)

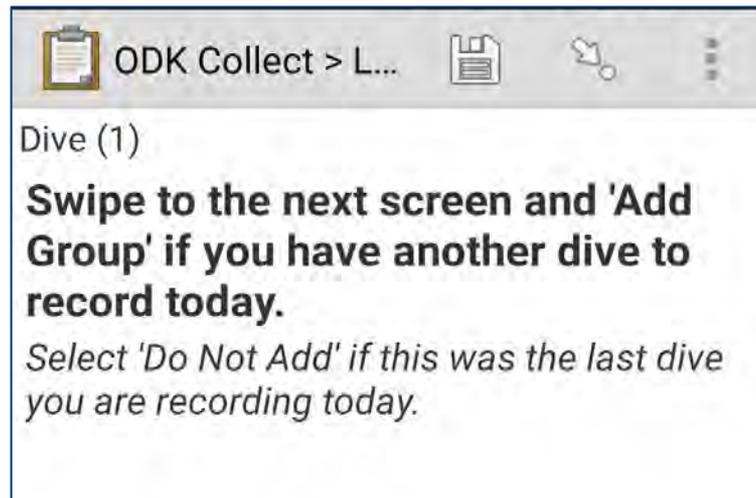
**Add details for each diver on this dive at 'Aquarium' in the next screens**

*The questions on diver details will automatically be repeated for each diver*

# Repeats

---

- If left undefined the form will prompt the user to 'Add new group' at the start of the repeat section.
- This can be confusing to inexperienced users, and adding a note explaining this could help.
- E.g. Swipe to the next screen and 'Add Group' if you have another dive to record today. Select 'Do Not Add' if this was the last dive you are recording today.



# Repeat question examples

---

This is the question that is used to determine how many times this group of questions is repeated. This should be before the repeat group.

This determines how many times the group of questions is repeated. If nothing is entered in the jr:count box the form will ask if you want to add a new group after each set of questions is completed (e.g. after the number of dead plants question is completed in this example). Each time a group is added the questions will be repeated. This is useful if you don't know how many subjects you need to enter, such as number of trees in a forest. In this example the questions are repeated according to the number of sub\_plots specified so this needs to be specified in the jr:count box.

type	name	label::English	hint::English	jr:count
integer	sub_plot	How many sub plots?	Enter number of subplots being sampled	
begin_repeat	species_details	Tree details for each subplot		$\{\text{sub\_plot}\}$
select_multiple	species	Which species are present in this plot?	Select species present	
begin_group	trees	Tree details		
integer	alive	Number of plants alive	Enter number of plants alive	
integer	dead	Number of plants dead	Enter number plants dead	
end_group				
end_repeat				

# Forcing the first repeat

---

- Use this if you have an open repeat but know that there will be at least one repeat subject entered.
- Save the form as an xml file
- Open in 'text edit'
- Search for jr:template=""
- Remove this section of code from the xml file.
- Leave the name of the repeat.
- E.g if the line is: <octopus jr:template=""> then delete the code above and leave <octopus>
- Save the file
- Upload to aggregate

# Restrained repeat

---

- Use if you want to restrain the number of times you repeat e.g. max repeats you want is 5 - anything under 5 will be repeated as many times as needed anything over 5 will only be repeated max 5 times.
- Repeat max five times example - add the following in the jr:count column:  

```
number(if( ${number_total}='1' or ${number_total}='2' or ${number_total}='3' or ${number_total}='4',  
${number_total},'5' ) )
```
- Where {number\_total} refers to the questions which is determining the repeat.
- The last number you enter (e.g. 5) will determine the max number of times this question will be repeated.

# Metadata

---

- Metadata are data that are embedded and recorded when a form is filled, but not visible to the user. Metadata can be captured by adding certain code to the first two columns of your spreadsheet. The others can be left blank.
- For example, you may want to capture the start time and end time of the form being filled.
- These times will be in UTC and will be based on the phone settings.
- Ensure the phone settings are correct when you set-up the phone and when you check data on phones (see [chapter 3](#) for further details).

This table shows how the meta data rows should be added. Only the type and name fields need to be specified:

type	name	label::English
start	start	
end	end	
today	today	

# Multiple languages

---

- ODK forms have the functionality to contain multiple languages.
- You will need to enter the translations yourself.
- This is particularly useful if you are working in different communities with different dialects or across languages e.g. Malagasy, French, English.
- Languages can be added by creating new label and hint columns for the respective languages.
- There must be two colons between the heading and the name of the language e.g. hint::English

The columns should added like this:

label::English	hint::English	label::Malagasy	hint::Malagasy

# Constraints and filters

---

- Constraints and filters are useful to ensure information is entered where it is required, the correct information is entered, and to avoid people answering questions irrelevant to them.
- Four types of constraints can be added using different mechanisms:
  1. A question must be answered to continue with the form ([Required questions](#))
  2. Only those questions relevant to the particular user will be asked ([Relevant questions](#))
  3. Questions are filtered according to a previous selection e.g. village names are used to filter lists of fishing sites ([Cascading Selects](#)).
  4. [Entry constraints](#) e.g. you can only enter a number of 1-100 (Entry constraints)

# Constraints 1: Required questions

- Can not progress until an answer has been entered as an answer is required.
- To mark a question as required, enter 'yes' into the 'required' column.
- The language of this message will be determined by whatever the phone languages is set to, not the language of the form. For example, here it is in French but the form language is Malagasy.



# Constraints 2: Relevant Questions

---

- Whether the question is asked is determined by the answer to a previous question.
- This can be controlled in the 'relevant' column.
- Entering instructions in the 'relevant' column will tell the form to look there if there are certain conditions. E.g. only ask this question if the person has selected that they have children; or only ask this question if the previous answer specifies that they used a net to go fishing.

The code for this is:

- `Selected({name of previous question you want to filter based on}, 'answer/selection you want to filter based on')`
- `Or not(selected({$....})` if the question is relevant unless a certain choice is selected.

**Example:** First question asks for name of the village. There is an 'other' option. If the respondent answers 'other' you want to know what this other village is called, so there is a second question asking the respondent to type in the name of the village. This question should only be asked if 'other' has been selected. The code in the relevant column would be:

Name of the previous question which asks about the name of the village – this is the previous question that the current question is dependant on

`Selected({village}, 'other')`

This is the answer to the previous question that you want to prompt this question

# Constraints 3: Cascading Selects

---

- It is possible to create cascading selects (where the options displayed depend on the selections of previous questions). This is helpful to make lists shorter.
- For example, village names could be filtered by the particular region of Madagascar, as selected in a previous question.
- In order to use cascading selects you will need to create a `choice_filter` column in your survey sheet and add some attribute columns (i.e. what to filter by) in the choices tab such as region.
- See next page for an example.

# Cascade Example

---

- The shark form is used for Velondriake, Maintirano and Belo-Sur-Mer regions. Data collectors in Belo do not need to see the list of all fisherman in other sites.
- There is a question which asks which site they are in (select\_one site) and this is used to filter the names of the fishermen available to choose in the 'Name of the fisherman' (select\_one main\_fisher\_name) question.
- In the choice\_filter column add site=\${site}, so that this question filters the options based on the site selected. The formula is therefore *name=\${name}* where 'name' is the question name that the answers should be filtered by e.g here the *name* is site (fishernames should be filtered by site).
- In the choices tab the attribute column 'site' has been added which then identifies which fishermen are from which site and makes it possible for fishermen to filtered according to the site that they are from e.g. Belo as seen below:

list_name	name	label::Malagasy	label::English	site	village
main_fisher_name	Alex	Alex	Alex	belo	Betania

# Constraints 4: Entry Constraints

---

- Entry constraints can be used for a variety of reasons. For example limiting numerical entries:
  - Limit the number entered to be between two values e.g. between and including 10 and 60 (`.>= 10 and .<=60`)
  - Restrict a value to be greater than or equal to 10 and less than or equal to 60 (`.>= 10 and .<=60`)
  - For free text date entries you can restrict the dates that can be entered (`. >= 1954 and .<=2004`)
  - `. > 7 and . < 20`      This must be between 7 and 20
  - `. > 4 and . < 14`      This must be between 4 and 14
- To restrict what options can be selected together
  - `!=` means unequal, i.e. `!={$data_collector}` means it cannot be the same name as selected for data collector
  - E.g. For previous contraception use you can not select 'none' and another item on the list. The code would be: `not(selected(., 'none') and (selected(., 'condoms') or ... with the whole list of all the other options enclosed in brackets to group them together. It is important that the brackets all match up:`

```
not(selected(., 'none') and (selected(., 'condoms') or selected(., 'pilplan') or selected(., 'depo_confiance') or  
selected(., 'ovrette') or selected(., 'implanon') or selected(., 'iud') or selected(., 'exclusive_breastfeeding') or selected(.,  
'cycle_method'))))
```

- To restrain an answer to one question based on another
  - e.g. tree height of the smallest tree must be smaller than largest tree, where the previous question asked for max\_height: .<({max\_height})
- Constraint messages can be entered in multiple languages
- Add another column and label each language appropriately.
- For example: constraint\_message::French

constraint_message:: English	constraint_message:: Malagasy
Must be smaller than largest tree measurement	Tokony kely noho ny hazo bevata maré

# Skip logic

---

- Questions can be skipped if they are only relevant to some people, by directing the user to the questions that are relevant to them.
- E.g. if someone chooses 'other' as an option you can then direct them to another question where they are asked to define 'other'. If you add skip logic only those that selected 'other' will be asked this question, others will not see this question.
- See [Constraints Relevant questions](#) for further details.

# Tailoring questions based on a previous question

- It is possible to tailor questions to make them easier to follow if there are lots of variables or they are repeated multiple times.
- For example, it is possible to add in something, e.g. the specific species name, to a question by inserting the following code. This will display the answer selected in a previous question.

select_one species_name	species_name	Species name	
image	image	Photo	Take a photo of the sea cucumber \${species_name}
select_one measure	measure	Are these counted by individuals or weight?	Select one
integer	weight_size	How many different sizes are there of \${species_name} today?	Enter the number of different weight groups or sizes

The name of the species that was selected in the first question will be displayed here.

# Chapter 5

Retrieving and sending data from the phones

# Methods to retrieve/send data

---

There are several ways to retrieve data from the phones:

1. Send data directly from the phone:
  - requires internet or wifi
  - the easiest option, if possible
  
2. Copy data from the phones and send at a later date either by:
  - 2.1. ODK briefcase
    - Sends data in bulk – requires the entire ODK folder to be copied from the phone. Requires ODK briefcase to be downloaded to a computer. Requires good internet connection
  - 2.2. Upload one form at a time directly to ODK Aggregate:
    - Very time consuming if there are lots of entries and photographs
  
3. Copy data from the phones and use briefcase to aggregate the data into a csv file
  - Does not need internet
  - Data are not sent to the server
  - Data can be uploaded from a csv file to the server at a later date if needed

# Connecting to the Internet

---

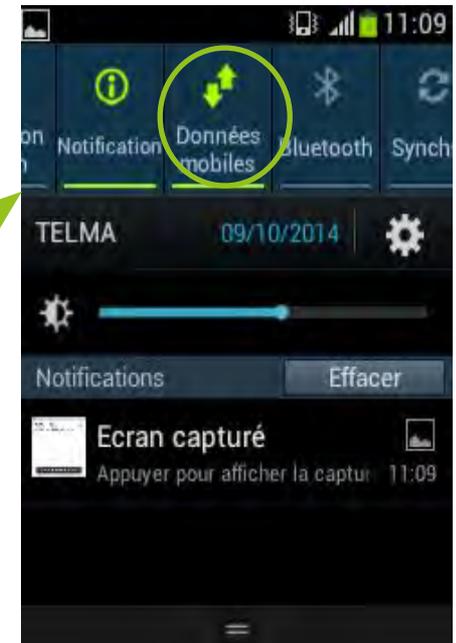
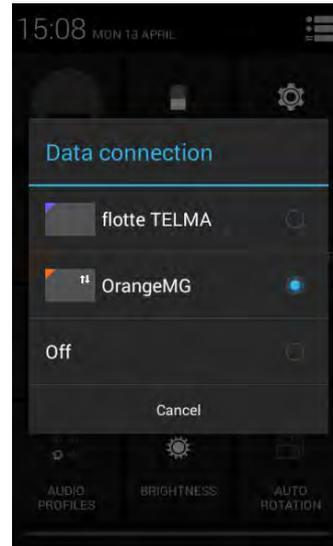
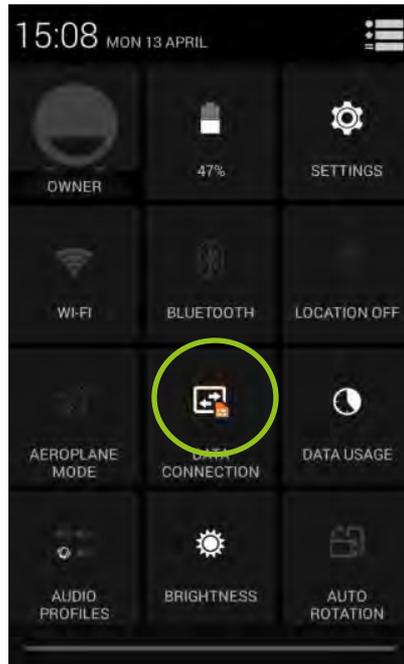
- Internet is necessary to both send data from the phones, or to send data via ODK Briefcase.
- There are three ways to connect to the internet:
  1. Mobile data connection – using data and phone credit
  2. Wifi connection – e.g. in the office or a hotel
  3. Create a wifi hotspot with a phone that does have mobile data connection and connect to that. The source of the internet for the phone providing the wifi hotspot can be from mobile internet or wifi.

# Checking Internet Connection

# Internet 1: Mobile data connection

Turning on the mobile data will depend on the phone model.

Karbons A5s



Samsung

# Internet 2: Wifi

- Turning on the wifi will depend on the phone model. These instructions are for Karbonn A5s.
- Options for wifi will be available in settings usually symbolised with this icon: 
- Wifi will be symbolised with something like this: 

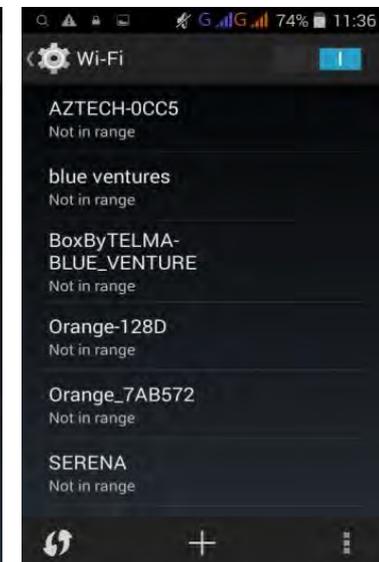
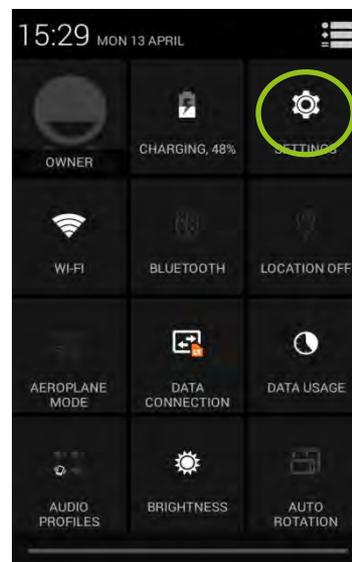
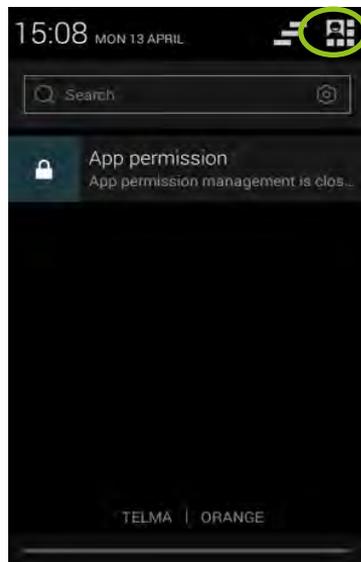
1. **RECONNECT:**  
Pull down from the home screen and click this icon.

2. Click on the wifi symbol to activate.

1. **NEW WIFI:** For new wifi connections go to settings.

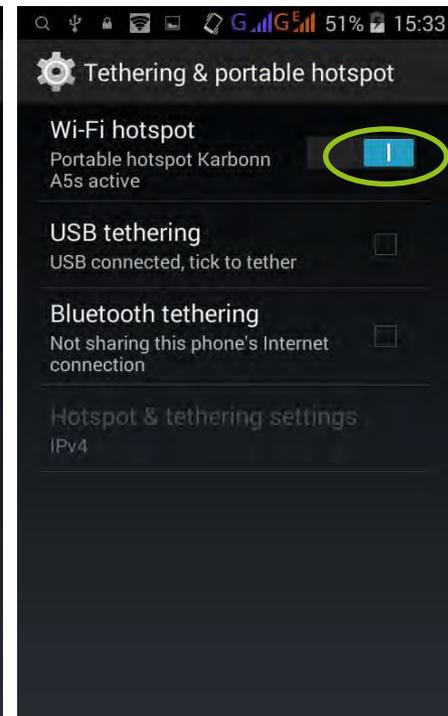
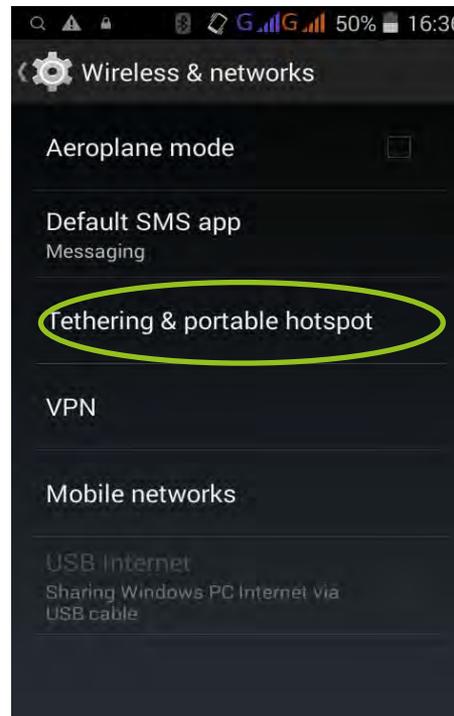
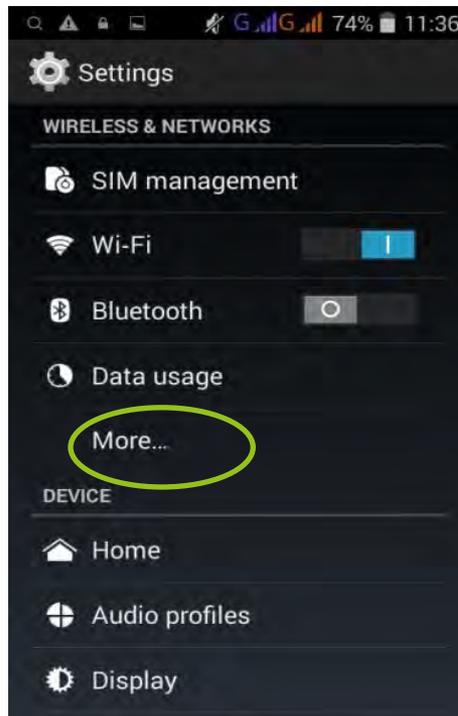
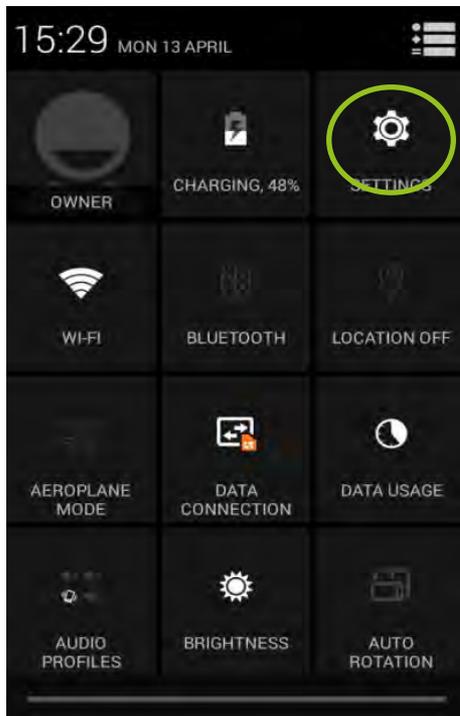
2. Click on the wifi symbol here.

3. Select the wifi in range you want to connect to. You may be prompted for a password.



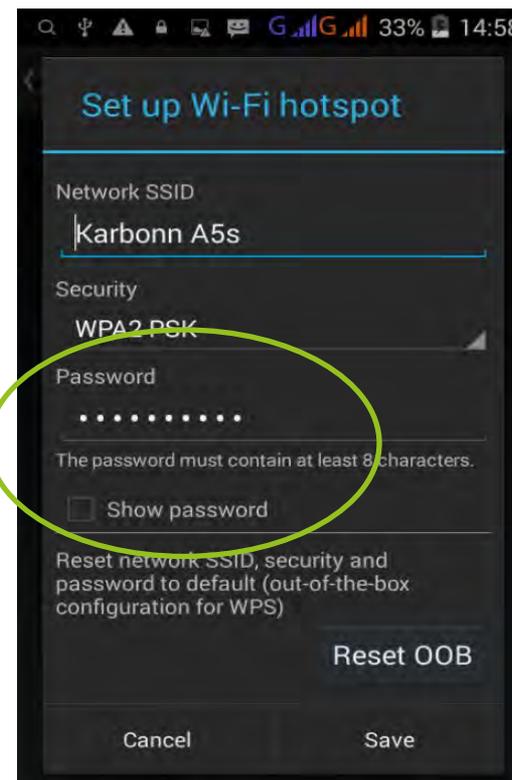
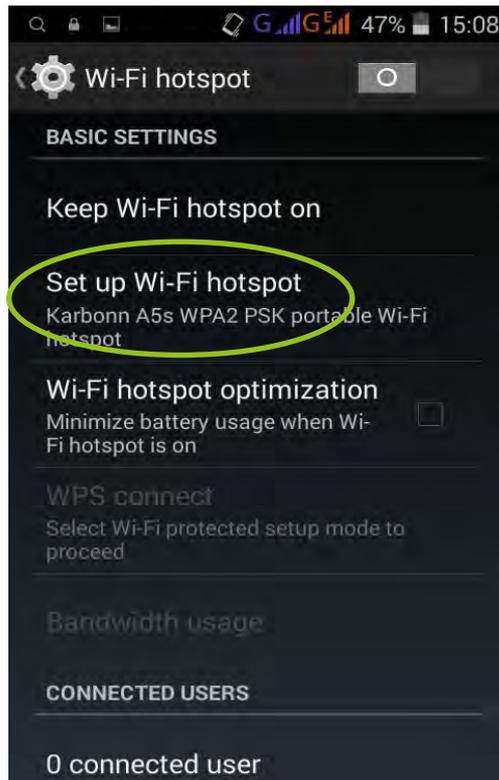
# Internet 3: Wifi hotspot

- To share a internet connection with another phone or device you can set-up a wi-fi hotspot.
- It can be used to share networks between phones and also share mobile network with computers.



# Internet 3: Connecting to a wifi hotspot

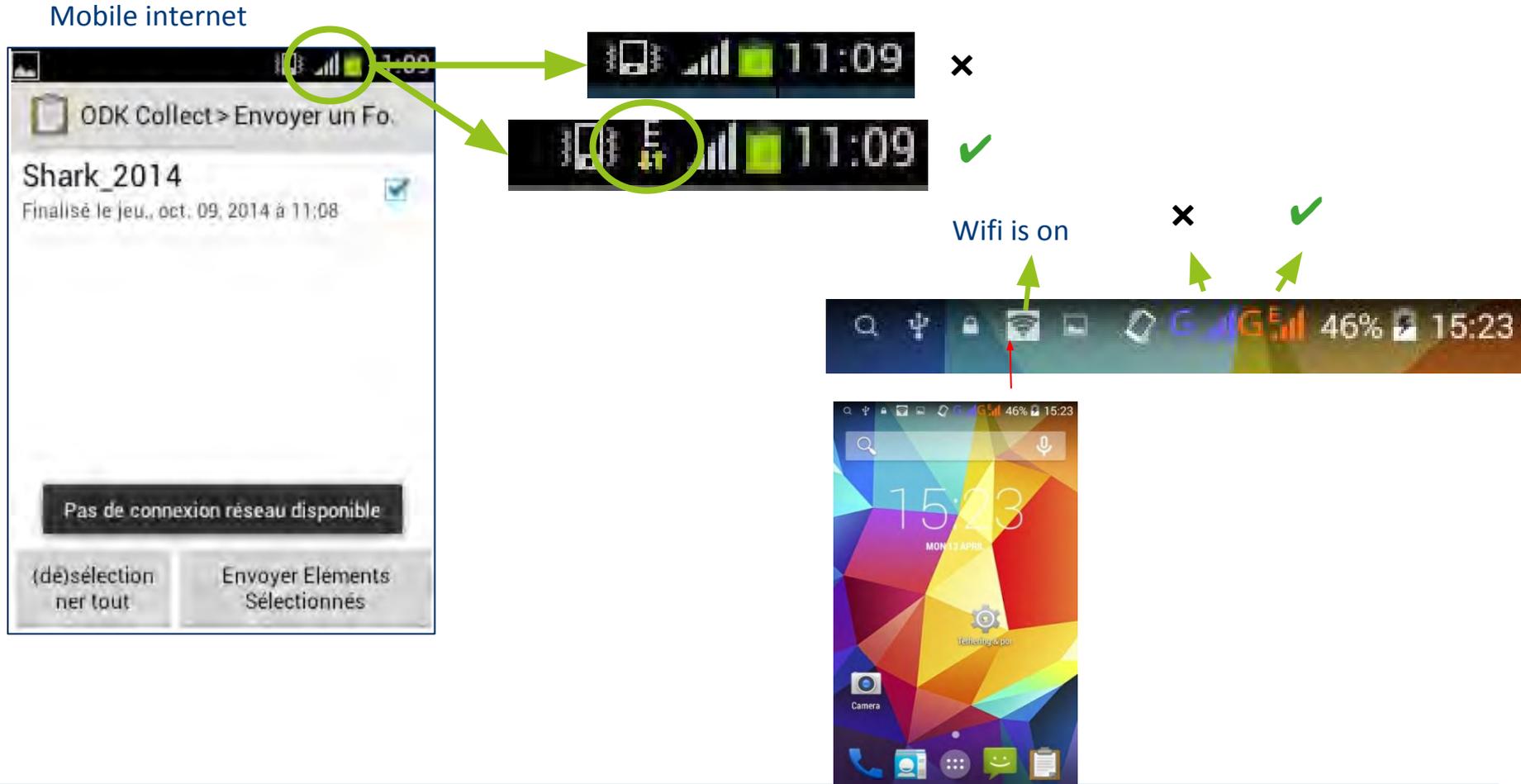
- Switch on the wifi, on the phone you wish to connect to the wifi hotspot on.
- Enter the password when prompted.
- If you do not know the wifi hotspot password, you will need to check this on the phone that you are trying to connect to. This can be found and/or changed on the phone that is sharing its wifi under 'Setup wifi hotspot':



## Method 1: Sending Data from the Phone

# Method 1: Sending data from the phone

- First check whether there is an internet connection

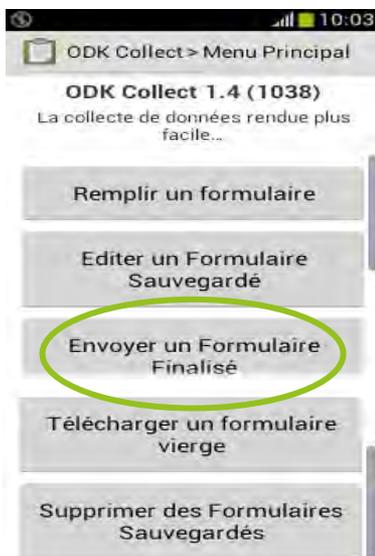


# Sending data from the mobile device

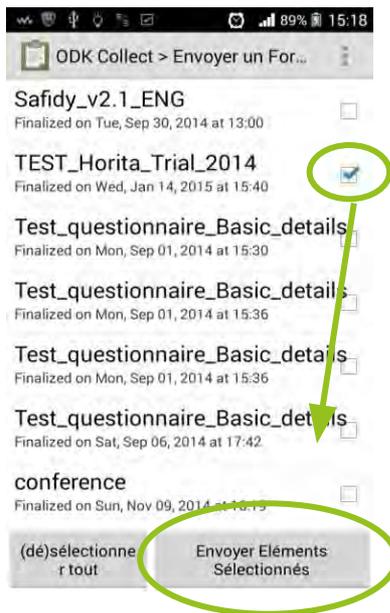
1. Check the form is finalised



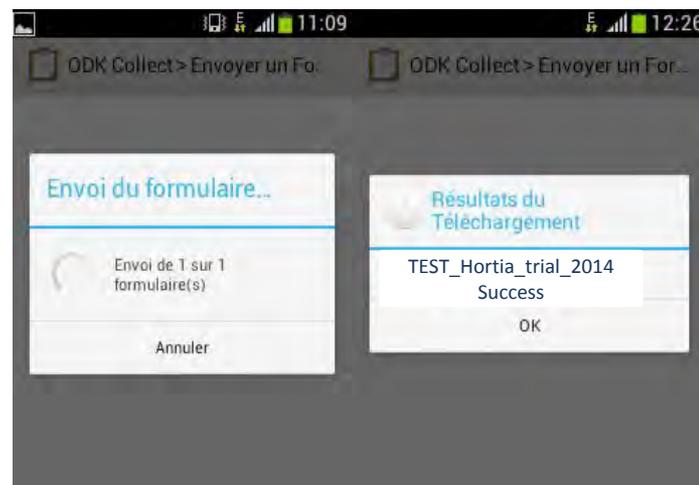
2. In main menu select 'Send finalised form'



3. Select one form at a time (sending multiple forms will be slow)



4. The form will send. This could be slow if there are photos (see [Troubleshooting](#) if you do not see "Success")



## Method 2.1: Sending Data Via Briefcase

# Method 2.1: Sending data using ODK Briefcase

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- ODK Briefcase is a way to send the forms in bulk from a computer instead of the phone or tablet.
- This requires an internet connection. This is a good way to send data if you have to copy data from phones in the field.

## Requirements

- The phone
- A USB 2.0 lead to attach the phone to a computer (some USB leads will only charge)
- A computer with ODK briefcase downloaded on it.
  - Instructions and site for download:
    - <http://opendatakit.org/use/briefcase/>
- Java needs to be already installed on the computer to run Briefcase. If not, you will need to download this before you can use Briefcase <https://java.com/download>.
- Create a shortcut to Briefcase on the desktop directly from the downloads folder as it doesn't appear in the programme files menu once it has been downloaded. To do this copy the file that was downloaded and place it on your desktop.

## Method 2.1: ODK Briefcase - Copying Data

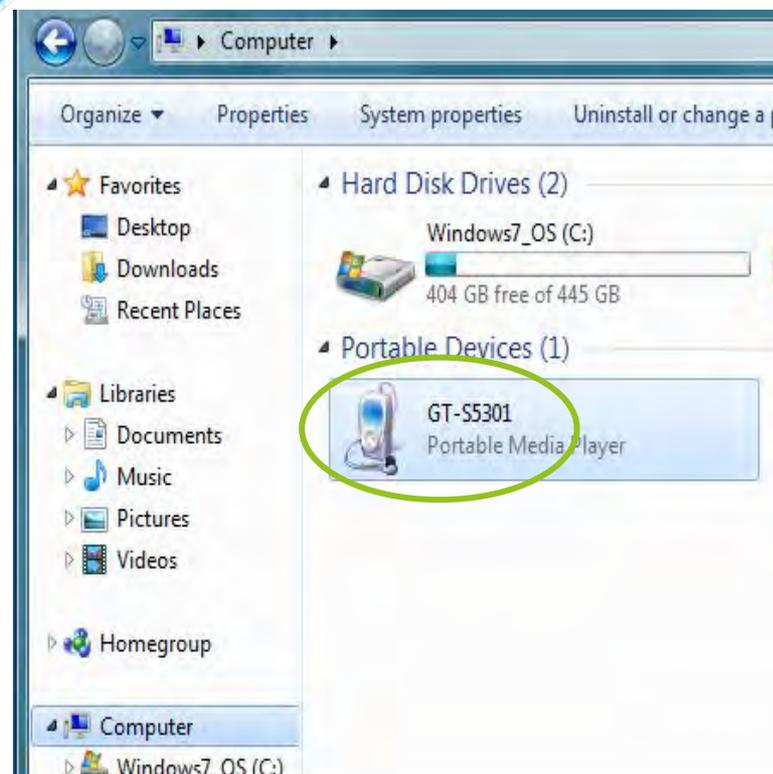
# ODK briefcase: Step 1

---

1. Ensure all forms on the **phone** are finalised in the “**Send Finalized Form**” folder.
  - Delete any un-finalised or old trial data entries.
  - If any forms had to be deleted then turn the phone off and on again before Step 2.

# ODK briefcase: Step 2

- Connect the phone to the computer using a USB data transfer cable.
- The phone should then appear in the list of portable devices in 'Computer'.
- If the phone does not appear here automatically it should appear in the status bar (at the top of the screen) with this symbol:



# Connecting the phone

- Swipe the status bar down and select 'USB storage.'
- Then click on 'Turn on USB storage'
- The phone will then appear in 'Computer' for you to access the files on it.

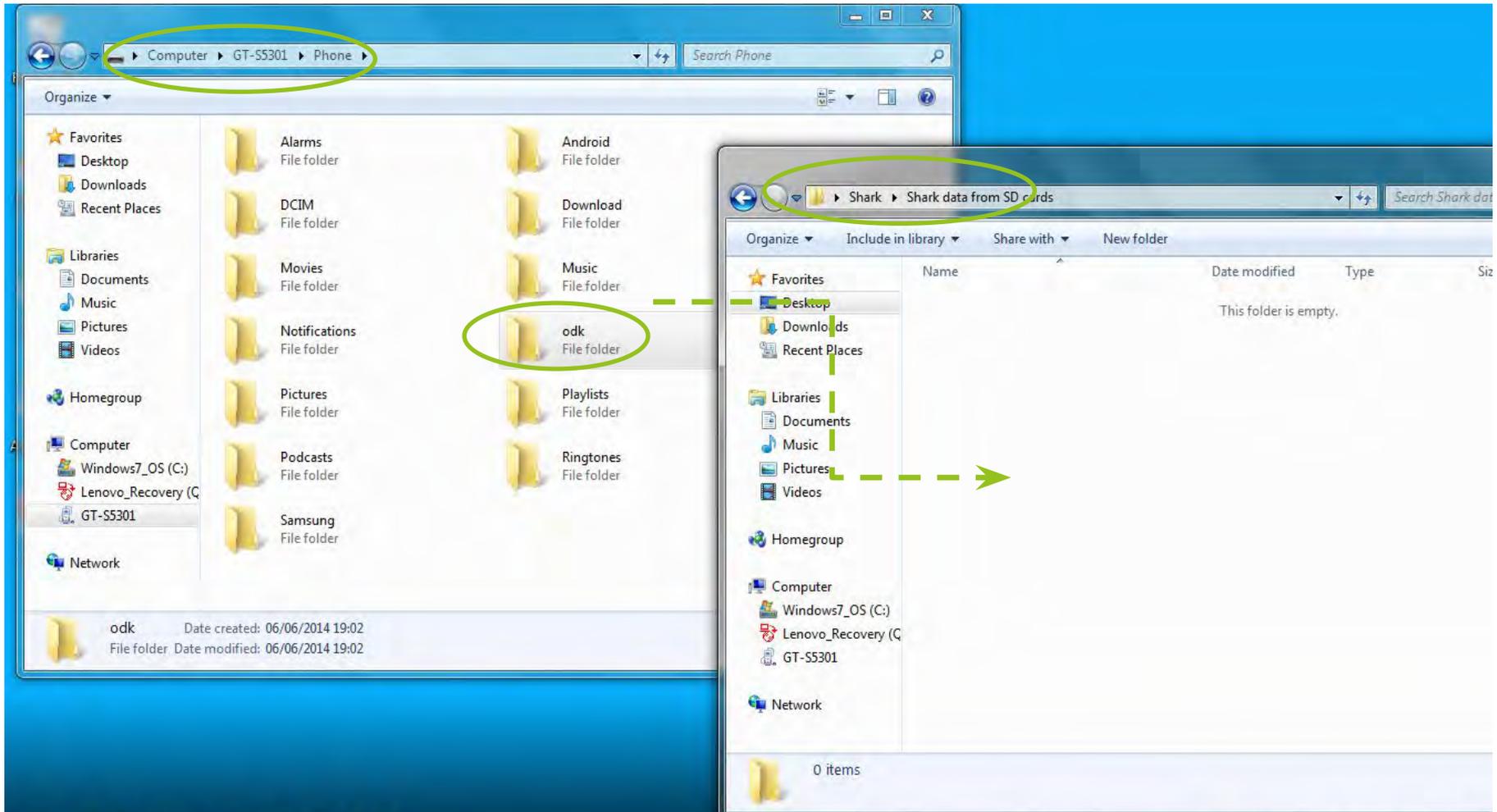


# ODK briefcase: Step 3

---

- Create a general folder on the computer where the data can be stored (e.g. Shark data from SD cards).
- Do not save data on your desktop - save it in 'My documents' somewhere and instead create a shortcut to this folder on the desktop.
- Next create a subfolder for each village or data collector with a unique ID – e.g. '150410\_Village1' for the data from Village1 on the 10/4/2015 using today's date and the village that the data are from.
- Go into the phone directory and find the ODK folder.
- Copy the **ENTIRE ODK** folder from the phone onto the computer, into the folder you just created.

- Copy the **whole ODK folder** from the phone into the newly created folder on your computer with the name of the village and today's date e.g. "Shark data from SD cards".
- Then rename the copied sub-folder on your computer to the date and village name (rather than ODK)



# ODK briefcase: Step 4

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- Check everything has copied over correctly and you can open the folder on the computer.
- Delete the saved forms from the phone. It is best to do this within ODK itself rather than via the computer.
- To do this go to “Delete Saved Form” and delete all forms that have been successfully transferred to the computer.
  - Alternatively if the phones and computer are in the same place for data transfer (e.g. the phone is *not* left with a data collector in a remote village), you may want to wait until after you have uploaded data via Briefcase before deleting the forms.
- If you toggle all forms and press ‘delete’, ODK will ask you if you want to delete X number of forms. Check that the number of forms you are deleting (X) is the same (or less\*) than the number of forms you have transferred to the computer.
- \*Sometimes more files are transferred to the computer than are available to delete but these are usually relic files and won’t be automatically uploaded in the upload process.

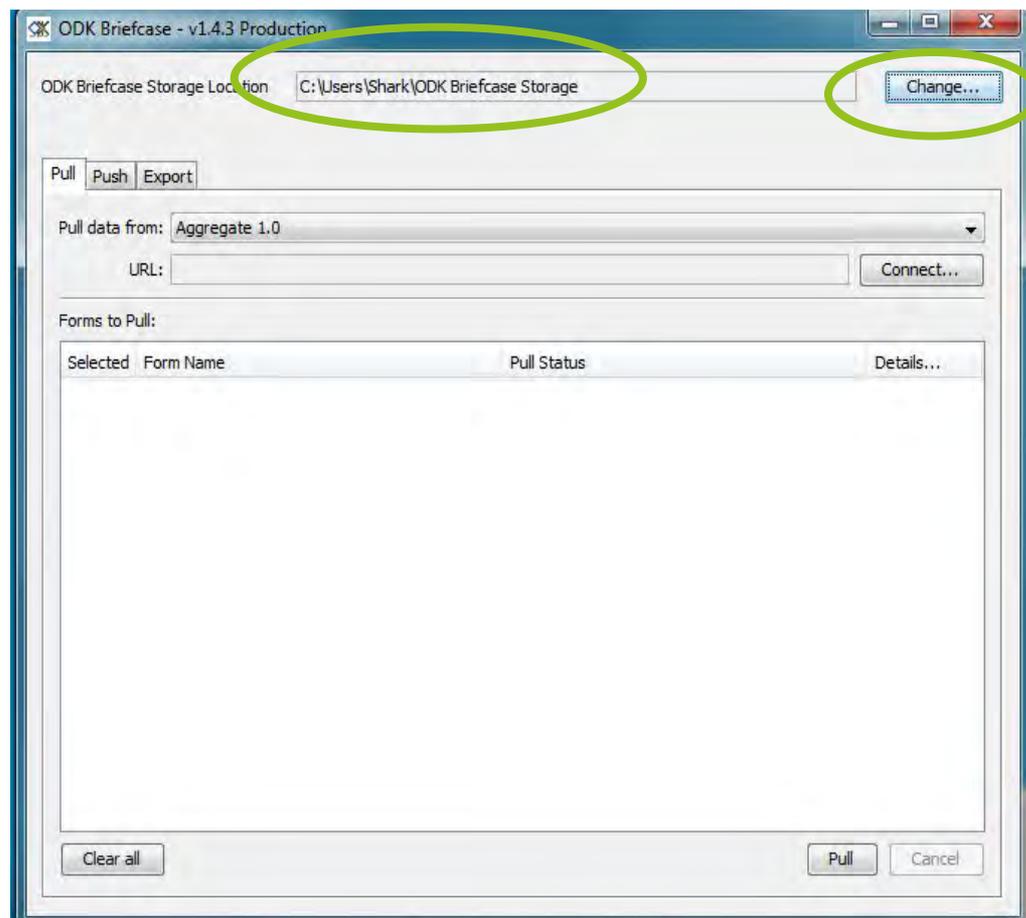
## STOP....

- Repeat these steps on data collection missions.
- Follow Step 5 onwards when you are back in a place with a good internet connection.

## Method 2.1: ODK Briefcase - Sending Copied Data

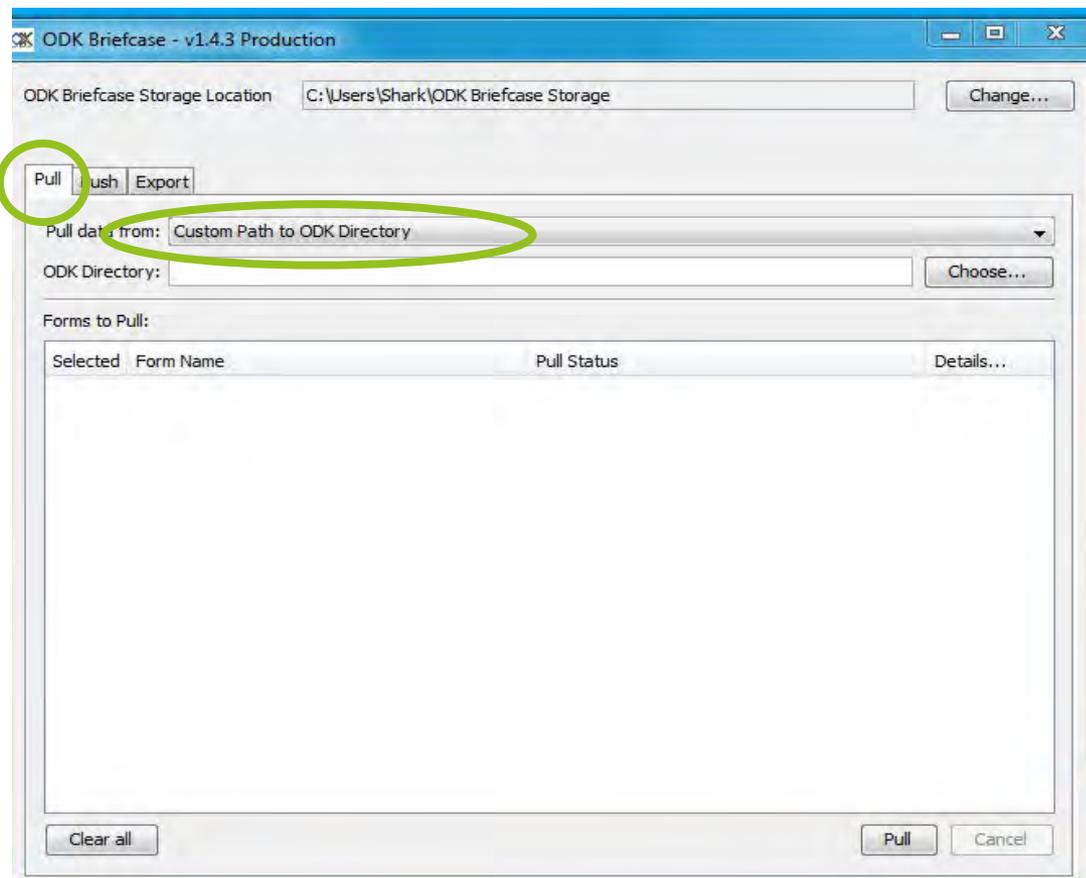
# ODK briefcase: Step 5 - Open ODK Briefcase

- Find ODK Briefcase on your computer (likely the desktop)
- The storage location will show where the data taken or 'Pulled' through Briefcase will be saved automatically.
- This folder is usually located on your desktop. This is just a temporary storage folder, not the folder where you will store saved data or data from the phones ready to be sent.
- DO NOT store anything else in this folder.
- This folder will be chosen during setup – if you want to change it click on “change”.



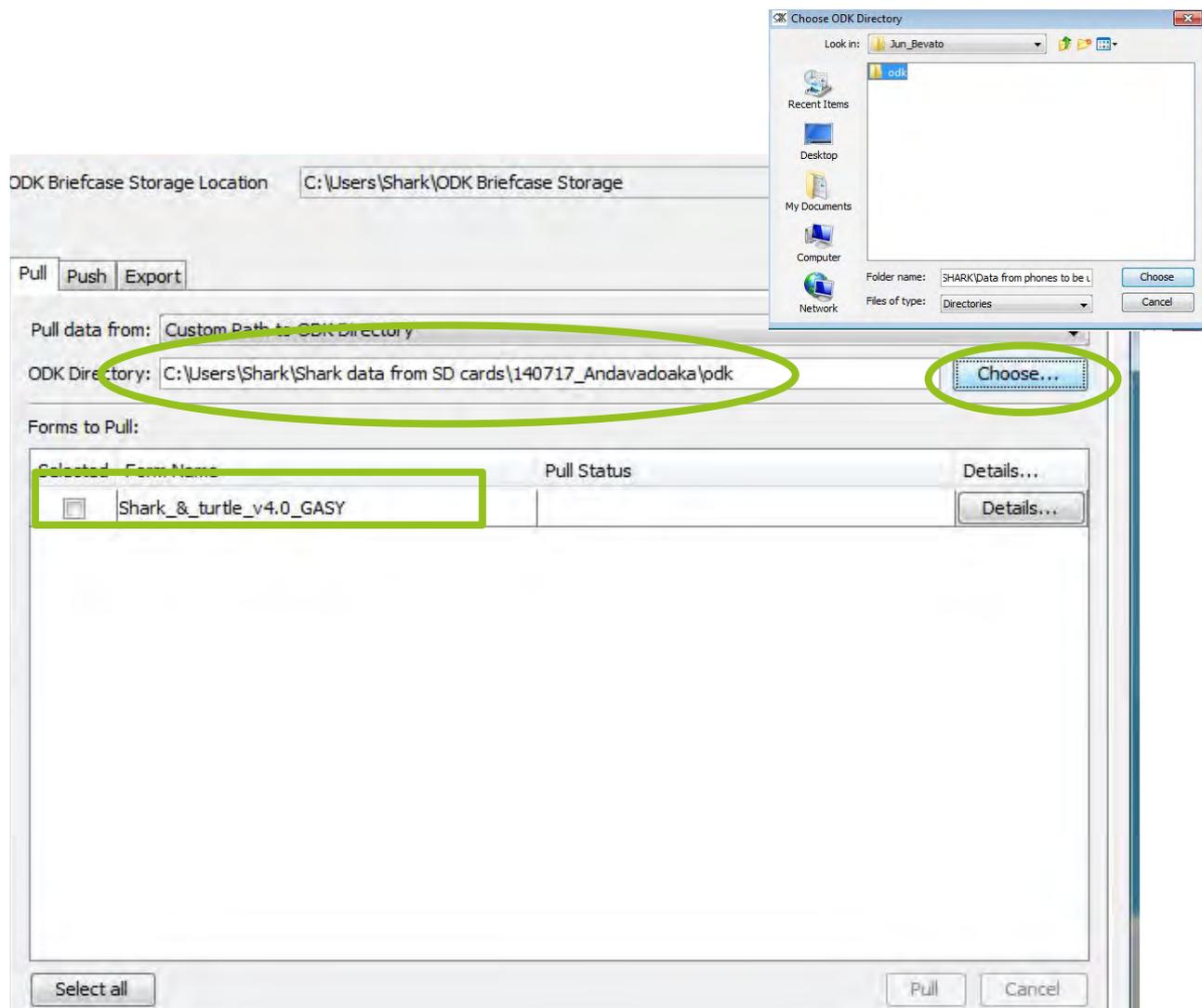
# ODK briefcase: Step 6 – Find the data

- Select the 'Pull' tab.
- Find the data you have previously copied from the phones (to the computer) and now want to send to the online database.
- First select **“Custom Path to ODK Directory”**



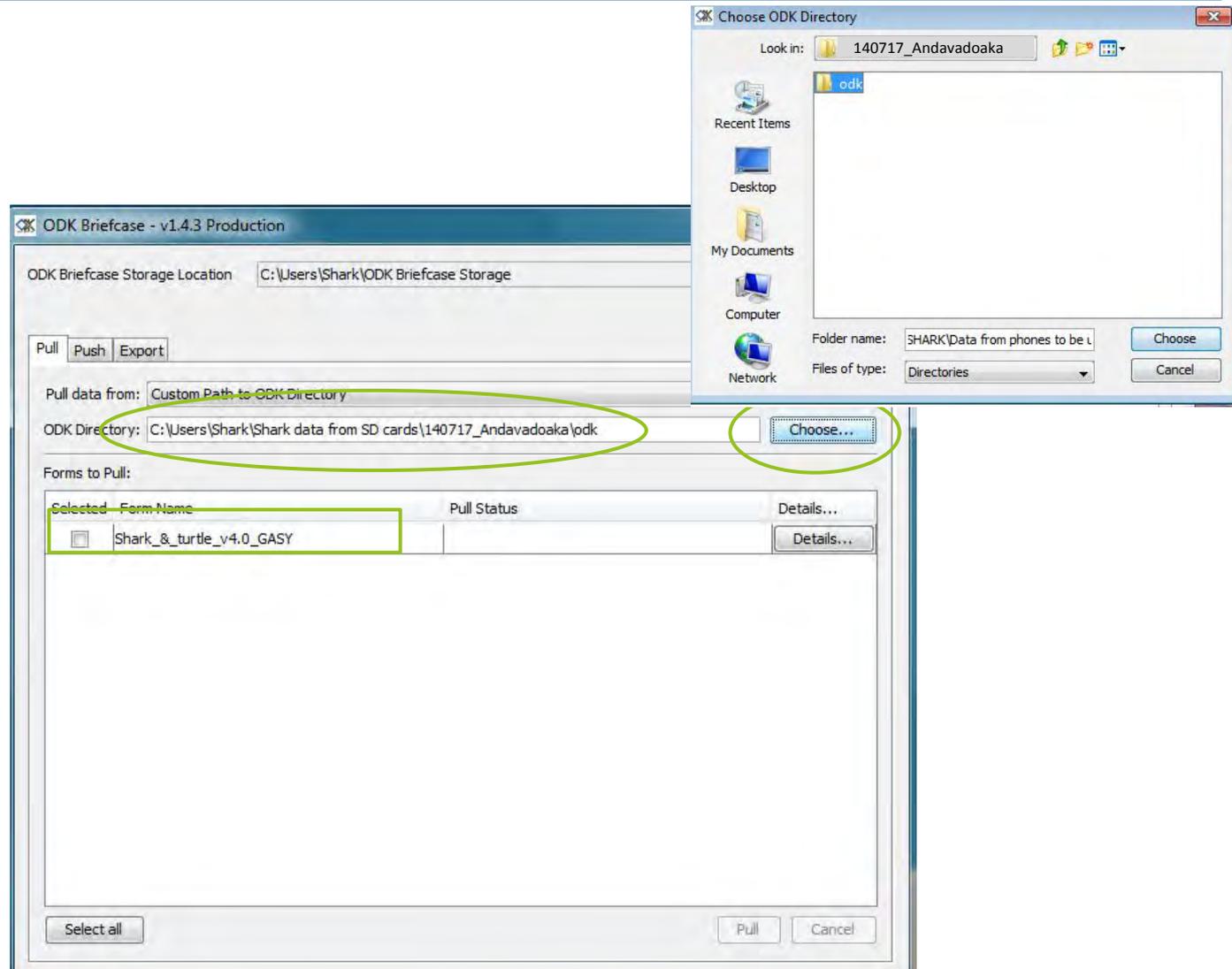
# ODK Briefcase: Step 7 – Selecting data to send

- Click 'Choose'
- Then navigate to a folder of data not yet sent.
- Navigate all the way to the folder called odk.



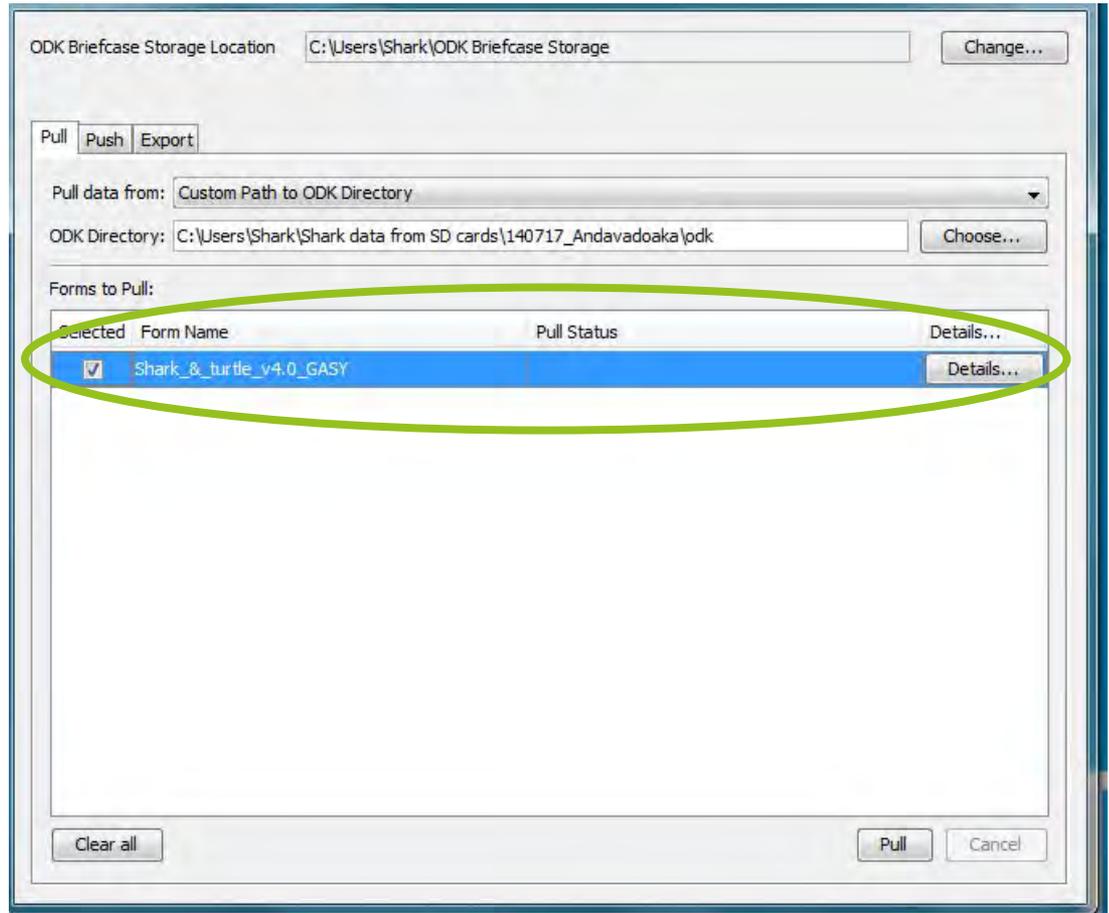
# ODK Briefcase: Step 7 – Selecting data to send

- Click 'Choose'
- Then navigate to a folder of data not yet sent.
- Navigate all the way to the folder called odk.



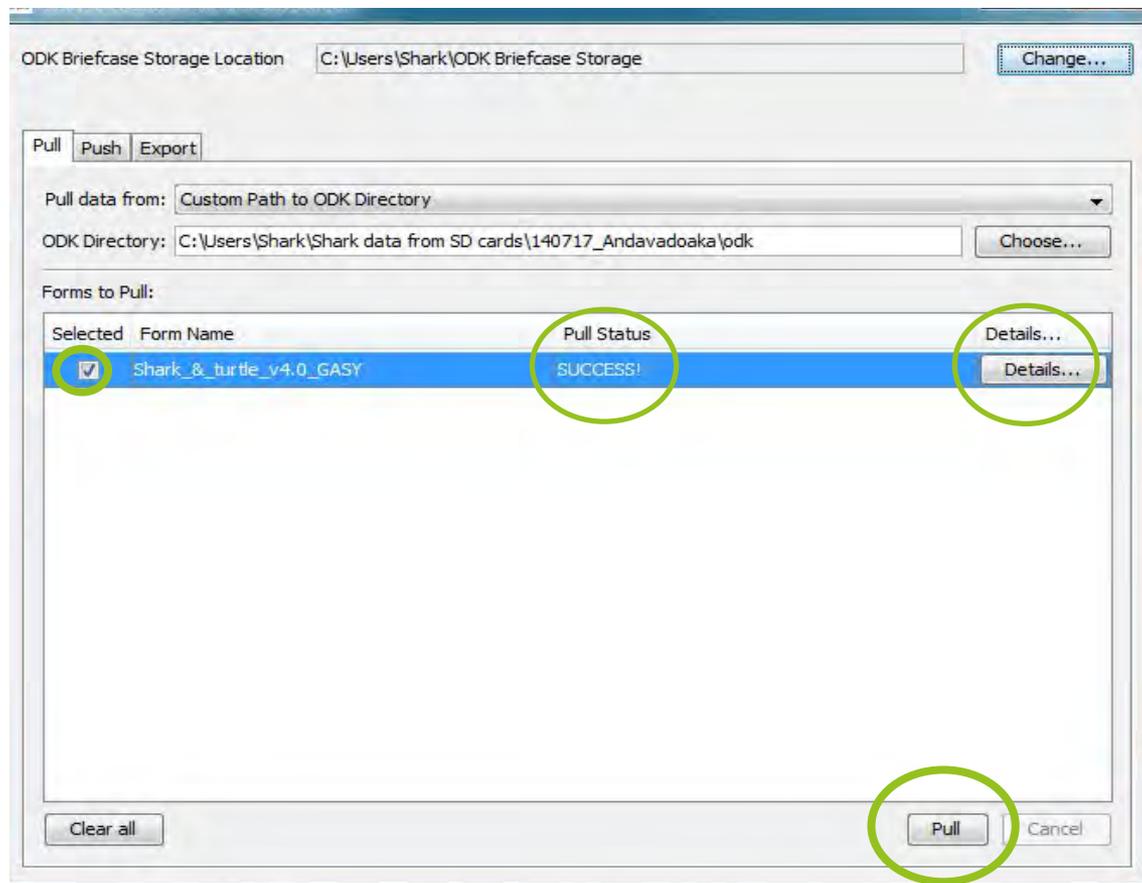
# ODK Briefcase: Step 8

- All finalised forms available in the folder you have selected will be displayed in ODK briefcase under the name of the form.
- Select the forms you want to send to aggregate or get the data from if you are using method 3.
- All questionnaires finalised under the same form will just appear under one form name.
- So if the data collector completed 10 forms under this questionnaire they will all be sent at the same time.



# ODK Briefcase: Step 9 – ‘Pulling’ finalised forms

- Click “**Pull**”.
- If all ok, you will see a message saying **SUCCESS!**
- You can check how many forms are ready to be sent by clicking on ‘Details’.
- These forms should now appear in the ‘ODK briefcase Storage’ folder on your desktop.

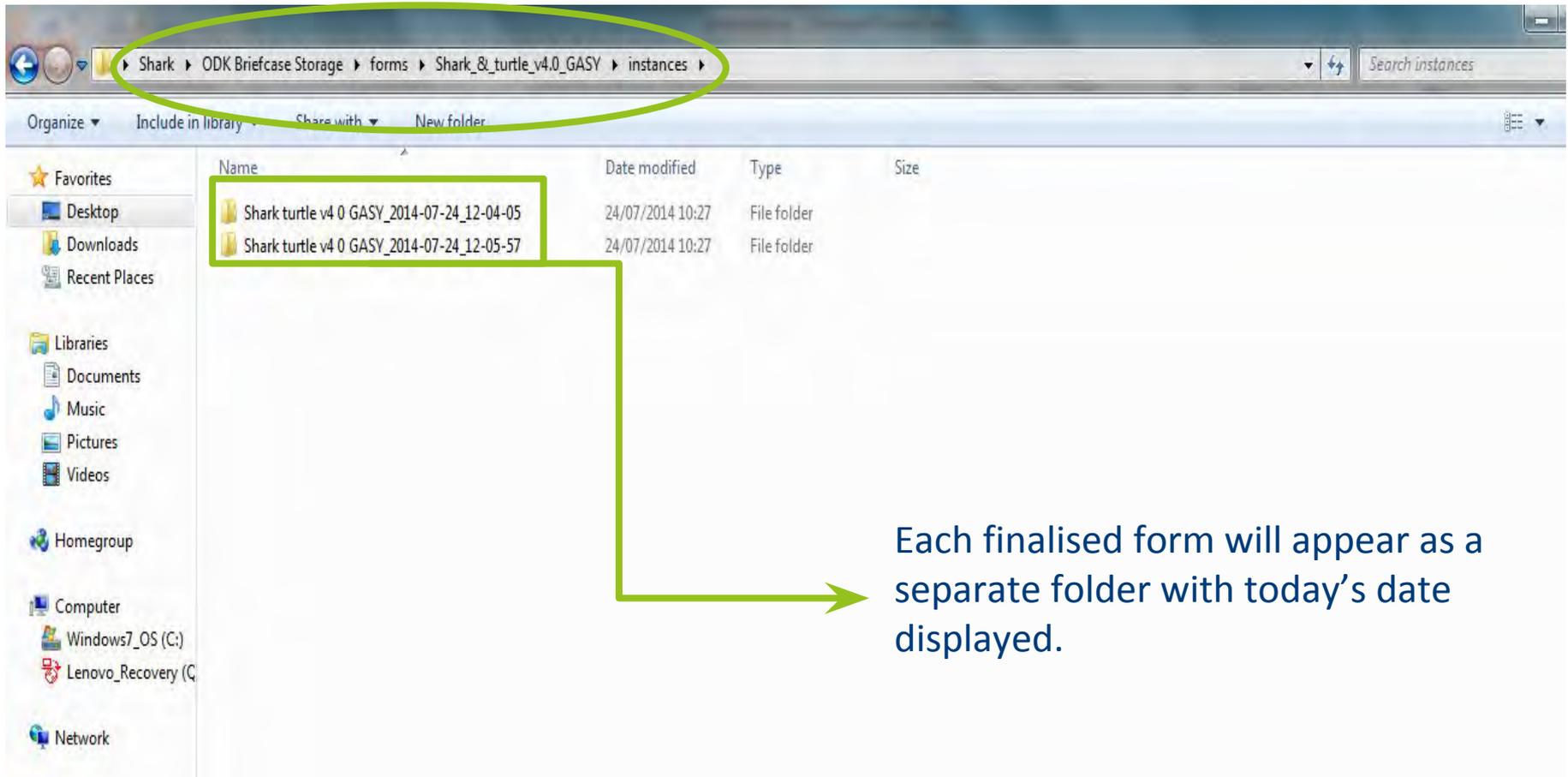


# ODK Briefcase: Step 10

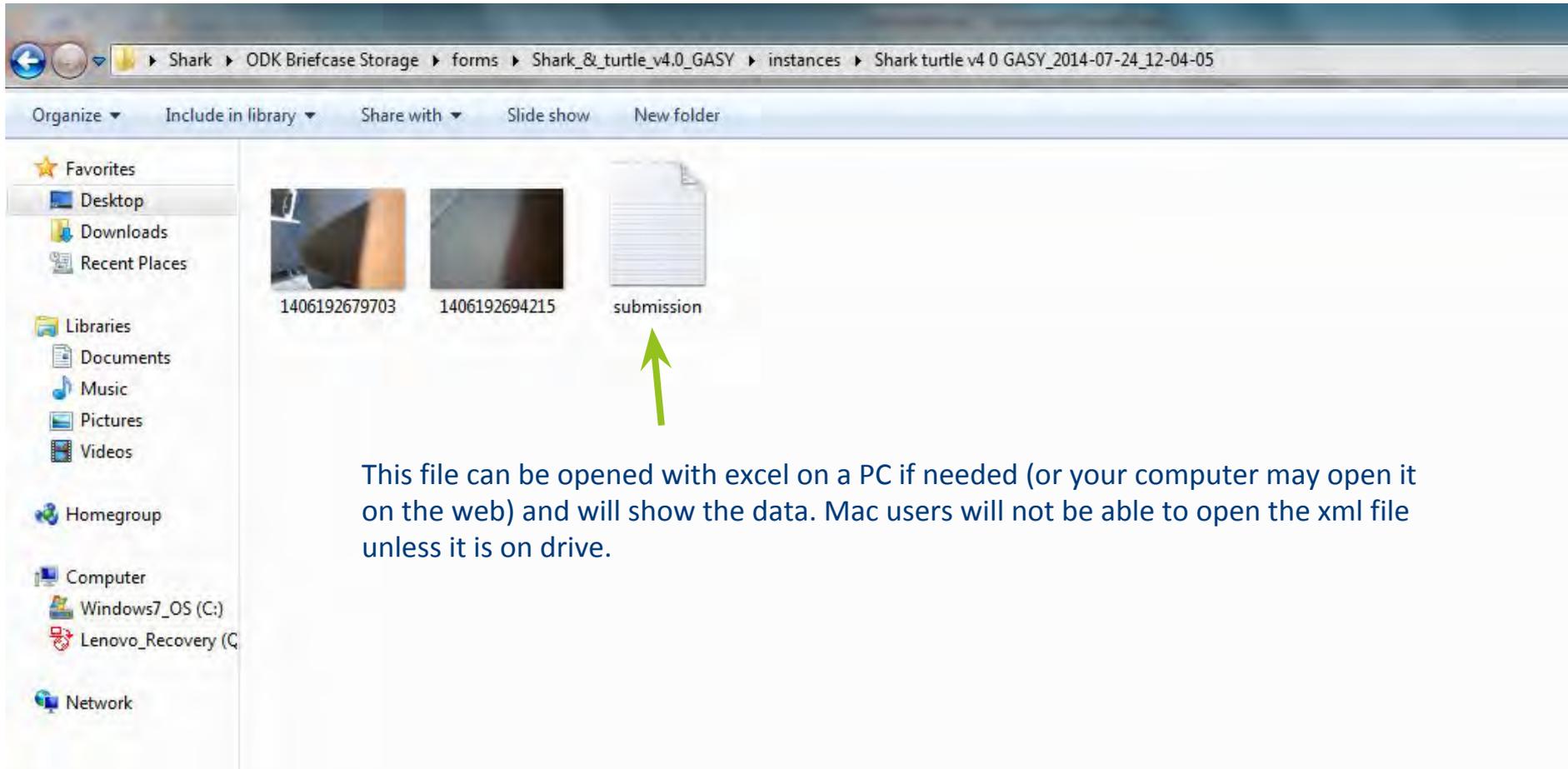
---

- Data pulled can now be seen in the ODK Briefcase Storage folder on the desktop.
- It will be in ODK Briefcase storage → Forms → Form name (eg. Shark\_2015) → Instances → Then a specific folder for each finalised form.
- Do **NOT** store anything else in the ODK briefcase folder.
  - If you open this folder the photos and an XML file will appear.
  - The XML file can be opened using excel if needed (say yes to any commands they ask).

- The ODK Briefcase Storage folder will be located wherever you selected during Briefcase set-up. It is fine for this to be on the desktop as you will be emptying the folder after data have been sent anyway.



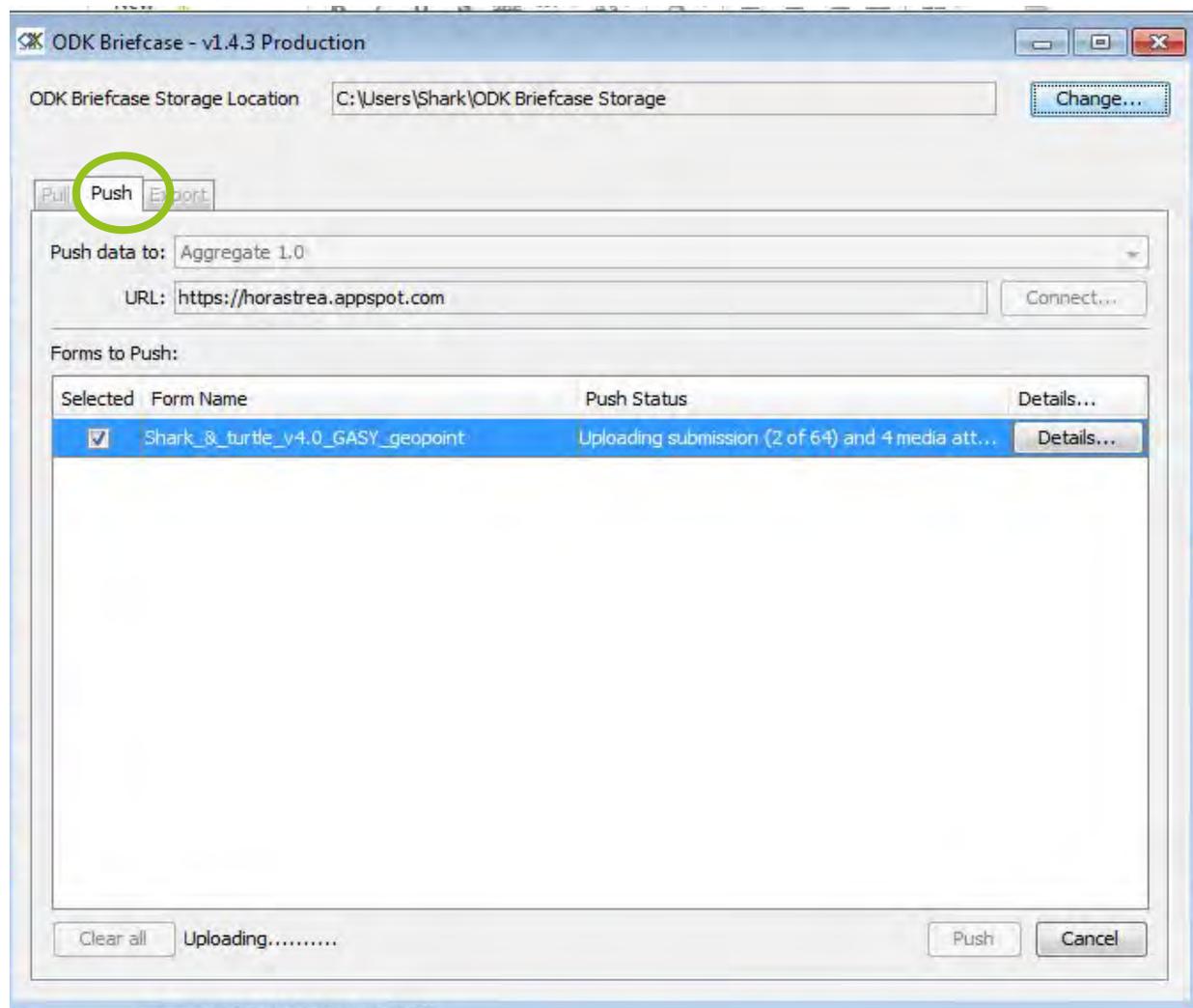
- In each folder you will see the photos related to the form, and the data as an xml file.



This file can be opened with excel on a PC if needed (or your computer may open it on the web) and will show the data. Mac users will not be able to open the xml file unless it is on drive.

# ODK Briefcase: Step 11 - Sending data to Aggregate

- Now the data are on the computer and ready to be sent to the website once a better internet connection is available or exported straight to csv file.
- Go to ODK Briefcase and select Push tab.



# ODK Briefcase: Step 12 – Connecting to Aggregate

- Click on 'Connect'
- Enter the details of your Appspot/Aggregate site. E.g:

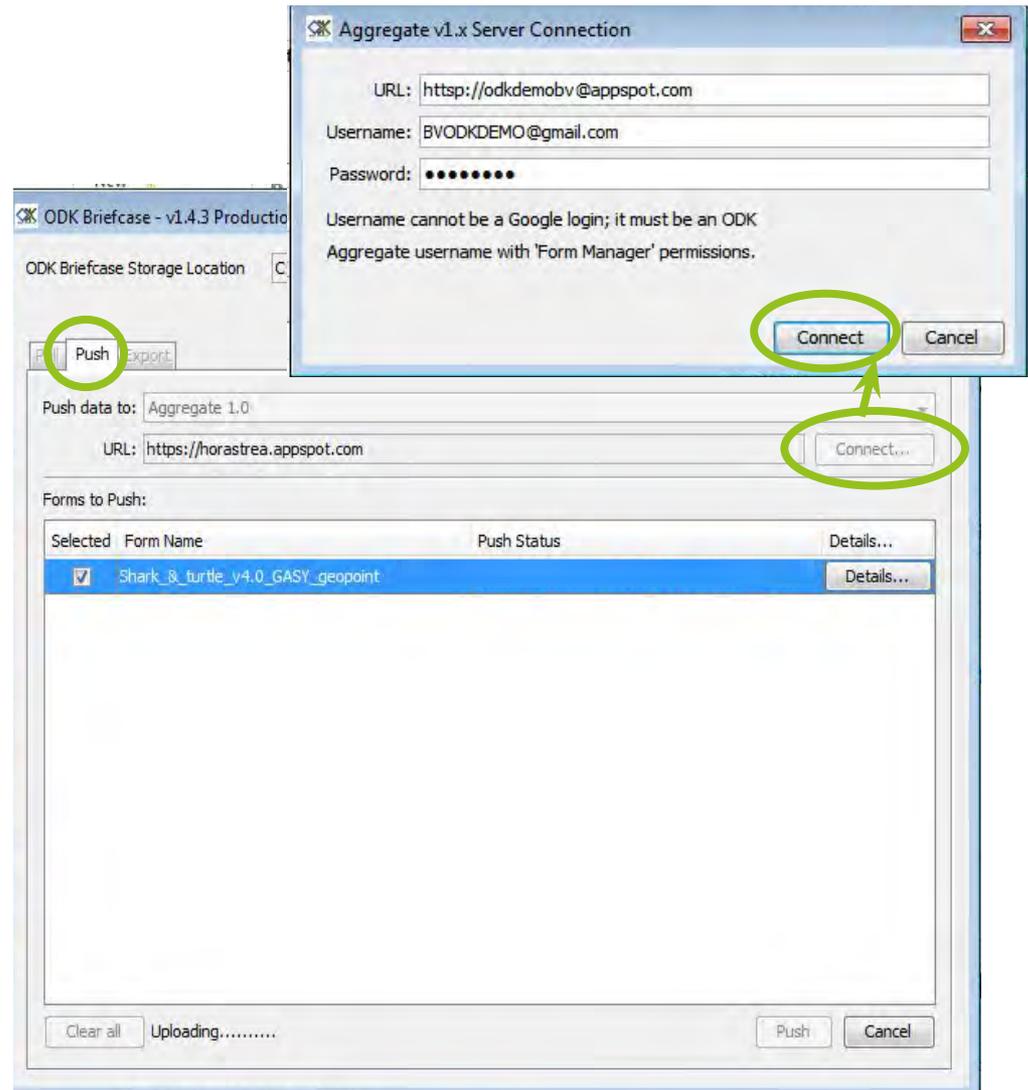
## URL:

<https://yourprojectname.appspot.com>

**Username:** e.g. XXX@gmail.com (The email that you use to login to aggregate)

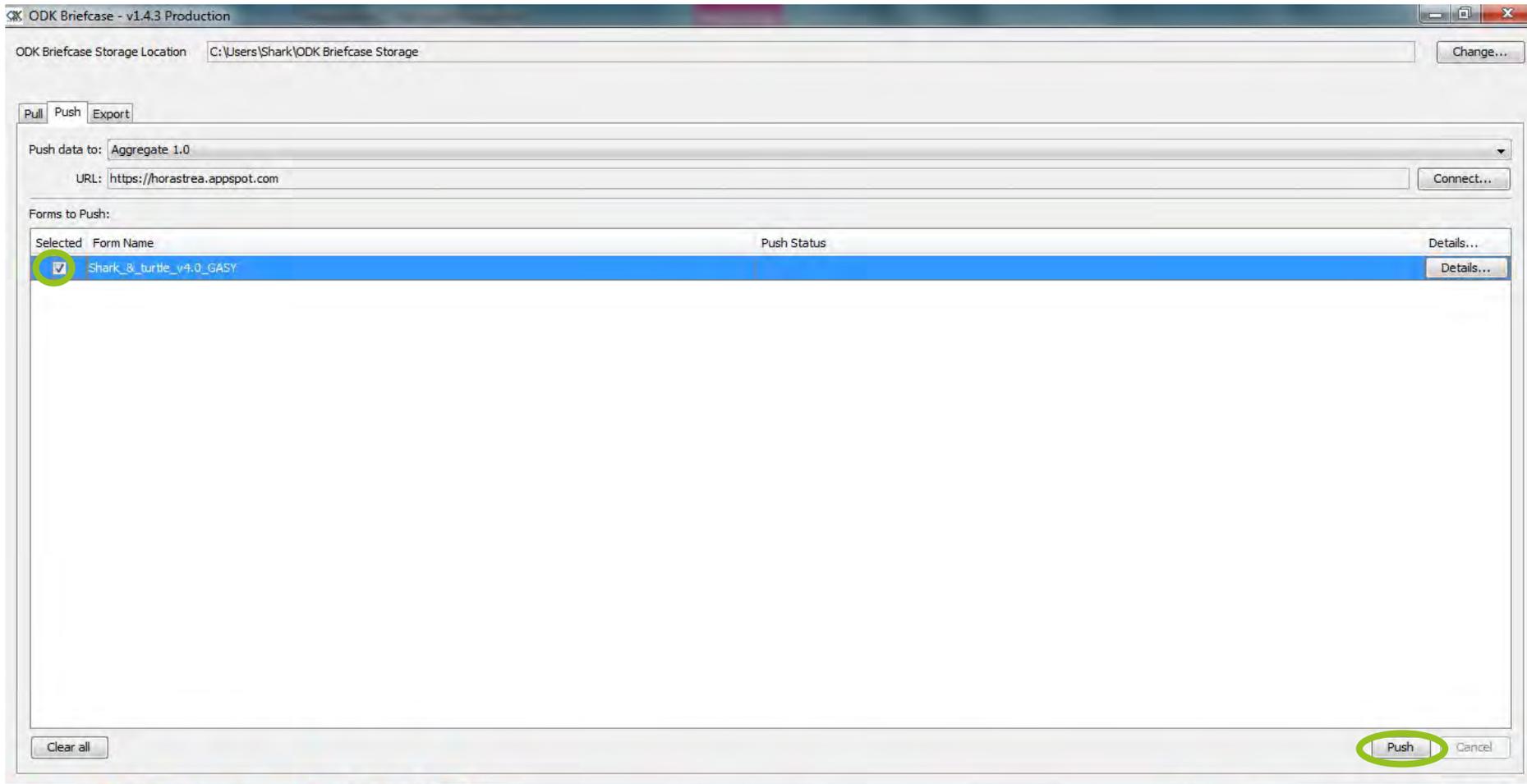
**Password:** Same password you were given (or created) to login to aggregate

**NB:** you can only use your personal Aggregate login details if you have 'Form Manager' access rights for aggregate. Otherwise you will need to contact your site administrator for the generic username and password to login.

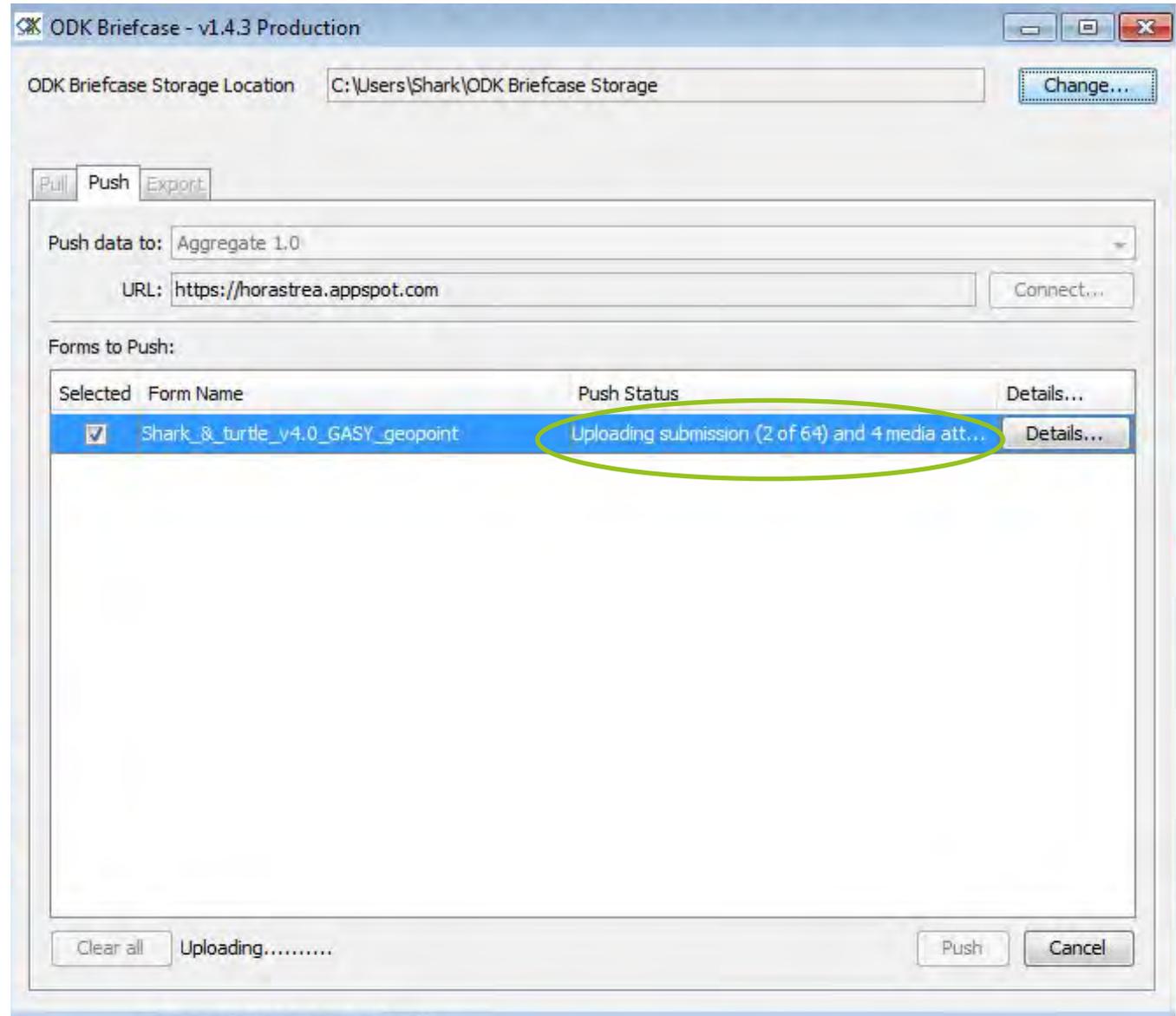


# Odk Briefcase: Step 13 – Sending data

- Select data and click “Push”



- You will see these status updates if data are sending successfully.
- Once the forms have all been sent you will get a SUCCESS message.
- You can check the details of the forms that have been uploaded (or not) 'Details'.



# Step 14: Data have now been sent to the website!

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- Close down ODK briefcase to clear all the forms.
- Reopen to send data from a new folder.
- If you go back to the ODK Briefcase folder on the computer you will see that the forms you have sent now have different folder names such as: uuid0cbaab53-15f7-4420-b6a2-0700f72e798e.
- Don't delete any folders but **move them** to an ARCHIVE folder outside of the ODK Briefcase Storage folder. (Otherwise they will send again next time you repeat these steps to push data).
- **You must remember to empty the ODK briefcase folder after sending the data!**

## Method 2.2: Manually Uploading Data (as a last resort)

## Method 2.2: Manually uploading data via USB Cable

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- ODK Aggregate allows you to import your data submissions individually to ODK Aggregate directly from your mobile device or from your computer. This can also be used if your phone does not have access to the internet.
  - Files need to be selected individually - this is time consuming so should be avoided is possible.
1. **Connect your mobile device to your computer** with a compatible cable. Most Androids use a mini-USB to USB cable. Be sure to 'mount your device' or select the option to transfer files/media when prompted so you can transfer files over the USB cable. You do not need an internet connection for this step.
  2. **Copy files from the ODK folder on the phone to the computer** – copy the entire ODK folder (in case you need to send via briefcase).
  3. **Store** these files in a clearly labelled folder (e.g. village name and date).
  4. When you have access to the internet again, go to your **ODK Aggregate** URL and click "Form Management" and then "Submission Admin."
  5. **Find the files on your computer** along with any corresponding data files, such as photos in .jpg format, that you would like to link to your data submission.
  6. **Hit "Upload Submission."** Your data will now appear within the list of submissions corresponding to the appropriate form.

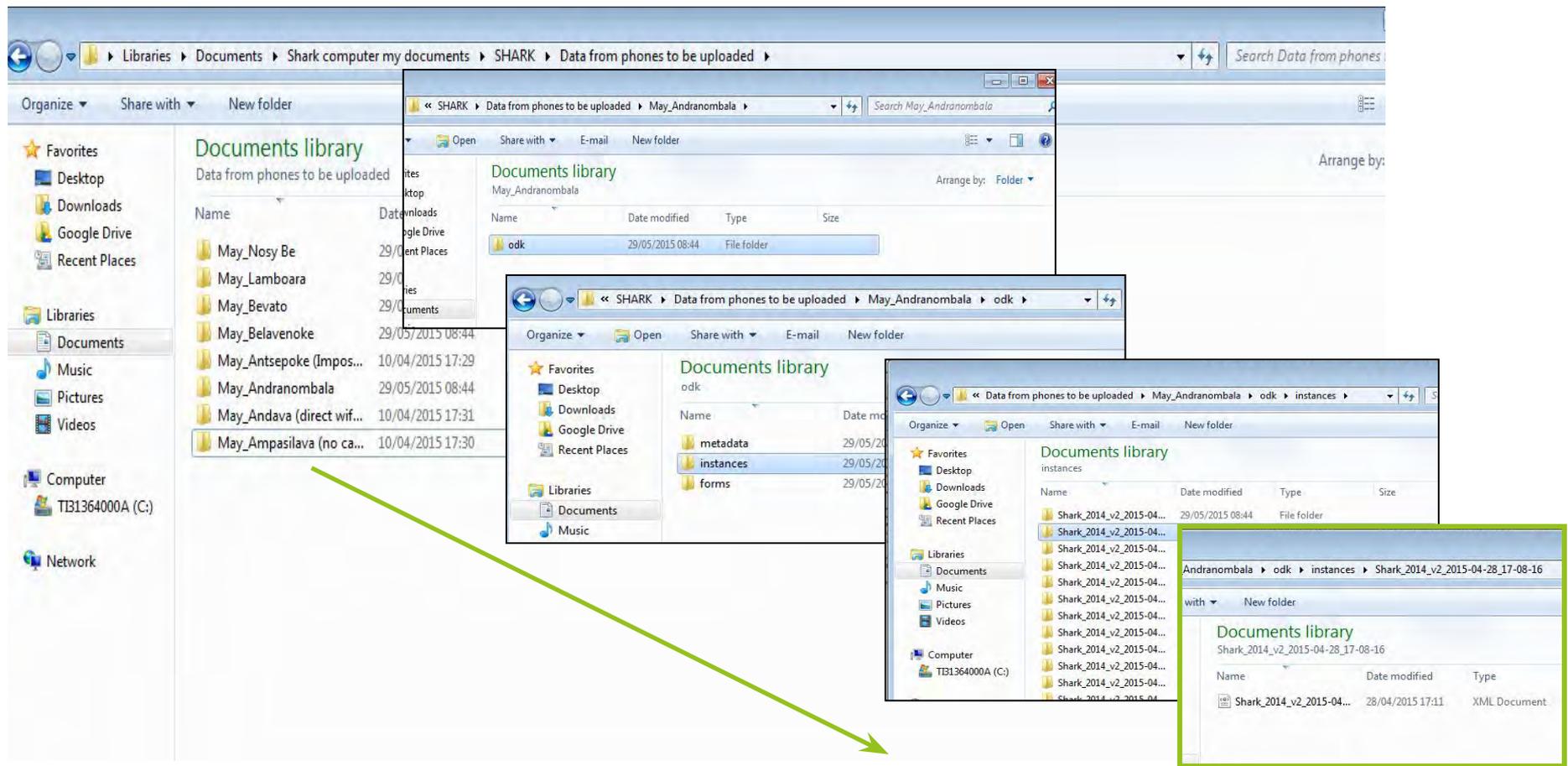
# Manually uploading data through Aggregate

The image shows a screenshot of the ODK Aggregate web interface and a Windows File Explorer window. The web interface is for the 'Shark\_2014' form. A green circle highlights the 'Submissions' tab, and a green arrow points from it to the 'Submission Admin' window. The 'Submission Admin' window has a title 'Submission' and a heading 'Upload one submission into ODK Aggregate'. It contains two file selection buttons: 'Choose File' (with 'No file chosen' next to it) and 'Choose Files' (with 'No file chosen' next to it). Below these is an 'Upload Submission' button. A text block explains that submissions are located under the /odk/instances directory and that each subdirectory contains a submission data file and associated media. The Windows File Explorer window shows the 'Documents library' with a folder named 'Nesting 2014 v2\_2014-11-26\_16-06-54'. A file with the same name is listed with a date of 26/11/20. A grey callout box with a green arrow pointing to the file says 'Navigate to the correct file on your computer (see next slide)'. The browser address bar shows 'https://horastrea.appspot.com/Aggregate.html#su' and the page title is 'ODK Aggregate'.

start	end	today	boat	number_sharks	shark_measurements_count	shark_measurements	fisher_details main_fisher_name	fisher_details fisher_number	main_fisher_name_manual
Thu Oct 16 04:40:13 UTC 2014	Thu Oct 16 04:51:16 UTC 2014	Thu Oct 16 00:00:00 UTC 2014	1	1	1	View	name_not_on_list	1	Maniela

# Navigate to the correct file on your computer

- Navigate to the data files where you saved them on your computer as described in the [previous steps](#) in the folder: ODK>instances>Name of form>data files
- Only XML and jpg files can be uploaded.



Method 3: Copy data from the phones and use briefcase to merge the data into a csv file

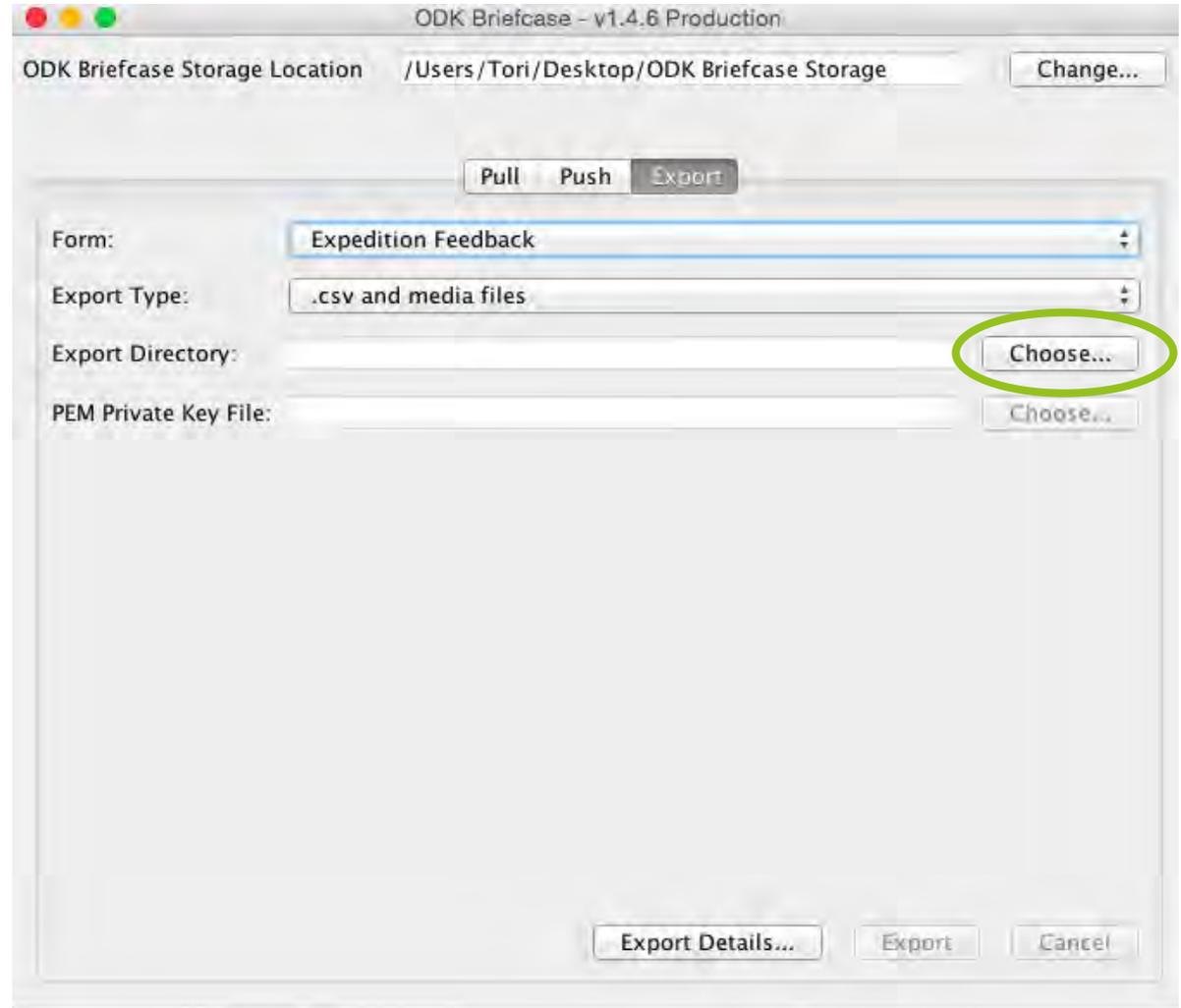
# Method 3: Step 1

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- Follow steps 1-10 in [Method 2.1: 'ODK briefcase'](#) above.

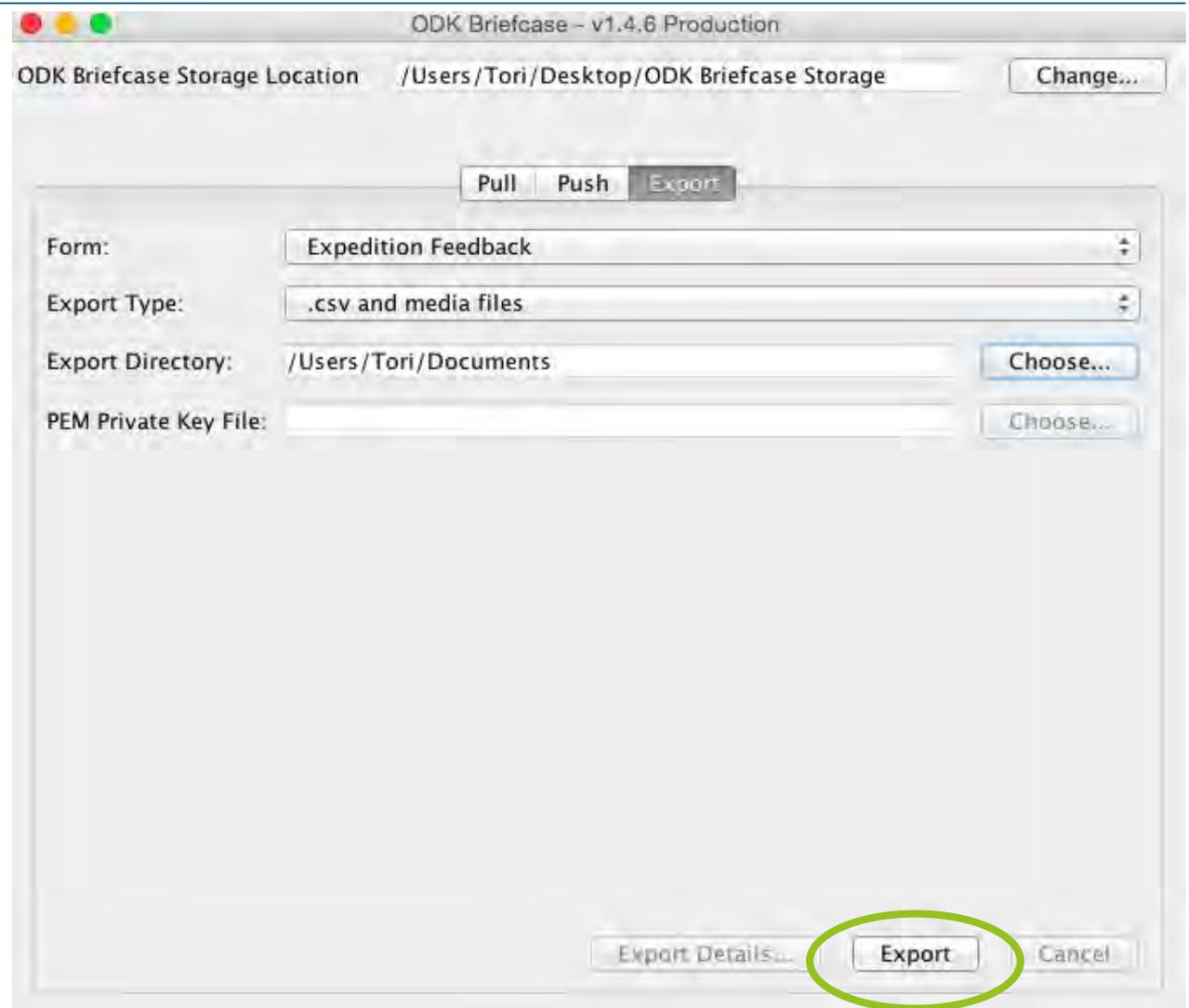
# Method 3: Step 12 – Exporting to CSV from briefcase

- Select the Export tab
- From the dropdown lists select the form and export type
- Choose the export directory (where you want the csv to be saved )



# Method 3: Step 13 – Exporting data to CSV

- Click on Export
- The file will be saved wherever you chose in the previous steps



# Chapter 6

ODK Aggregate – Downloading and Managing Data

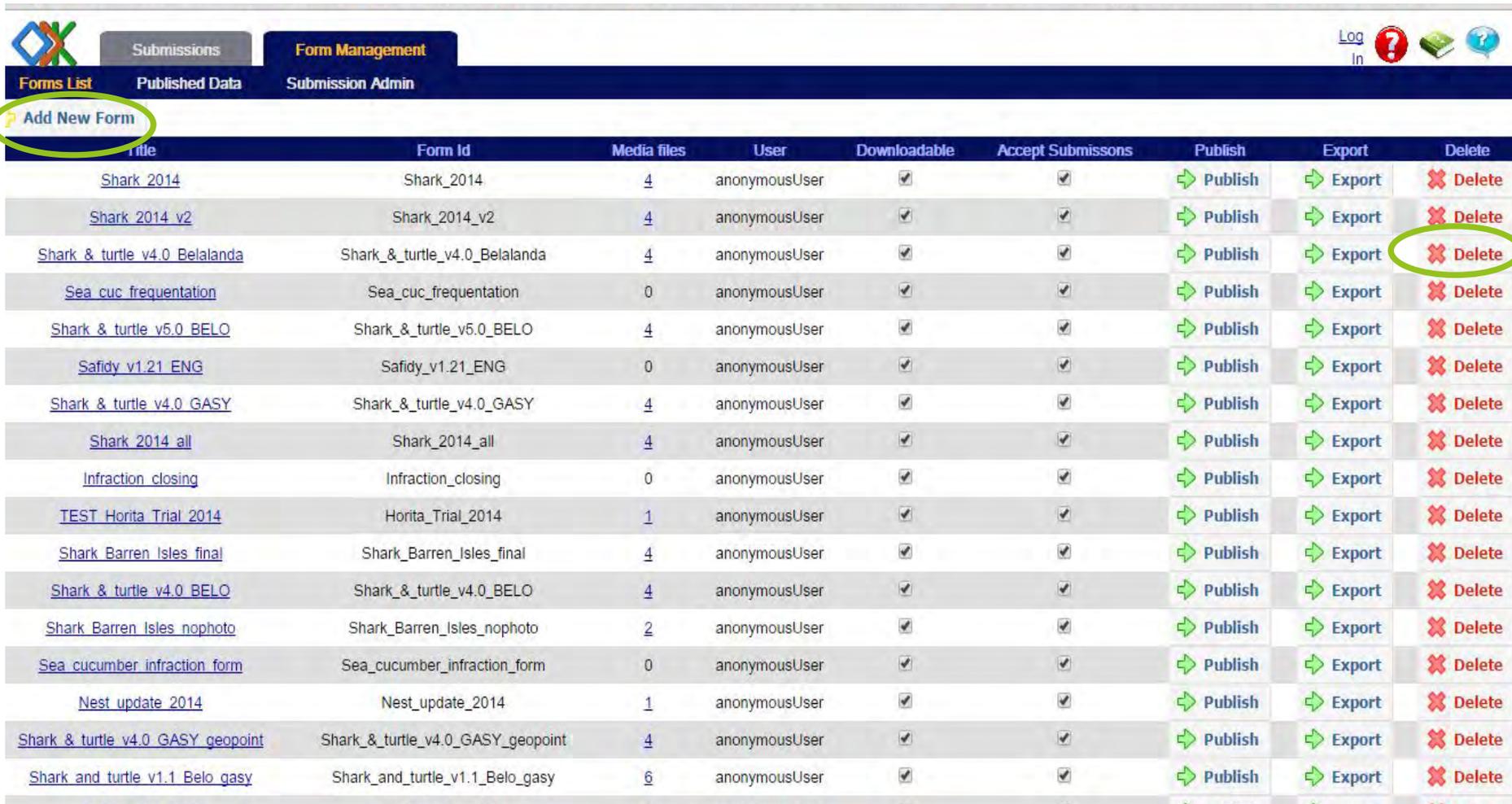
# ODK Aggregate

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- Data that are sent from the mobile devices are stored on ODK aggregate, an online data site.
- Simple manipulations are possible online.
- Data can be downloaded and exported to Excel or to Google spreadsheets or Fusion tables.
- This is also where new template forms are added.

# Form management on ODK Aggregate

- All forms can be added and deleted here:



The screenshot shows the ODK Aggregate web interface. At the top, there are navigation tabs: 'Submissions' and 'Form Management'. Under 'Form Management', there are sub-tabs: 'Forms List', 'Published Data', and 'Submission Admin'. The 'Forms List' sub-tab is active, and a green circle highlights the 'Add New Form' button. The main content is a table listing various forms with columns for Title, Form Id, Media files, User, Downloadable, Accept Submissions, Publish, Export, and Delete. The 'Delete' column contains red 'X' icons, and one of these icons is circled in green.

Title	Form Id	Media files	User	Downloadable	Accept Submissions	Publish	Export	Delete
<a href="#">Shark 2014</a>	Shark_2014	4	anonymousUser	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<a href="#">Publish</a>	<a href="#">Export</a>	<a href="#">Delete</a>
<a href="#">Shark 2014 v2</a>	Shark_2014_v2	4	anonymousUser	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<a href="#">Publish</a>	<a href="#">Export</a>	<a href="#">Delete</a>
<a href="#">Shark &amp; turtle v4.0 Belanda</a>	Shark_&_turtle_v4.0_Belanda	4	anonymousUser	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<a href="#">Publish</a>	<a href="#">Export</a>	<a href="#">Delete</a>
<a href="#">Sea cuc frequentation</a>	Sea_cuc_frequentation	0	anonymousUser	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<a href="#">Publish</a>	<a href="#">Export</a>	<a href="#">Delete</a>
<a href="#">Shark &amp; turtle v5.0 BELO</a>	Shark_&_turtle_v5.0_BELO	4	anonymousUser	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<a href="#">Publish</a>	<a href="#">Export</a>	<a href="#">Delete</a>
<a href="#">Safidy v1.21 ENG</a>	Safidy_v1.21_ENG	0	anonymousUser	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<a href="#">Publish</a>	<a href="#">Export</a>	<a href="#">Delete</a>
<a href="#">Shark &amp; turtle v4.0 GASy</a>	Shark_&_turtle_v4.0_GASy	4	anonymousUser	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<a href="#">Publish</a>	<a href="#">Export</a>	<a href="#">Delete</a>
<a href="#">Shark 2014 all</a>	Shark_2014_all	4	anonymousUser	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<a href="#">Publish</a>	<a href="#">Export</a>	<a href="#">Delete</a>
<a href="#">Infraction closing</a>	Infraction_closing	0	anonymousUser	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<a href="#">Publish</a>	<a href="#">Export</a>	<a href="#">Delete</a>
<a href="#">TEST Horita Trial 2014</a>	Horita_Trial_2014	1	anonymousUser	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<a href="#">Publish</a>	<a href="#">Export</a>	<a href="#">Delete</a>
<a href="#">Shark Barren Isles final</a>	Shark_Barren_Isles_final	4	anonymousUser	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<a href="#">Publish</a>	<a href="#">Export</a>	<a href="#">Delete</a>
<a href="#">Shark &amp; turtle v4.0 BELO</a>	Shark_&_turtle_v4.0_BELO	4	anonymousUser	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<a href="#">Publish</a>	<a href="#">Export</a>	<a href="#">Delete</a>
<a href="#">Shark Barren Isles nophoto</a>	Shark_Barren_Isles_nophoto	2	anonymousUser	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<a href="#">Publish</a>	<a href="#">Export</a>	<a href="#">Delete</a>
<a href="#">Sea cucumber infraction form</a>	Sea_cucumber_infraction_form	0	anonymousUser	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<a href="#">Publish</a>	<a href="#">Export</a>	<a href="#">Delete</a>
<a href="#">Nest update 2014</a>	Nest_update_2014	1	anonymousUser	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<a href="#">Publish</a>	<a href="#">Export</a>	<a href="#">Delete</a>
<a href="#">Shark &amp; turtle v4.0 GASy geopoint</a>	Shark_&_turtle_v4.0_GASy_geopoint	4	anonymousUser	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<a href="#">Publish</a>	<a href="#">Export</a>	<a href="#">Delete</a>
<a href="#">Shark and turtle v1.1 Belo gasy</a>	Shark_and_turtle_v1.1_Belo_gasy	6	anonymousUser	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<a href="#">Publish</a>	<a href="#">Export</a>	<a href="#">Delete</a>

# Replacing forms on ODK Aggregate

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- Each form ID needs to be unique (on one appspot) as you will be unable to upload a form with the same form ID
- However, it is possible to make minor changes to a form and re-upload it with the same form ID if the version number is higher than the original (note that the XML file name has to be identical, too). This will replace the old form with that ID, and the new and old form submissions will be submitted into the same submissions table.

NB: Once a form is uploaded to ODK Aggregate, the number of questions or the type of question cannot be changed! If you need to add or delete questions you either have to delete the form from aggregate (deleting all of its submissions) or upload a new form with a new ID (in which case it will be treated as an entirely different form and can co-exist with the original) – submissions will be separate from the original form though.

# Viewing Data

# Viewing data

- Select the 'Submissions' tab.
- Select the form you want to view in the dropdown 'Form' menu.
- **DO NOT LEAVE YOUR BROWSER OPEN ON THE SUBMISSIONS PAGE:** This will use data unnecessarily and the account will be locked for the rest of the 24hr period if exceeded (as defined in App Engine).

The screenshot shows a web application interface with a navigation bar at the top. The 'Submissions' tab is highlighted with a green oval. Below the navigation bar, there are two tabs: 'Filter Submissions' and 'Exported Submissions'. A dropdown menu is open, showing a list of forms, with 'Safidy\_2015' selected and highlighted in blue. The main content area displays a table with columns for various data points, including 'pilplan', 'preg\_6\_yesc', 'preg\_condomc', 'preg\_pilplanc', 'preg\_ovreftec', 'preg\_depoc', 'preg\_implanonc', 'preg\_iudc', 'preg\_chancec', and 'pilplan\_probs'. The table is currently empty, and the 'Safidy\_2015' form is selected in the dropdown menu.

- Data will be displayed so that each horizontal line represents a completed form.
- If there are multiple sharks, octopus or other items recorded in the same form as a repeat group, this will be displayed on Aggregate as one form with the repeats condensed and there will be a hyperlink to the information in the repeat.
- Information contained in the repeats These will be visible on export to google sheets (not CSV) where the information from the repeated questions will be displayed on a new tab. Where there are multiple repeat groups in a form these will be separated into multiple tabs (e.g if there is a repeat group of questions for fish and a repeat for octopus).
- When exporting to CSV the information in the repeats will remain hidden and will only be visible by clicking on the link in the export, which will link back to aggregate to show the information in the repeat groups.
- The form that you are viewing will be evident from the title of the form.
- Any metadata written into the form (not visible to the end user but written into the form – see [chapter 4](#) for further details) such as time and date of completion will be evident here.

# View of data in Aggregate

This is the name of the form

The screenshot displays the 'Submissions' tab for the 'Shark\_2014' form. The interface includes a navigation bar with 'Submissions' and 'Form Management' tabs, and a 'Filter Submissions' dropdown menu. The main content area shows a table of submissions with columns for date, time, and user. A 'View' button is highlighted for one of the entries.

Date	Time	User	View
04:43:22	04:51:34	Maniela Anosy_Mitata	View
06:06:20	06:12:03	Vohavy Bemoromboho	View
04:19:42	04:23:46	Maniela Anfantsombo	View
10:23:19	15:46:29	Zalira Magneritrandro	View
06:40:09	06:49:45	Zimba Riakalaoke	View
06:29:39	06:39:41	Zandina Ankaritse	View

Metadata

Clicking on view will reveal the repeat group - this will be a separate pop-out screen with all the details of the individual sharks (in this case)

# Exporting Data

# Exporting data

- Data sent appear online on ODK Aggregate and can be exported as CSV file for further analysis.

The screenshot shows the ODK Aggregate web interface. At the top, there are navigation tabs for 'Submissions' and 'Form Management'. Below this, the 'Filter Submissions' section is active, showing a form named 'TEST\_Horita\_Trial\_2014'. The 'Export' button is circled in green. A dropdown menu is open, showing 'Form: Horita\_Trial\_2014 Type: CSV file Filter: none', with the 'Type' dropdown also circled in green. A green arrow points from the 'Export' button to the 'Type' dropdown. Below the main data table, there is an 'Exported Files' section with a table showing the export progress.

start	end	today	village	village_manual	collector_names	collector_names	other_names	other_names	group_details	group_details	fisher_details	fisher_details	fisher_details	fisher_details
data_collector	sous_collector	data_collector	manual	sous_collector	manual	group_number	boat_people	name	age	sex2	fishing_site	file	status	
Thu Jan 08 12:17:17 UTC 2015	Thu Jan 08 12:18:16 UTC 2015	Thu Jan 08 12:18:16 UTC 2015	Ambohibola		Lalune_Vestine	Viniky	1	1	W	2	female	Ambalagny_Sth		
Thu Jan 08 12:25:11 UTC 2015	Thu Jan 08 12:36:23 UTC 2015	Thu Jan 08 12:36:23 UTC 2015	Anakao		Voahira	Vory								

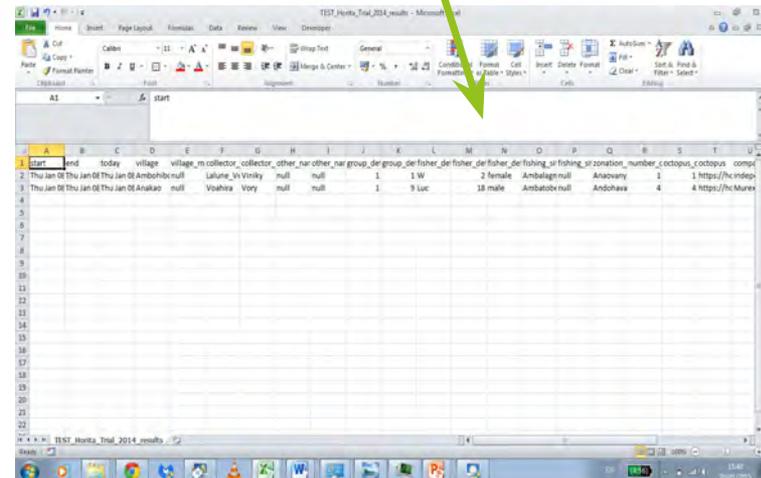
  

File Type	Status	Time Completed	Download File	Delete
CSV file	Generation in progress			Delete

# Exporting to excel

- Once an export has been selected this screen will be visible whilst the dataset is generated. CSV files can be opened using excel.

File Type	Status	Time Completed	Download File	Delete
CSV file	Dataset Available	Thu Mar 24 12:08:14 GMT+000 2016	<a href="#">desman_questions_2016_results.csv</a>	Delete
CSV file	Dataset Available	Wed Jun 17 12:02:31 GMT+100 2015	<a href="#">Shark 2015 all results.csv</a>	Delete



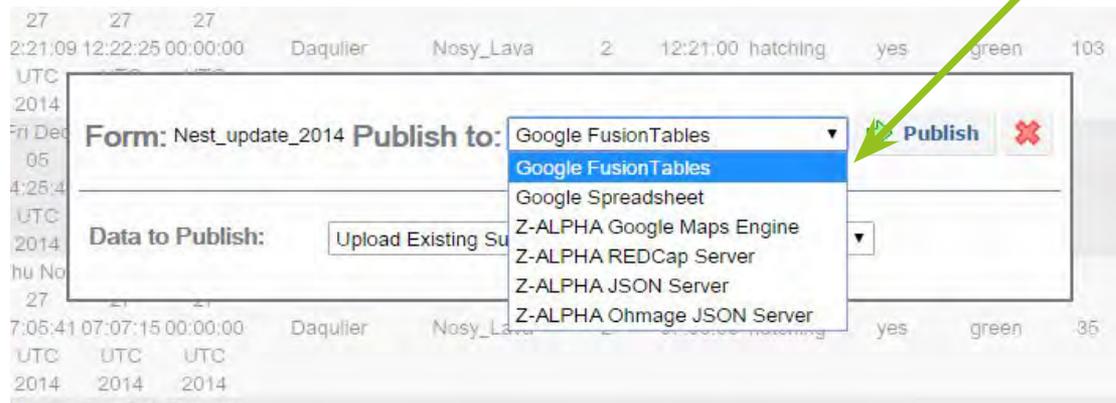
# Publishing Data

# Publishing Data

- Data can be 'published' as google sheets or Fusion tables.



The screenshot shows the ODK Data Manager interface for the 'BV Octopus Monitoring' form. The 'Publish' button is circled in green. The interface includes a navigation bar with 'Submissions', 'Form Management', 'ODK Tables', and 'Site Admin'. Below the navigation bar, there are tabs for 'Filter Submissions' and 'Exported Submissions'. The main content area displays a table of submissions with columns for dates, times, and various data points. The 'Publish' button is located in the top right corner of the main content area.



The screenshot shows the 'Publish' dialog box in the ODK Data Manager. The 'Form' is 'Nest\_update\_2014'. The 'Publish to' dropdown menu is open, showing options: 'Google FusionTables', 'Google FusionTables', 'Google Spreadsheet', 'Z-ALPHA Google Maps Engine', 'Z-ALPHA REDCap Server', 'Z-ALPHA JSON Server', and 'Z-ALPHA Ohmage JSON Server'. The 'Publish' button is highlighted in green. The background shows a table of submissions with columns for dates, times, and various data points.

# Publishing to Google Spreadsheets

# Google Spreadsheets

---

- To publish to Google sheets select spreadsheets in the dropdown menu and decide which data to publish (existing only or future data too) and the name of the workbook.
- Enter the email address that these should be published to (gmail account).
- This should appear in the drive of the email address entered.
- Repeats will be separated out to different tabs when you export to Google sheets (see next pages). E.g. All the shark measurements will be on a separate tab when exported. This makes it much easier to view all the shark measurements. However, if you want to match up the shark to the form or location information you will need to match by the unique identifier but there is an ad-on in google sheets that will allow you to do this:  
[https://chrome.google.com/webstore/detail/merge-sheets/gdmgbiccnaIapanbededmeiadjfbfhl?utm\\_source=permalink](https://chrome.google.com/webstore/detail/merge-sheets/gdmgbiccnaIapanbededmeiadjfbfhl?utm_source=permalink)

# Google spreadsheet export view

Shark\_2015\_all

File Edit View Insert Format Data Tools Add-ons Help Last edit was on 16 March

fx metainstanceid

	A	B	C	D	E	F	G	H	I	J
10	uuid:58ac7b37-2			03/15/2015 13:5	TRUE	03/15/2015 13:5	03/01/2015 09:0	03/01/2015 09:1	03/01/2015	belo
11	uuid:f04c7954-5			03/15/2015 13:5	TRUE	03/15/2015 13:5	03/01/2015 09:1	03/01/2015 09:1	03/01/2015	belo
12	uuid:4733cdce-c			03/15/2015 13:5	TRUE	03/15/2015 13:5	03/01/2015 09:3	03/01/2015 09:5	03/01/2015	belo
13	uuid:f68dad31-8			03/15/2015 13:5	TRUE	03/15/2015 13:5	03/01/2015 16:0	03/01/2015 16:1	03/01/2015	belo
14	uuid:8fdcc533-1			03/15/2015 13:5	TRUE	03/15/2015 13:5	03/02/2015 05:5	03/02/2015 06:0	03/02/2015	belo
15	uuid:1e443dfe-8			03/15/2015 13:5	TRUE	03/15/2015 13:5	03/02/2015 06:0	03/02/2015 06:1	03/02/2015	belo
16	uuid:d2ee9e56-e			03/15/2015 13:5	TRUE	03/15/2015 13:5	03/02/2015 06:1	03/03/2015 10:2	03/02/2015	belo
17	uuid:63e064e3-1			03/15/2015 13:5	TRUE	03/15/2015 13:5	03/02/2015 06:1	03/02/2015 06:2	03/02/2015	belo
18	uuid:c67b71a3-f			03/15/2015 13:5	TRUE	03/15/2015 13:5	03/02/2015 06:2	03/02/2015 06:3	03/02/2015	belo
19	uuid:e369bdcf-1			03/15/2015 13:5	TRUE	03/15/2015 13:5	03/02/2015 06:3	03/02/2015 06:3	03/02/2015	belo
20	uuid:009f9235-d			03/15/2015 14:0	TRUE	03/15/2015 14:0	03/02/2015 06:3	03/02/2015 06:5	03/02/2015	belo
21	uuid:87051002-4			03/15/2015 14:0	TRUE	03/15/2015 14:0	03/02/2015 07:1	03/02/2015 07:1	03/02/2015	belo
22	uuid:c12f9b22-4			03/15/2015 14:0	TRUE	03/15/2015 14:0	03/02/2015 10:5	03/02/2015 10:5	03/02/2015	belo
23	uuid:c786768d-c			03/15/2015 14:0	TRUE	03/15/2015 14:0	03/02/2015 11:0	03/02/2015 11:1	03/02/2015	belo
24	uuid:6d0aded3-2			03/15/2015 14:0	TRUE	03/15/2015 14:0	03/02/2015 11:3	03/02/2015 11:3	03/02/2015	belo
25	uuid:b8c909f9-3			03/15/2015 14:0	TRUE	03/15/2015 14:0	03/02/2015 11:4	03/02/2015 11:5	03/02/2015	belo
26	uuid:b39e4791-0			03/15/2015 14:0	TRUE	03/15/2015 14:0	03/02/2015 12:1	03/02/2015 12:2	03/02/2015	belo
27	uuid:525d432c-c			03/15/2015 14:0	TRUE	03/15/2015 14:0	03/02/2015 12:2	03/02/2015 12:2	03/02/2015	belo
28	uuid:0e9da4d8-0			03/15/2015 14:0	TRUE	03/15/2015 14:0	03/02/2015 12:4	03/02/2015 12:5	03/02/2015	belo
29	uuid:fc556642-0			03/15/2015 14:0	TRUE	03/15/2015 14:0	03/03/2015 08:2	03/03/2015 08:3	03/03/2015	belo
30	uuid:108287c2-4			03/15/2015 14:0	TRUE	03/15/2015 14:0	03/03/2015 08:3	03/03/2015 08:3	03/03/2015	belo
31	uuid:b63fae5a-4			03/15/2015 14:1	TRUE	03/15/2015 14:1	03/03/2015 08:3	03/03/2015 08:4	03/03/2015	belo
32	uuid:c45d005e-f			03/15/2015 14:1	TRUE	03/15/2015 14:1	03/03/2015 08:4	03/03/2015 10:2	03/03/2015	belo

Shark\_2015\_all shark\_measurements

# Repeats will be on a separate tab

The screenshot shows a spreadsheet application window titled "Shark\_2015\_all". The spreadsheet contains a table with the following data:

	A	B	C	D	E	F	G
1	parentuid	shark	sex	shark manual	images harkone	images harktwo	shark.length
2	uuid:2e10844f-0f...	vao	female		<a href="https://horastrea">https://horastrea</a>	<a href="https://horastrea">https://horastrea</a>	12
3	uuid:4b0940fd-1f...	viko	male				15
4	uuid:4b0940fd-1f...	viko	male				18
5	uuid:4b0940fd-1f...	viko	male				16
6	uuid:4b0940fd-1f...	viko	male				17
7	uuid:4b0940fd-1f...	viko	male				17
8	uuid:4b0940fd-1f...	viko	male				16
9	uuid:4b0940fd-1f...	viko	female				18
10	uuid:4b0940fd-1f...	viko	female				18
11	uuid:4b0940fd-1f...	viko	male				17
12	uuid:4b0940fd-1f...	viko	male				15
13	uuid:4b0940fd-1f...	viko	female				16
14	uuid:4b0940fd-1f...	viko	male				15
15	uuid:4b0940fd-1f...	viko	female				14
16	uuid:8b72dfc1-92...	viko	male				13
17	uuid:8b72dfc1-92...	viko	male				12
18	uuid:8b72dfc1-92...	viko	male				13
19	uuid:8b72dfc1-92...	maintindambosy	male		<a href="https://horastrea">https://horastrea</a>	<a href="https://horastrea">https://horastrea</a>	19
20	uuid:8b72dfc1-92...	viko	male				15
21	uuid:8b72dfc1-92...	viko	male				17
22	uuid:8b72dfc1-92...	viko	female				14
23	uuid:8b72dfc1-92...	viko	female				13

The bottom tab bar shows two tabs: "Shark\_2015\_all" and "shark\_measurements". The "shark\_measurements" tab is highlighted with a green circle.

# Publishing to Fusion Tables

# Fusion Tables

---

- To export to Fusion tables the system needs to be configured correctly to connect ODK aggregate and Fusion tables. See the next section on [Setting up fusion tables](#) if this has not already been done.
- Once this is setup correctly (or if it has already been done by the site administrator/creator) then you will already be able to publish to Fusion tables:
  - Go to 'publish'
  - Select 'Fusion tables'
  - Select the data you want to publish
  - If there is no error message the fusion tables should be visible in the drive of the email it was published to.

# Publishing to Fusion tables

- Choose 'publish' on the right hand side
- Choose whether you want to publish existing data or future data
- Upload existing submission data will only upload what is already on the server and will not update when new data are added. New submission data will not upload current data, only future data. BOTH will upload existing data and continue to update when other data are added.
- Click on publish in the pop-up box

The screenshot shows a web application interface for managing submissions. The main content area displays a table with columns: date, village\_name, title, site, reference\_site, monitor\_name, sub\_plot, species\_details, count, species\_details, meta, and instanceID. The table title is 'BF-Monitoring\_replanting\_2015'. In the top right corner, there are buttons for 'Visualize', 'Export', and 'Publish', with the 'Publish' button circled in green. Below the table, a pop-up dialog is open, showing the form 'BF-Monitoring\_replanting\_2015 Publish to: Google Fusion Tables' with a 'Publish' button. The 'Data to Publish:' dropdown menu is open, showing options: 'BOTH Upload Existing & Stream New Submission Data', 'Upload Existing Submission Data ONLY', 'Stream New Submission Data ONLY', and 'BOTH Upload Existing & Stream New Submission Data'. The first and last options are circled in green.



- Error Message if not published correctly (e.g. if you try to publish to a non gmail account):

The page at https://bvsharkdata.appspot.com says:

```
Error: RequestFailureException (
com.google.api.client.googleapis.json.GoogleJsonResponseException: 400
{
  "code": 400,
  "errors": [{
    "domain": "global",
    "message": "Bad Request. User message: \\\"Sorry, cannot transfer ownership to victoria@blueventures.org. Ownership can only be transferred to another user in the same domain as the current owner.\\\"",
    "reason": "invalidSharingRequest"
  }],
  "message": "Bad Request. User message: \\\"Sorry, cannot transfer ownership to victoria@blueventures.org. Ownership can only be transferred to another user in the same domain as the current owner.\\\"")
})
```

OK

start	end	today	basic	surveyor_name	species	number	evidence	poaching	poaching	meta		
UTC	UTC	UTC						poaching	poaching	instanceID		
Nov 7 1:09	Nov 27 12:22	Nov 27 00:00		Daquilier	green	103				uuid:14dc1d35-57d4-4311-9b96-efea9d9b1387		
Dec 5 5:41	Fri Dec 14 14:35	Fri Dec 12 00:00		Haja				nest_dug_up	lo lavakio mihoraky laliky ary zahay nisava koa?	uuid:203ca566-e7b2-4a51-a634-3e68a5d881fa		
Nov 7 5:41	Nov 27 07:07	Nov 27 15:00		Daquilier	Nosy_Lava	2	07:00:00	hatching	yes	green	35	
Jan 8 7:58	Thu Feb 12 08:29	Thu Jan 8 00:00		Haja	Nosy_Mboro	1	05:38:00	hatching	no		tracks	uuid:3bef8261-134f-4099-8f52-76d4125cc56f
Nov 7 6:40	Nov 27 00:00										uuid:415081bc-1903-40da-a1e8-748b78014858	

# How data are displayed in Fusion tables

- When you publish a fusion table it will appear in the Drive of the email address you published to and appear as a table like this:

Shark\_2015\_all\_results\_forFUSION2  
Imported at Wed Jun 17 07:39:46 PDT 2015 from Shark\_2015\_all\_results\_forFUSION2.xlsx  
Edited on June 17, 2015

File Edit Tools Help

Ro... Ca... Map of survey... No. of sharks per fisherman... No. of sharks per village Velo, a... No. sharks per fishing site - ... No. sharks b... No. of sharks by n...

Filter - surveyor:village IN ('Antsepoke', 'Andavadoaka', 'Belavenoke', 'Belalanda', 'Andranombala', 'Ampasilava', 'Bevato', 'Antanagnabo', 'Lamboara', 'Nosy\_Bo')

surveyor:village 1-100 of 347

12 distinct values

- Ampasilava 15
- Andavadoaka 87
- Andranombala 41
- Antanagnabo 36
- Antsepoke 15
- Belalanda 3

start	end	today	site	surveyor_mai...	surveyor_mai...	surveyor:village	surveyor:surveyor_name
Sat Oct 25 04:07:40 UTC 2014	Sat Oct 25 04:49:37 UTC 2014	Sat Oct 25 00:00:00 UTC 2014	velo			Andavadoaka	Henriette
Thu Oct 30 04:44:16 UTC 2014	Thu Oct 30 04:47:59 UTC 2014	Thu Oct 30 00:00:00 UTC 2014	velo			Andavadoaka	Henriette
Fri Oct 31 04:20:28 UTC 2014	Fri Oct 31 04:30:21 UTC 2014	Fri Oct 31 00:00:00 UTC 2014	velo			Andavadoaka	Henriette
Wed Nov 05 03:27:14 UTC 2014	Wed Nov 05 03:33:12 UTC 2014	Wed Nov 05 00:00:00 UTC 2014	velo			Andavadoaka	Henriette
Wed Nov 05 03:03:26 UTC 2014	Wed Nov 05 03:09:46 UTC 2014	Wed Nov 05 00:00:00 UTC 2014	velo			Andavadoaka	Henriette
Thu Nov 06 03:28:42 UTC 2014	Thu Nov 06 03:37:53 UTC 2014	Thu Nov 06 00:00:00 UTC 2014	velo			Andavadoaka	Henriette

Add row layout  
Add card layout  
Add summary  
Add chart  
Add map

# Fusion tables – data management

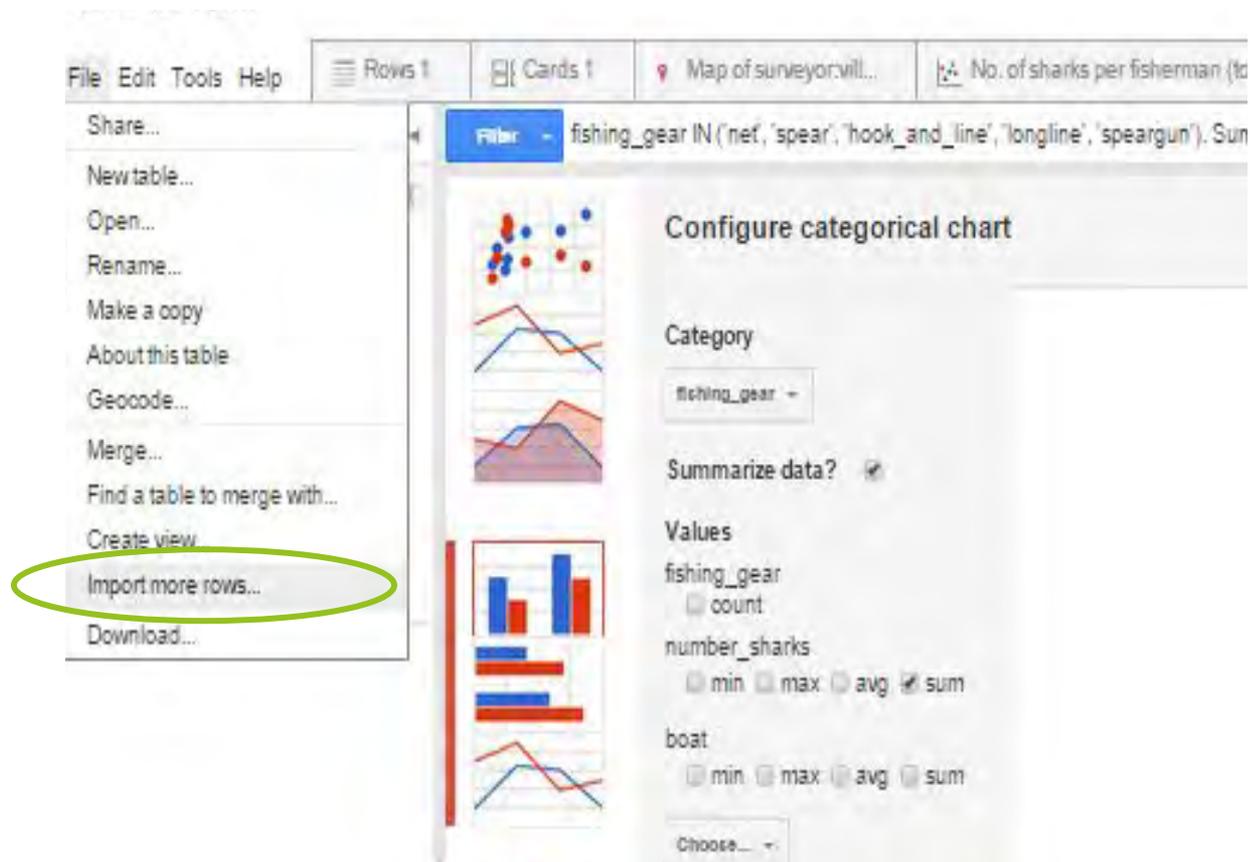
---

- Data can then be filtered and sorted to create simple graphs.
- Add a graph or a chart by using the little red cross symbol and then choosing the kind of layout you want to add.

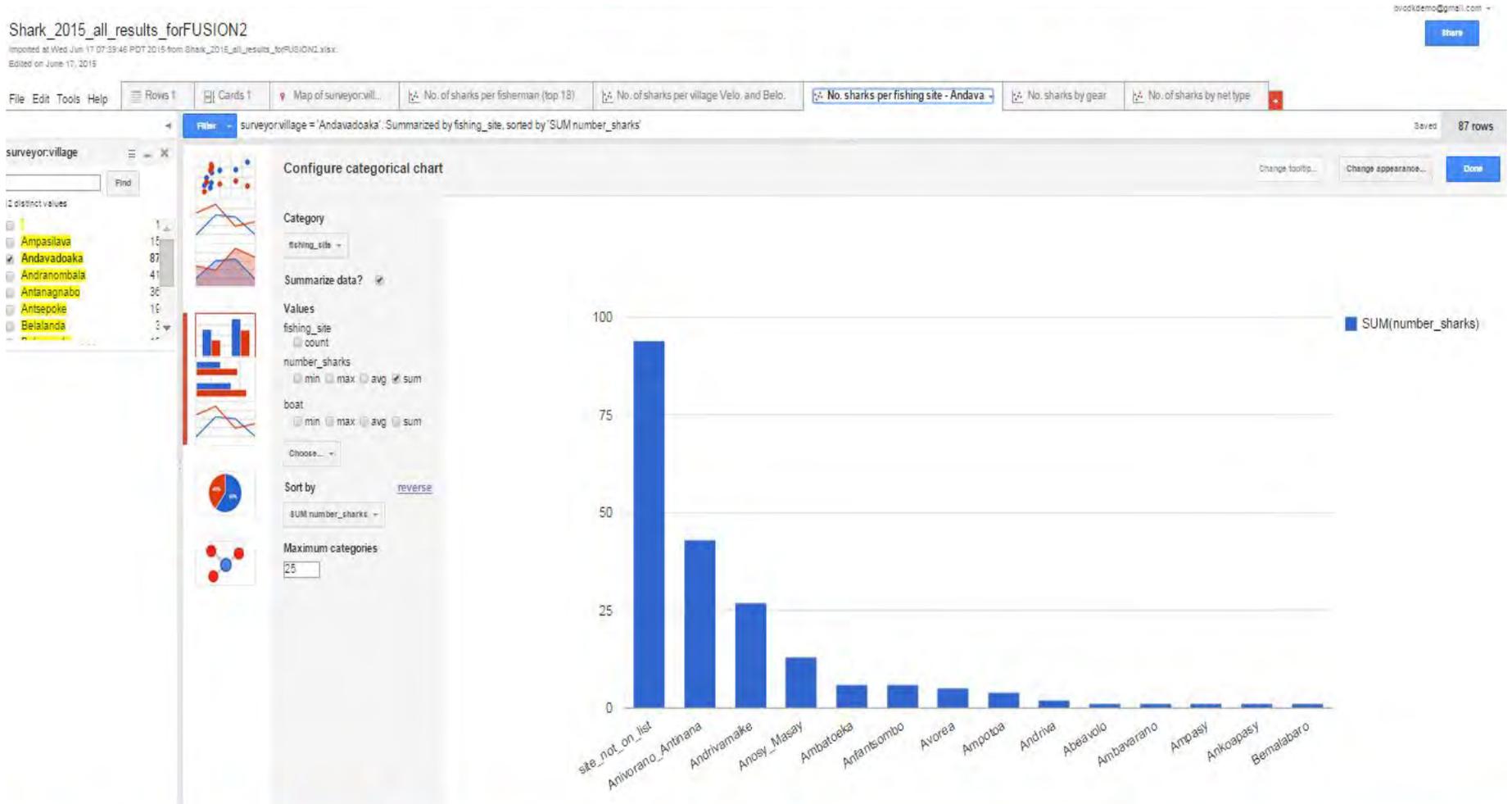


# Importing extra data rows

- It is possible to manually upload other data to existing fusion tables under **file>import more rows**.
- Here you can select a document to import data from:



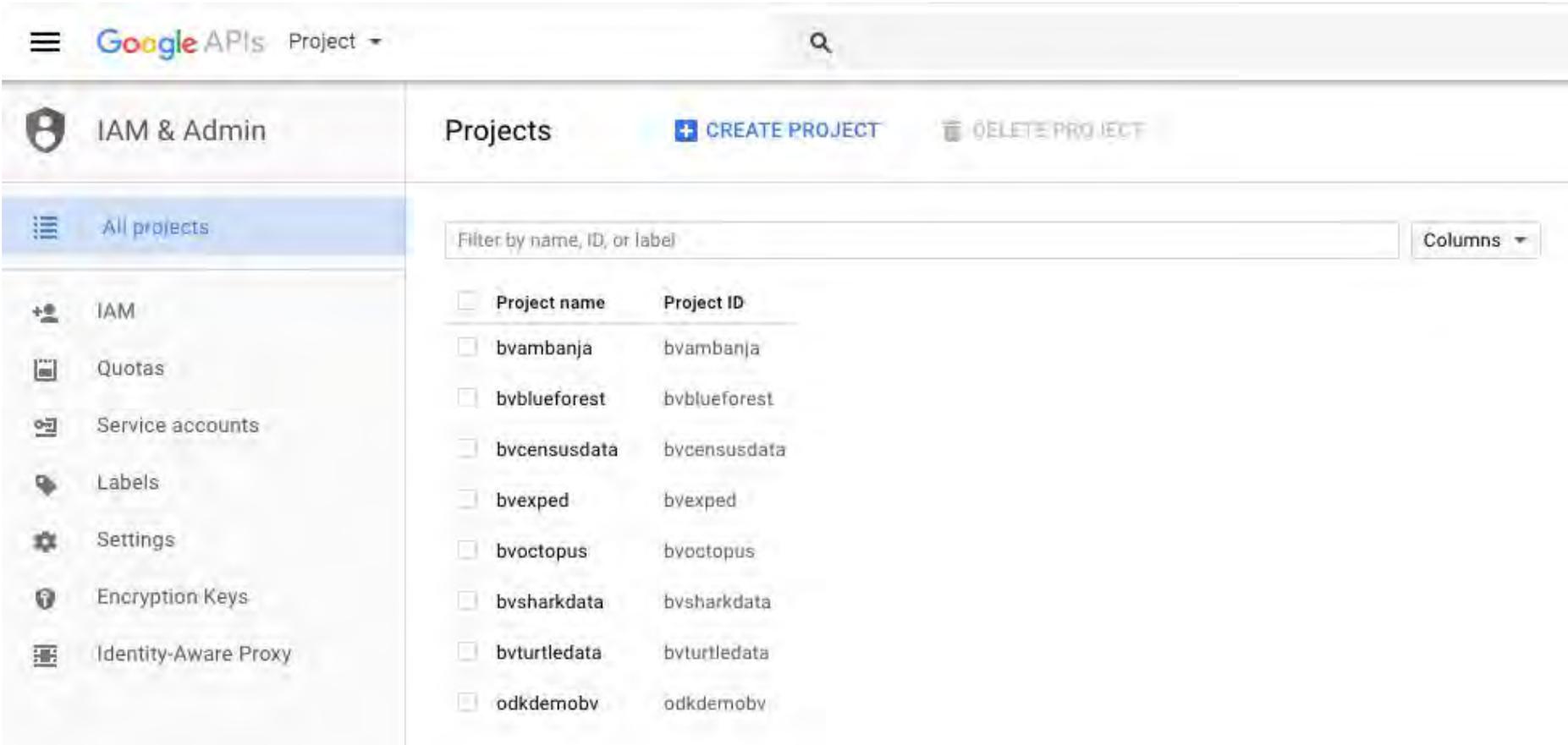
# Graph examples



# Setting up APIs for Google Sheets and Fusion Tables

# Setting up API: Step 1 in App Engine

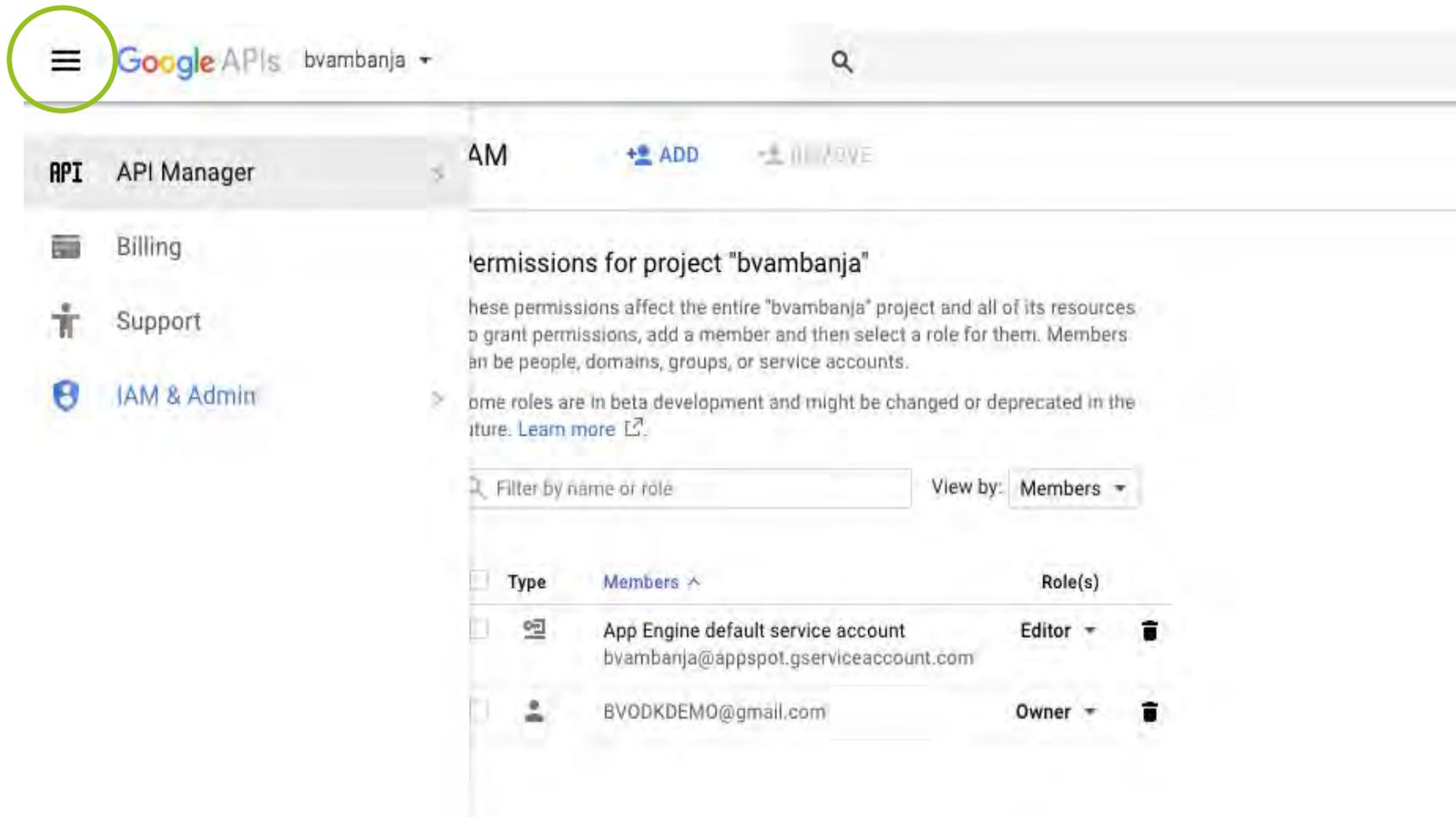
1. Open: [console.developers.google.com/project](https://console.developers.google.com/project)
2. Select appspot



The screenshot shows the Google Cloud IAM & Admin console. The left sidebar contains navigation options: IAM & Admin, All projects, IAM, Quotas, Service accounts, Labels, Settings, Encryption Keys, and Identity-Aware Proxy. The main content area is titled 'Projects' and includes a search bar, a 'Filter by name, ID, or label' input, and a 'Columns' dropdown. Below these is a table of projects with checkboxes for selection.

<input type="checkbox"/>	Project name	Project ID
<input type="checkbox"/>	bvambanja	bvambanja
<input type="checkbox"/>	bvblueforest	bvblueforest
<input type="checkbox"/>	bvcensusdata	bvcensusdata
<input type="checkbox"/>	bvexped	bvexped
<input type="checkbox"/>	bvoctopus	bvoctopus
<input type="checkbox"/>	bvsharkdata	bvsharkdata
<input type="checkbox"/>	bvturtledata	bvturtledata
<input type="checkbox"/>	odkdemobv	odkdemobv

# From the menu select API manager



The screenshot shows the Google Cloud console interface. At the top left, the 'Google APIs' logo is visible, followed by the project name 'bvambanja'. A green circle highlights the hamburger menu icon (three horizontal lines) to the left of the logo. Below the header, a navigation menu is displayed on the left side, with 'API Manager' selected and highlighted in grey. Other menu items include 'Billing', 'Support', and 'IAM & Admin'. The main content area shows the 'API Manager' page for project 'bvambanja'. It features a title 'Permissions for project "bvambanja"', a search bar, and a table of members. The table has columns for 'Type', 'Members', and 'Role(s)'. Two members are listed: 'App Engine default service account' (Editor) and 'BVODKDEMO@gmail.com' (Owner).

Google APIs bvambanja

API Manager

AM + ADD - REMOVE

Permissions for project "bvambanja"

These permissions affect the entire "bvambanja" project and all of its resources. To grant permissions, add a member and then select a role for them. Members can be people, domains, groups, or service accounts.

Some roles are in beta development and might be changed or deprecated in the future. [Learn more](#)

Filter by name or role View by: Members

Type	Members	Role(s)
	App Engine default service account bvambanja@appspot.gserviceaccount.com	Editor
	BVODKDEMO@gmail.com	Owner

# From the menu select library

Google APIs bvambanja

API Manager

Billing

Support

IAM & Admin

Dashboard

Library

Credentials

for project "bvambanja"

affect the entire "bvambanja" project and all of its resources. To grant permissions, add a member and then select a role for them. Members can be people, domains, groups, or service accounts.

Some roles are in beta development and might be changed or deprecated in the future. [Learn more](#)

Filter by name or role

View by: Members

Type	Members	Role(s)
	App Engine default service account bvambanja@appspot.gserviceaccount.com	Editor
	BVODKDEMO@gmail.com	Owner

# Enable the relevant APIs

3. In the library. Enable Drive API. Enable Fusion Tables API. If you can not see them in the list use the search bar

Google Developers Console | bvsafidydata | Sign up for a free trial! | Try the beta console

Home | Permissions | **APIs & auth** | Credentials | Monitoring | Source Code | Cloud Launcher | Deployments | Compute | Networking | Storage | Big Data

Google APIs | Enabled APIs (4)

Search all 100+ APIs

**Popular APIs**

- Google Cloud APIs**
  - Compute Engine API
  - BigQuery API
  - Cloud Storage Service
  - Cloud Datastore API
  - Cloud Deployment Manager API
  - Cloud DNS API
  - More
- Mobile APIs**
  - Cloud Messaging for Android
  - Google Play Game Services
  - Google Play Developer API
  - Google Places API for Android
- Advertising APIs**
  - AdSense Management API
  - DCM/DFA Reporting And Trafficking API
  - Ad Exchange Seller API
  - Ad Exchange Buyer API
  - DoubleClick Search API
  - Analytics API
- Google Maps APIs**
  - Google Maps Android API
  - Google Maps SDK for iOS
  - Google Maps JavaScript API
  - Google Places API for Android
  - Google Places API for iOS
  - Google Maps Roads API
  - More
- Social APIs**
  - Google+ API
  - Blogger API
  - Google+ Pages API
  - Google+ Domains API
- Other popular APIs**
  - Translate API
  - Custom Search API
  - URL Shortener API
  - PageSpeed Insights API
  - Fusion Tables API**
  - Web Fonts Developer API
- Google Apps APIs**
  - Drive API**
  - Calendar API
  - Gmail API
  - Google Apps Marketplace SDK
  - Admin SDK
  - Contacts API
  - CalDAV API
- YouTube APIs**
  - YouTube Data API
  - YouTube Analytics API
  - YouTube Reporting API

# Enable the relevant APIs II

API API Manager

← Google Drive API **▶ ENABLE**

Documentation Try this API

### About this API

The Google Drive API allows clients to access resources from Google Drive.

#### Using credentials with this API

##### Accessing user data with OAuth 2.0

You can access user data with this API. On the Credentials page, create an OAuth 2.0 client ID. A client ID requests user consent so that your app can access user data. Include that client ID when making your API call to Google. [Learn more](#)

Your app → User consent → User data

##### Server-to-server interaction

You can use this API to perform server-to-server interaction, for example between a web application and a Google service. You'll need a service account, which enables app-level authentication. You'll also need a service account key, which is used to authorize your API call to Google. [Learn more](#)

Your service → Authorization → Google service

# Create credentials

- After you enable the API a warning will tell you to add create credentials to use the API.

← Google Drive API ■ DISABLE

**⚠ To use this API, you may need credentials. Click "Create credentials" to get started.**

[Create credentials](#)

Overview Quotas Drive UI Integration

About this API Documentation Try this API in APIs Explorer

All API versions All API credentials All API methods

1 hour 6 hours 12 hours 1 day 2 days 4 days 7 days 14 days 30 days

Traffic By response code

Requests/sec (5 min average)

# Add the relevant credentials (APIs and service account)

- Click on 'service account'

Credentials

---

## Add credentials to your project

- 1 Find out what kind of credentials you need

We'll help you set up the correct credentials  
If you wish you can skip this step and create an API key, client ID, or [service account](#)

**Which API are you using?**  
Determines what kind of credentials you need.

Google Drive API

**Where will you be calling the API from?**  
Determines which settings you'll need to configure.

Choose...

**What data will you be accessing?**

User data  
Access data belonging to a Google user, with their permission

Application data  
Access data belonging to your own application

[What credentials do I need?](#)

- Select a role: Project> Browser

**Create service account**

Service account name

Service account ID

Furnish a new private key  
Downloads a file that contains the private key. Store the file carefully; the file can't be recovered if lost.

Enable G Suite Domain-wide Delegation  
Grants a client access to all users' data on a G Suite domain without user authorization on their part. [Learn more](#)

Role: Select a role

- Selected
- Project
- App Engine
- Billing
- Datahub
- Logging
- Other
- Resource Manager
- Storage

- Owner
- Editor
- Viewer
- Browser
- Service Account Actor

CANCEL CREATE

Access to browse GCP resources.

1. Name your service account in the 'Service account name' box
2. Select "Furnish a new private key"
3. Select p12
4. Click 'Create'

**Create service account**

**Service account name**  **Role**

**Service account ID**  
 @byambanja.iam.gserviceaccount.com

**Furnish a new private key**  
Downloads a file that contains the private key. Store the file securely because this key can't be recovered if lost.

**Key type**

**JSON**  
Recommended

**P12**  
For backward compatibility with code using the P12 format

**Enable G Suite Domain-wide Delegation**  
Grants a client access to all users' data on a G Suite domain without manual authorization on their part. [Learn more](#)

- Successfully created. You will not need this information later
- A file will also automatically download to your computer - you will need this later. Sometimes there are problems doing this in Safari - try in Chrome if you have problems).

## Service account created

The account's private key **bvambanja-23b978098e46.p12** has been saved on your computer. This is the only copy of the key, so store it securely.

This is the private key's password. It will not be shown again. You must present this password to use the private key. [Learn more](#)



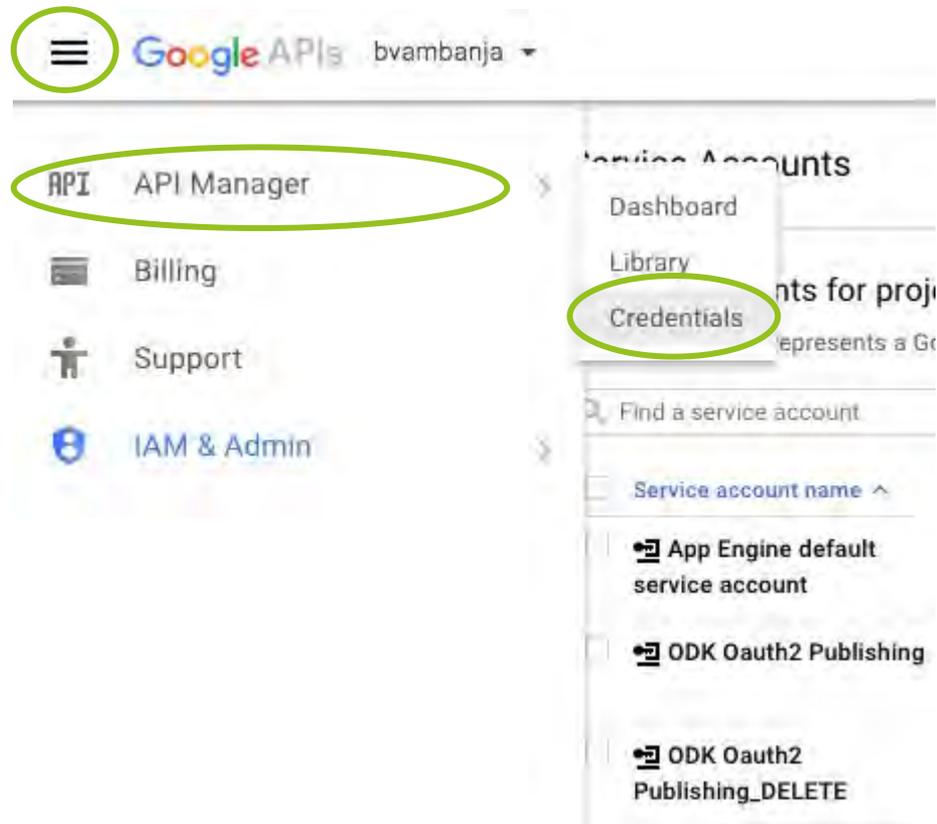
CLOSE

- After closing the pop-up window you will redirect to the Service Accounts page.
- The new service account will appear here.
- You will need the Service account ID and the KEY ID later in the process.

The screenshot shows the Google Cloud IAM & Admin console for project 'bvambanja'. The 'Service Accounts' page is active, displaying a list of service accounts for the project. The 'Service account ID' and 'Key ID' columns are circled in green. The 'App Engine default service account' has no keys, while the 'ODK OAuth2 Publishing\_DELETE' account has a key created on April 6, 2017.

Service account name	Service account ID	Key ID	Key creation date
App Engine default service account	bvambanja@appspot.gserviceaccount.com	No keys	
ODK OAuth2 Publishing_DELETE	odk-oauth2-publishing-delete@bvambanja.iam.gserviceaccount.com	23b978098e46cc783f2f2aa200cecd0be0fed3ff	Apr 6, 2017

- Navigate back to the menu and select API Manager> Credentials



- Click on 'create credentials'

## Credentials

[Credentials](#) [OAuth consent screen](#) [Domain verification](#)

**Create credentials**

Create credentials to access your enabled APIs. [Refer to the API documentation](#) for details.

### API keys

<input type="checkbox"/>	Name	Creation date	Restriction	Key	
<input type="checkbox"/>	 API key 1	Apr 5, 2017	None	AlzaSyA0st1ZGMcz0ffuWcTlJTYWVwmA4o9WH_s	 

### Service account keys

[Manage service accounts](#)

<input type="checkbox"/>	ID	Creation date	Service account	
<input checked="" type="checkbox"/>	23b978098e46cc783f2f2aa200cecd0be0fed3ff	Apr 5, 2017	ODK OAuth2 Publishing_DELETE	

- Select API Key

The screenshot shows the 'Credentials' page in the Google Cloud console. At the top, there are three tabs: 'Credentials', 'OAuth consent screen', and 'Domain verification'. Below the tabs, there are two buttons: 'Create credentials' (highlighted in blue) and 'Delete'. A dropdown menu is open from the 'Create credentials' button, listing four options: 'API key' (circled in green), 'OAuth client ID', 'Service account key', and 'Help me choose'. Each option has a brief description. To the right of the dropdown, there is a table with a header 'Key' and a row containing the text 'AlzaSy/...'.

**Credentials**

Credentials   OAuth consent screen   Domain verification

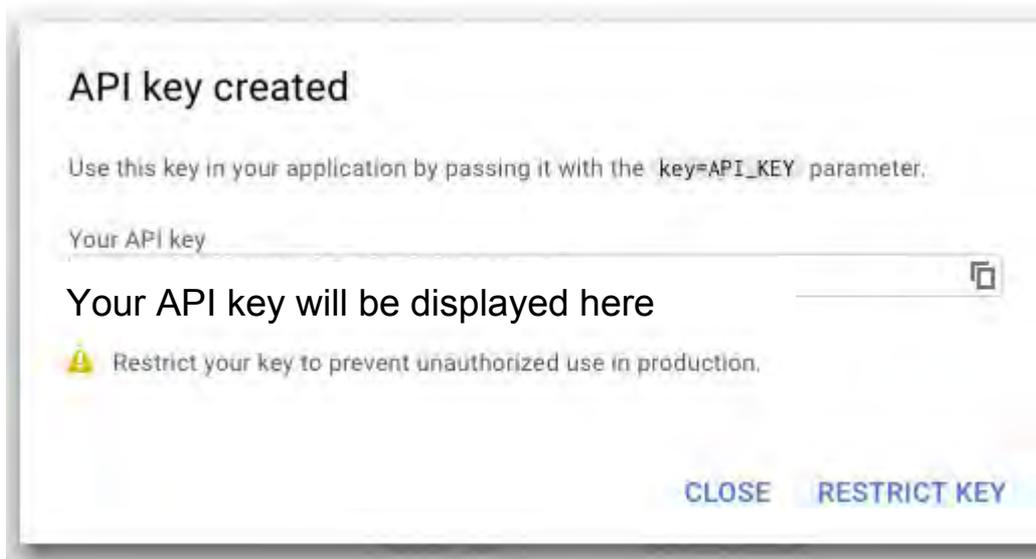
Create credentials ▾   Delete

- API key**  
Identifies your project using a simple API key to check quota and access
- OAuth client ID**  
Requests user consent so your app can access the user's data
- Service account key**  
Enables server-to-server, app-level authentication using robot accounts
- Help me choose**  
Asks a few questions to help you decide which type of credential to use

Key

AlzaSy/...

- A new key will be created - you will need this later so copy the API key.
- Click close



- Then click on OAuth consent screen tab.
- Add in a product name (compulsory) and any other details you want to (optional).
- Save.

### Credentials

Credentials **OAuth consent screen** Domain verification

Email address   
BVODKDEMO@gmail.com

Product name shown to users  
**gdrive\_agg\_test**

Homepage URL (Optional)  
https:// or http://

Product logo URL (Optional)   
http://www.example.com/logo.png

 This is how your logo will look to end users  
Max size: 120x120 px

Privacy policy URL  
Optional until you deploy your app  
https:// or http://

Terms of service URL (Optional)  
https:// or http://

**Save** Cancel



The consent screen users whenever you to their private data ID. It will be shown applications register project.

You must provide a and product name f work.

- Select the name of the service account you created
- Click 'manage service accounts'

## Credentials

Credentials OAuth consent screen Domain verification

Create credentials ▾

Delete

Create credentials to access your enabled APIs. [Refer to the API documentation](#) for details.

### API keys

<input type="checkbox"/>	Name	Creation date ▾	Restriction	Key	
<input type="checkbox"/>	⚠ API key 1	Apr 5, 2017	None	Your API key will be displayed here	 

### Service account keys

<input type="checkbox"/>	ID	Creation date ▾	Service account	
<input checked="" type="checkbox"/>	23b978098e46cc783f2f2aa200cecd0be0fed3ff	Apr 6, 2017	ODK OAuth2 Publishing_DELETE	

[Manage service accounts](#)

- This will take you back to the service accounts page
- Use this information along with the API key you copied earlier to complete the information required in Aggregate (see following stages).

The screenshot shows the Google Cloud IAM & Admin console for project 'bvambanja'. The left sidebar contains navigation options: IAM & Admin, All projects, IAM, Quotas, Service accounts (highlighted), Labels, Settings, Encryption Keys, and Identity-Aware Proxy. The main content area is titled 'Service Accounts' and includes buttons for 'CREATE SERVICE ACCOUNT', 'DELETE', and 'PERMISSIONS'. Below this, it shows 'Service accounts for project "bvambanja"' with a search bar and a table of service accounts.

Service account name	Service account ID	Key ID	Key creation date
App Engine default service account	bvambanja@appspot.gserviceaccount.com	No keys	
ODK Oauth2 Publishing			
ODK Oauth2 Publishing_DELETE	odk-oauth2-publishing-delete@bvambanja.iam.gserviceaccount.com	Key ID	Apr 6, 2017

# Setting up Fusion tables: Step 2 in Aggregate

---

You will now need to enter the details of the 'service accounts' you have just created into the preferences of your appspot:

1. Open your appspot (e.g. <https://odkdemobv.appspot.com>)
2. Go to Site Admin>preferences (see next pages)
3. Select Change Google API credentials
4. The settings from the console.developers site you have just created need to be copied across (see next pages)
  - Copy the browser key into the Simple API key box in ODK
  - Copy the Service account details into the relevant boxes
5. Upload p12 key from where it was saved on your computer - will be file type "Personal Information Exchange"

Under site admin>preferences click on Change Google API credentials

The screenshot shows a web browser window with the URL `bvcensusdata.appspot.com`. The browser's tab bar includes several open tabs: 'Inbox', 'away fr', 'BV T-L wiki...', 'bvcensusdata', 'appspots -...', 'Aggregate', 'My Drive -...', 'Credentials...', 'Developers...', 'Using OAut...', 'Chapter 6...', and '06. Using O...'. The application's navigation bar features a logo on the left and three main menu items: 'Submissions', 'Form Management', and 'Site Admin'. The 'Site Admin' menu is active, and a sub-menu is displayed with 'Permissions' and 'Preferences' options. The 'Preferences' sub-menu is selected, and the 'Change Google API Credentials' button is highlighted with a green circle.

**Permissions** **Preferences**

### Version Information

v1.4.7 Production

### Google API Credentials

See <http://opendatakit.org/use/aggregate/oauth2-service-account/> for instructions on obtaining and supplying these values.

#### Simple API Access Key

undefined

Recommended for accessing Google Maps.

#### Google OAuth2 Credentials

undefined

Necessary for publishing to Google Spreadsheets and Fusion Tables.

[Change Google API Credentials](#)

### Enketo Webform Integration

See [instructions](#) on how to do this.

#### Enketo API URL

undefined

The URL of the Enketo service API

#### Enketo API token

undefined

Necessary for authentication with the Enketo service

[Change Enketo API Configuration](#)

- Go to: Aggregate: Site Admin>Preferences>Change Google API credentials
- This screen will appear

The screenshot shows a web browser window with the URL `bvcensusdata.appspot.com`. The browser tabs include 'Inbox', 'away fr', 'BV T-L wiki...', 'bvcensusdata', 'appspots -...', 'Aggregate', 'My Drive -...', 'Credentials...', 'Developers...', 'Using OAut...', 'Chapter 6...', and '06. Using O...'. The browser address bar shows the URL. The page content is partially obscured by a modal dialog box titled 'Google API Credentials Upload'. The dialog box has a close button in the top right corner. The main heading of the dialog is 'Google API Credentials Upload'. Below the heading, there is a sub-heading 'Google API Credentials' and a paragraph: 'Please refer to the documentation at [Service Account Configuration](#).' Below this, there is another sub-heading 'Google Simple API Key' and a paragraph: 'Specifying a Simple API Key is recommended but not required for Google Maps visualizations.' Below this, there is a sub-heading 'Simple API Key:' followed by a text input field. Below this, there is a sub-heading 'Google API Service Account information' and a paragraph: 'Google API Service accounts are required when publishing to Google Spreadsheets and Google FusionTables.' Below this, there is a sub-heading 'Private key file (.p12 file):' followed by a 'Choose File' button and the text 'no file selected'. Below this, there is a sub-heading 'Client ID:' followed by a text input field. Below this, there is a sub-heading 'Email address:' followed by a text input field. At the bottom of the dialog, there is a blue button labeled 'Upload Google Credentials'. The background page shows a navigation menu with 'Submissions', 'Form Management', and 'Site Admin'. The 'Site Admin' menu is active, and the 'Preferences' sub-menu is selected. The page content includes sections for 'Version Information' (v1.4.7 Production), 'Google API Credentials' (with a link to <http://opendatakit.org/use/a>), 'Simple API Access Key' (with a red 'undefined' error message and text 'Recommended for accessing G'), 'Google OAuth2 Credentials' (with a red 'undefined' error message and text 'Necessary for publishing to Goo'), 'Change Google API Credentials' (a button), 'Enketo Webform Inte' (with a link to [instructions](#) on how to do th), 'Enketo API URL' (with a red 'undefined' error message and text 'The URL of the Enketo service #'), 'Enketo API token' (with a red 'undefined' error message and text 'Necessary for authentication w'), and 'Change Enketo API Configuration' (a button). At the bottom, there is a section for 'ODK 2.0 Features' with a checkbox for 'ODK Tables Synchronization Functionality'.

# Uploading p12 key

Choose the file that automatically downloaded in the previous stages and upload it here

The image shows a screenshot of a web browser displaying the Google API Credentials page. The page title is "Google API Credentials". Under the "Google API Key" section, the "Simple API Key" is set to "AlzaSyB4\_mDdmkqECR2\_WPRSo8xujGvjiRQ-WIE". Under the "Google API Service Account information" section, the "Private key file (.p12 file)" field is highlighted with a green circle. The field contains a "Choose File" button and the text "No file chosen". Below this field are the "Client ID" and "Email address" fields, both containing long alphanumeric strings. An "Upload Google Credentials" button is visible at the bottom of the form.

Overlaid on the right side of the screenshot is a Windows File Explorer window. The address bar shows the path "Tori ICT > Downloads". The file list shows a single file named "bvcoctopus-79645e2a4ebd" with a date modified of "12/08/2015 10:07" and a type of "Personal Informa...". The "File name" field is empty, and the file type is set to "All Files". The "Open" button is highlighted.

- Add the credentials from the previous stages

# Google API Credentials Upload

## Google API Credentials

Please refer to the documentation at [Service Account Configuration](#).

### Google Simple API Key

Specifying a Simple API Key is recommended but not required for Google Maps visualizations.

Simple API Key:

### Google API Service Account information

Google API Service accounts are required when publishing to Google Spreadsheets and Google FusionTables.

Private key file (.p12 file):  no file selected

Client ID:

Email address:

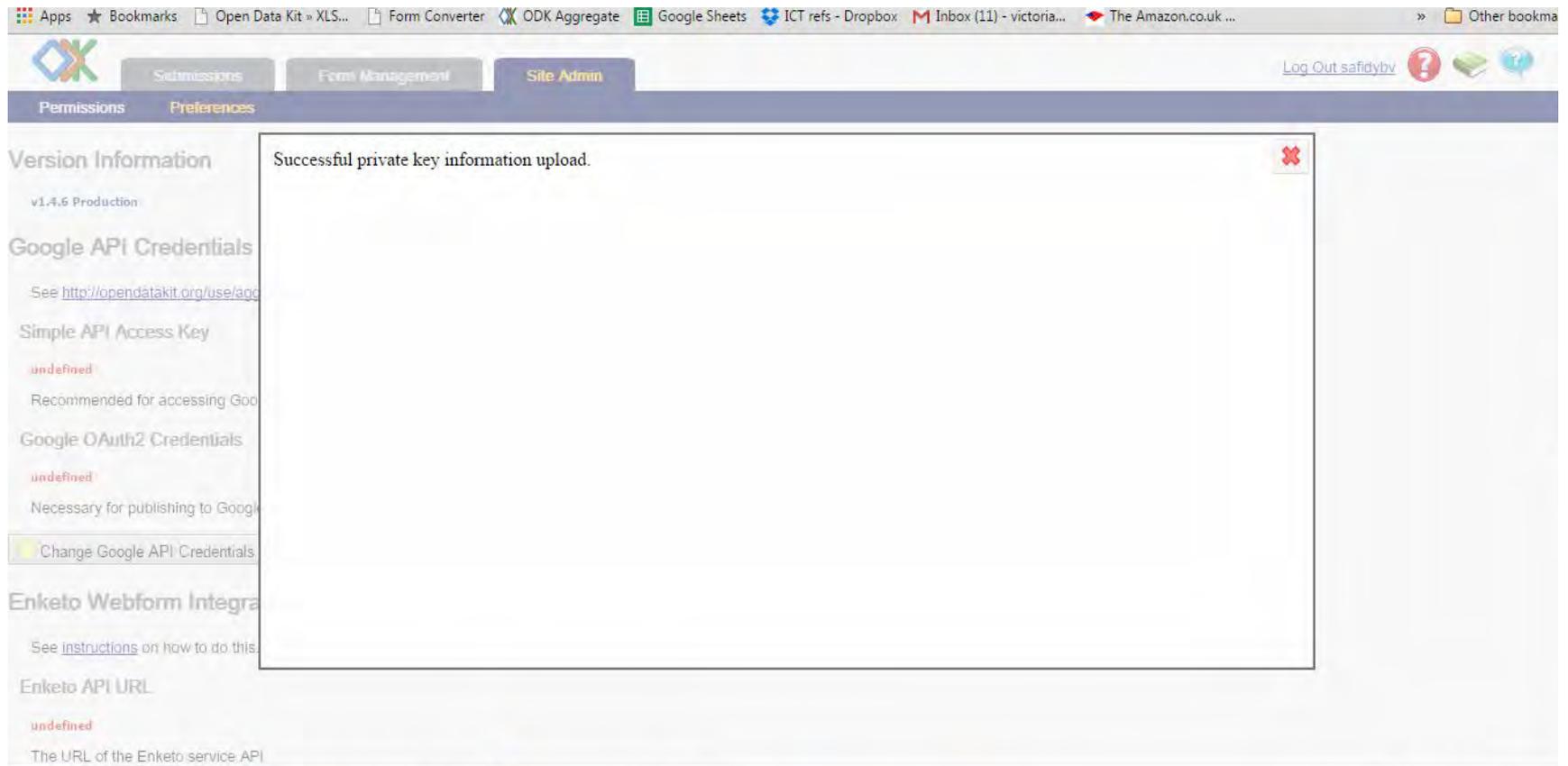
API key

Key ID

Service account ID

# Successful API key change

- You should now be able to publish to Fusion tables and Google Drive



The screenshot shows a web browser window with a navigation bar at the top containing tabs for 'Apps', 'Bookmarks', and several open pages including 'Open Data Kit - XLS...', 'Form Converter', 'ODK Aggregate', 'Google Sheets', 'ICT refs - Dropbox', 'Inbox (11) - victoria...', and 'The Amazon.co.uk ...'. Below the browser tabs is a navigation menu with 'Submissions', 'Form Management', and 'Site Admin' tabs. The 'Site Admin' tab is active, and the page title is 'Permissions Preferences'. A central message box displays 'Successful private key information upload.' with a red 'X' icon in the top right corner. The left sidebar contains sections for 'Version Information' (v1.4.6 Production), 'Google API Credentials' (with a link to <http://opendatakit.org/use/agg>), 'Simple API Access Key' (undefined), 'Google OAuth2 Credentials' (undefined), and 'Enketo Webform Integra' (with a link to [instructions](#) on how to do this). The 'Enketo API URL' is also listed as undefined.

# Publishing data

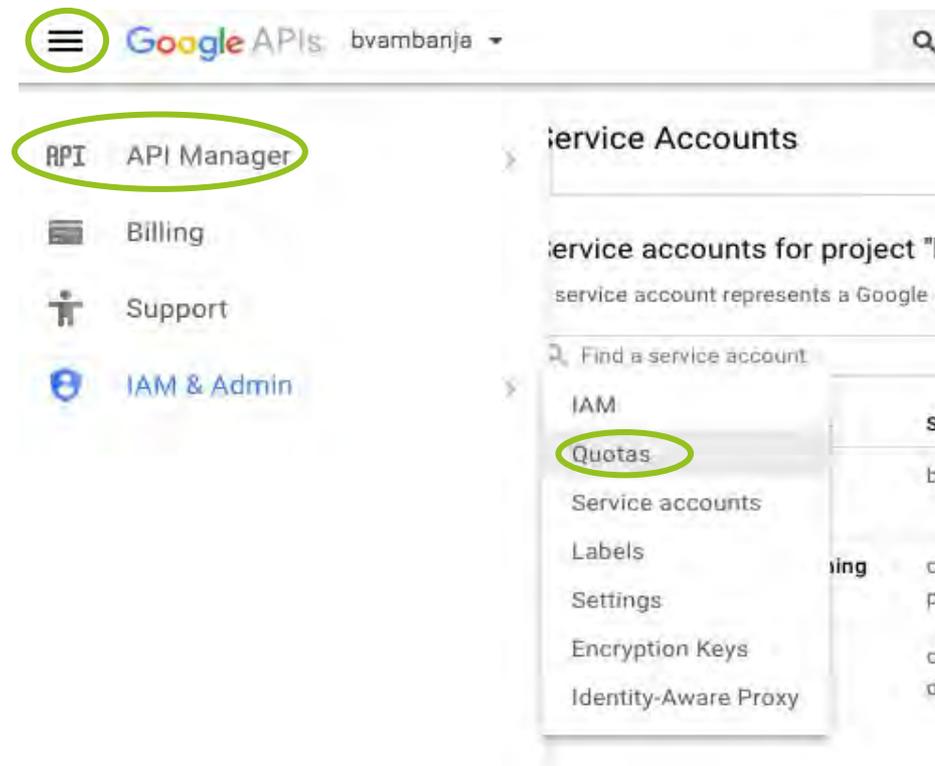
---

1. In aggregate go to Submissions, select the form you want to publish data for, select Publish and then choose Google Spreadsheets or Fusion tables.
2. Enter a spreadsheet or Fusion tables name when requested.
3. Enter an gmail email address to publish to when prompted

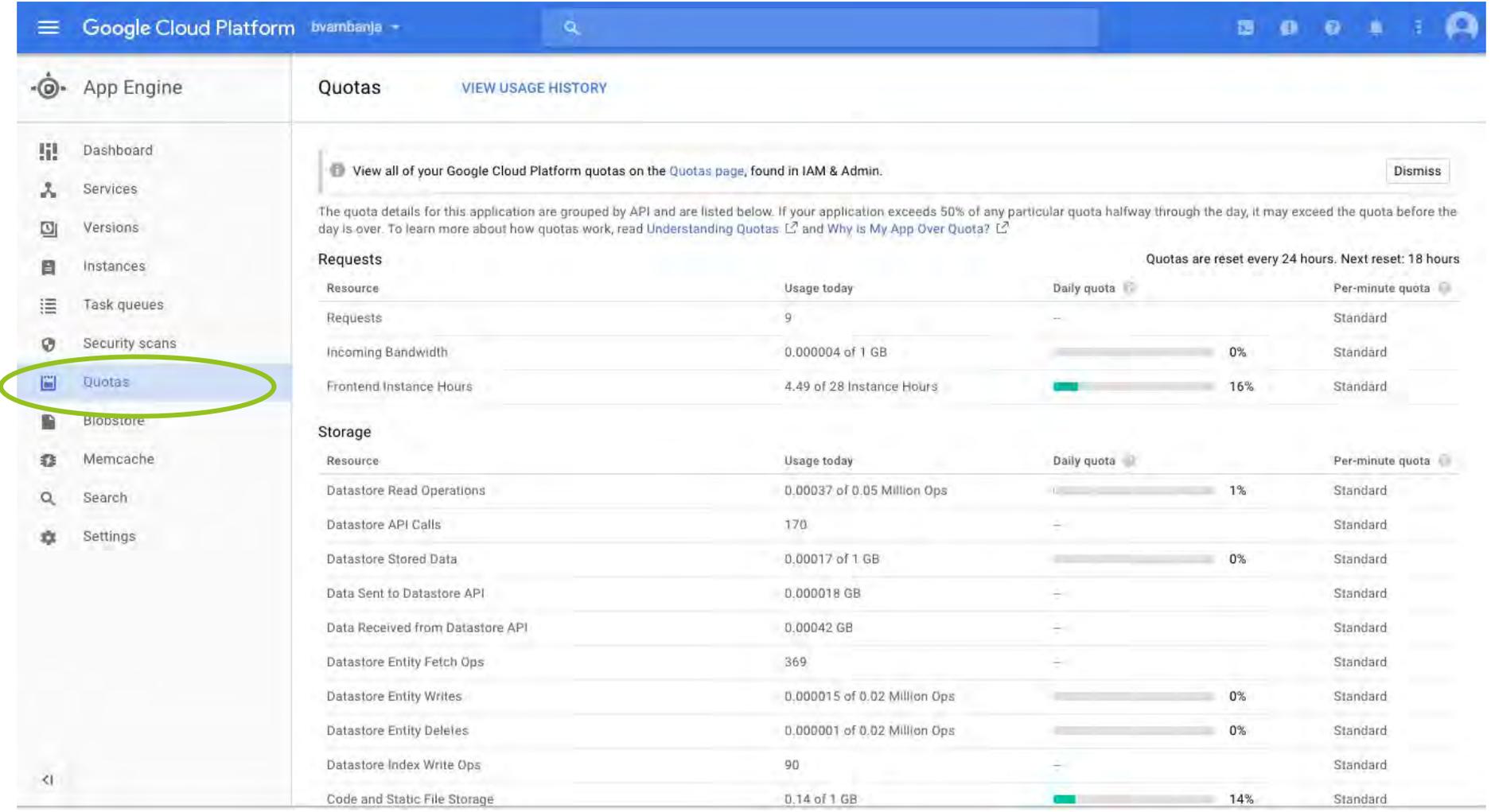
# Daily Data Quotas

---

- Publishing to Fusion tables can use a large proportion of the daily data quotas.
- The quotas can be viewed by going to your App Engine settings by selecting your instance here: <https://console.developers.google.com/appengine/>
- Or from your Service accounts pages navigate the menu as follows:



- Form this link <https://console.developers.google.com/appengine/> you will see this page



The screenshot shows the Google Cloud Platform interface for the 'App Engine' service. The left sidebar contains navigation options: Dashboard, Services, Versions, Instances, Task queues, Security scans, **Quotas** (highlighted with a green oval), Blobstore, Memcache, Search, and Settings. The main content area is titled 'Quotas' and includes a 'VIEW USAGE HISTORY' link. A notification bar at the top states: 'View all of your Google Cloud Platform quotas on the Quotas page, found in IAM & Admin.' Below this, a text block explains that quota details are grouped by API and lists a warning: 'If your application exceeds 50% of any particular quota halfway through the day, it may exceed the quota before the day is over.' A note indicates 'Quotas are reset every 24 hours. Next reset: 18 hours'. The page displays two tables: 'Requests' and 'Storage'. The 'Requests' table shows usage for 'Requests', 'Incoming Bandwidth', and 'Frontend Instance Hours'. The 'Storage' table shows usage for various Datastore operations and 'Code and Static File Storage'. Each row includes a progress bar, usage percentage, and quota type.

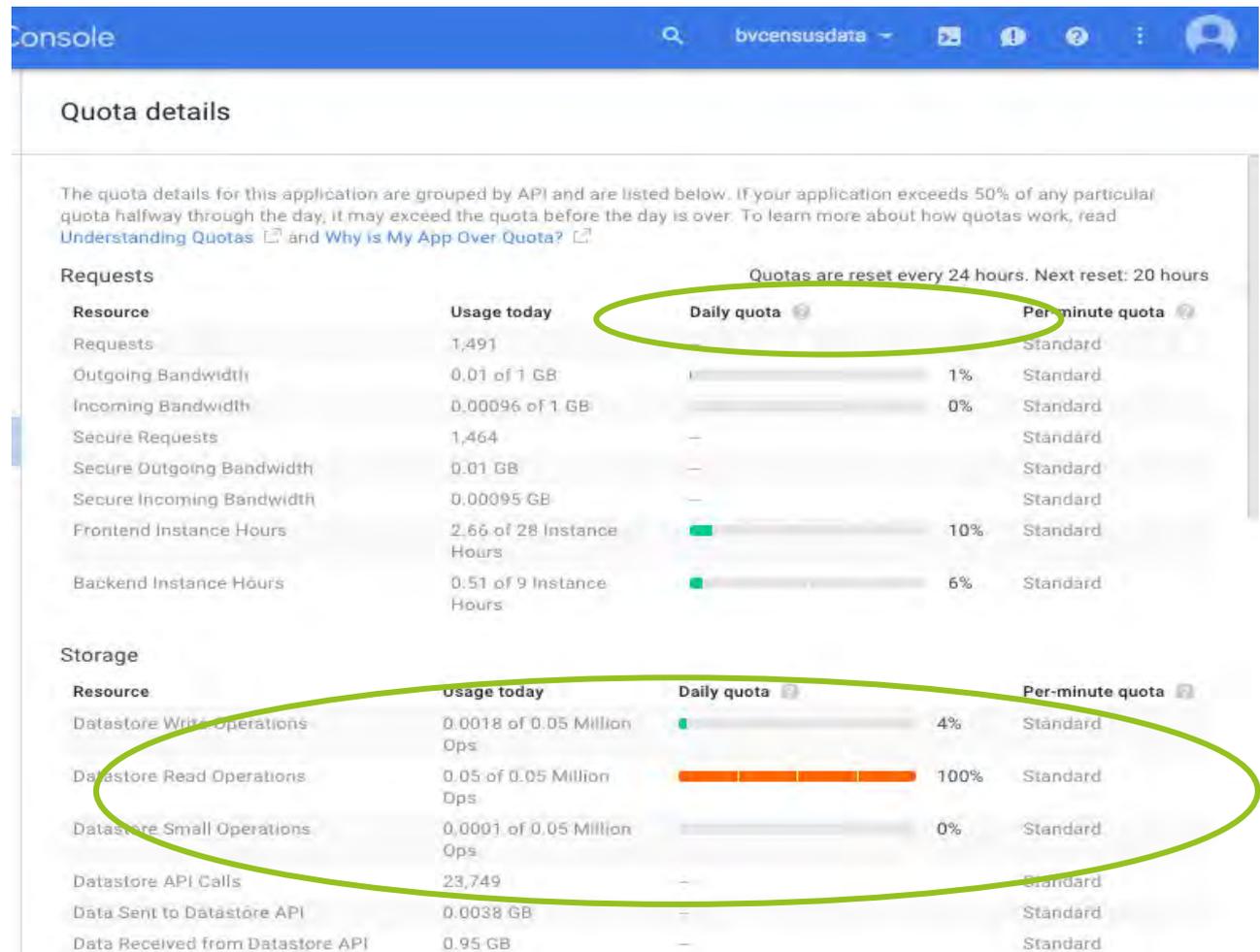
Resource	Usage today	Daily quota	Per-minute quota
Requests	9	---	Standard
Incoming Bandwidth	0.000004 of 1 GB	0%	Standard
Frontend Instance Hours	4.49 of 28 Instance Hours	16%	Standard

Resource	Usage today	Daily quota	Per-minute quota
Datastore Read Operations	0.00037 of 0.05 Million Ops	1%	Standard
Datastore API Calls	170	---	Standard
Datastore Stored Data	0.00017 of 1 GB	0%	Standard
Data Sent to Datastore API	0.000018 GB	---	Standard
Data Received from Datastore API	0.00042 GB	---	Standard
Datastore Entity Fetch Ops	369	---	Standard
Datastore Entity Writes	0.000015 of 0.02 Million Ops	0%	Standard
Datastore Entity Deletes	0.000001 of 0.02 Million Ops	0%	Standard
Datastore Index Write Ops	90	---	Standard
Code and Static File Storage	0.14 of 1 GB	14%	Standard

# Checking daily usage

- Datastore read operations is usually the quota which runs out first due to data being viewed or downloaded (below in red)
- Quotas reset every 24 hours and a countdown is displayed at the top of the page.



- To slow down the rate of publishing to conserve daily quotas select 'Disable faster background actions' in Aggregate.
- Go to Site admin>preferences then under Aggregate features:

The screenshot shows the ODK Aggregate Site Admin interface. At the top, there are navigation tabs: 'Permissions', 'Preferences', 'Form Management', and 'Site Admin'. The 'Preferences' and 'Site Admin' tabs are circled in green. Below the navigation is the 'Version Information' section, followed by 'Google API Credentials' which includes a link to instructions, a 'Simple API Access Key', and 'Google OAuth2 Credentials'. The 'Enketo Webform Integration' section includes instructions, API URL, and API token fields. The 'ODK 2.0 Features' section has a checkbox for 'ODK Tables Synchronization Functionality' and an 'ODK 2.0 Application Name' field. The 'Aggregate Features' section is circled in green and contains a checked checkbox for 'Disable faster background actions (exports, publishing, form deletion) (slows quota usage on Google AppEngine)'.

# Chapter 7

## Technological Considerations

# Choosing equipment

---

## Choosing Phones

- Must be Android to run ODK.
- Pick the biggest screen you can afford, especially if working with older people, fishermen (often have little feeling in their fingers) or those new to phones.
- Put screen protectors on your phones.
- Consider investing in waterproof/dustproof covers for phones that will be used in remote sandy villages to prolong their life.
- Have spare micro-usb leads (or whatever leads the phone charges with), these often break or are lost.

## SIM cards

- Choose a network that has good coverage.
- It may be best to have everyone on the same network if possible to make calls to them/you cheaper and topping up easier.
- Tell the data collectors not to take the SIM out but that they can use our SIM card for personal calls. In some case phones have been broken by incorrectly removing the SIM, or SIM cards getting stuck.
- Recharge credit at least once every three months to avoid the SIM cards being blocked. Ideally once a month (will vary by country).

## Choosing Solar chargers

- Good solar chargers are important to keep phones well charged.
- Look at the capacity that the charger can hold once it is charged. The battery of a basic cheap smartphone is about 1400mAH, newer models will be larger. Ideally you need a charger than can hold more than this so that a full charge can fully-charge the battery.
- Look at the output – ideally it should be no less than 0.6v as otherwise it will charge too slowly.
- To date we have found the best solar chargers to be the [Waka Waka](#) lights or an [Anker](#) charger with a [power pack](#) but unfortunately these are not always available in many countries so they need to be taken out from the UK or US.
- The other model that has worked is the [D-Light solar chargers](#) previously available in Madagascar and also available from sites like Amazon.
- Providers within Madagascar: [HERi](#)
- Please [send recommendations](#) for providers in other countries

## Other tips:

- Provide a folder or robust zip-lock bag for users to store their phone and other equipment in.
- Make sure users have the number for the main contact for your project and they know who they are and who to call if there are problems and how to request a call-back if low on credit.

## ODK phone settings:

- The prompts (not the questions) in the form will be based on the phone language. Turn the phone settings to French for the prompts to be in French. See [appendix](#) for a French to Malagasy translation guide for these prompts.
- It is recommended to remove all options except 'fill blank form' and 'edit blank form' until the user is ready to use the other functions. To do this go into 'Admin settings' within ODK (the three dots in the corner of the screen) and then select the items you want the users to see under the section 'User can access main menu items'. These can be added back in at any time but will prevent users accidentally deleting forms or getting confused by the other options
- Put an ODK shortcut on the bottom bar of the home screen.

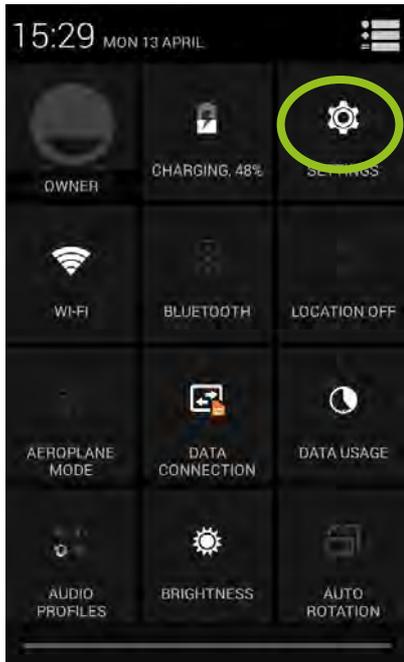
## General phone settings:

- If working with fishers they often have no feeling in the tips of their fingers so haptic feedback or vibrate options when buttons are pressed may be good options.
- Delete unnecessary shortcuts from the home screens.
- Set time and date to automatically update with network.
- Make sure the screen does not auto-rotate – this can be confusing.

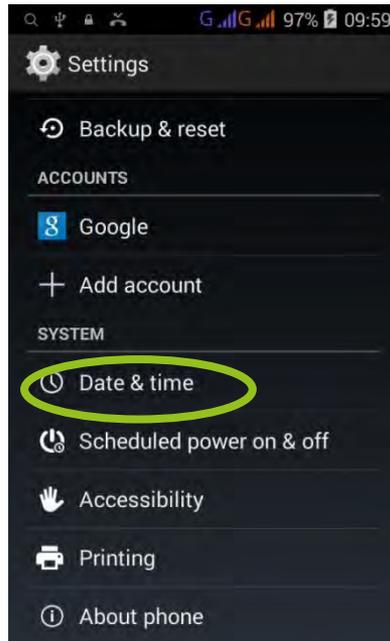
# Setting time and date

---

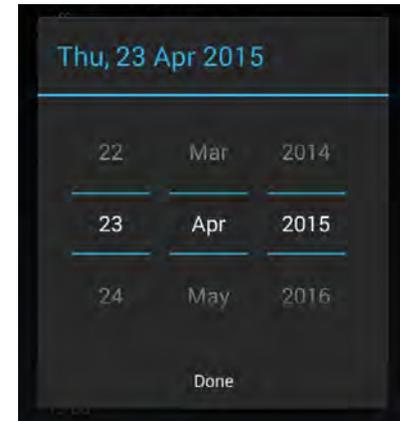
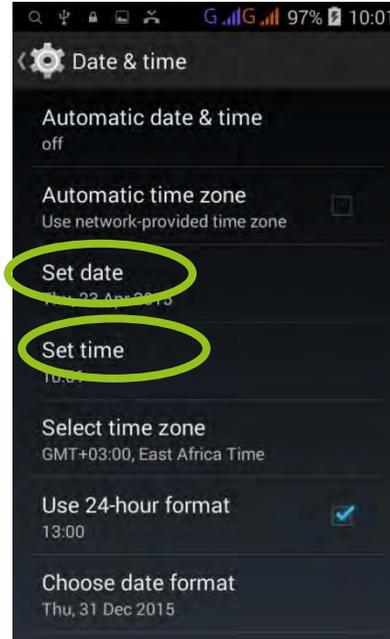
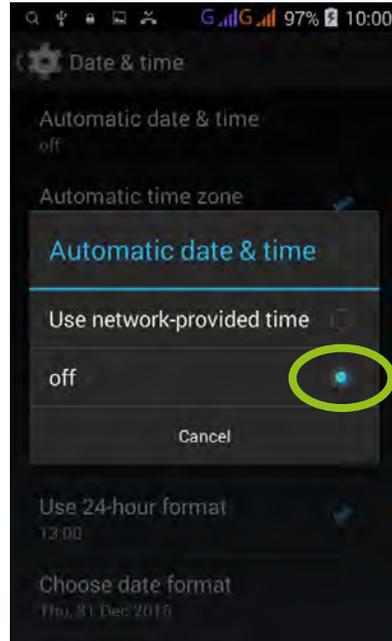
- This is important as the times that are recorded in the metadata of the form and visible on Aggregate will be based on these settings (in UTC).
- Set time to automatically update according to the phone operator.
- If the time is wrong it will need to be changed manually first. See next pages



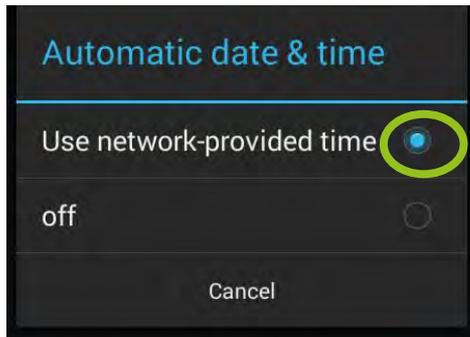
Check date and time are set to use automatic time and date. This will vary according to individual phones.



If time and date are set to automatic but are wrong you will need to change them, and then change back to automatic:



After date and time have been set manually go back and change to automatic



# Security

---

- You may like to install some security software for the phone (see separate guide).
- You may like to install an app that locks the apps installed. AppLock, available from the Play Store allows you to lock certain aspects of the phone. This is good if you want to restrict the capabilities of the phone but it also allows you prevent apps being accidentally deleted without entering a correct password.
- These apps require passwords and backup emails to be entered.
- Keep a track of these details in a spreadsheet and try to provide a generic email to avoid losing these details.
- Mark all equipment with your organisation name and a number or village identifier and make a note of what is distributed to which villages. Perhaps even ask for a signature to say it has been received and remains the property of your organisation.

# Chapter 8

Guide to choosing and training data collectors

# Choosing Data collectors

---

- Think carefully about who you want/need to be data collectors.
- Do they need to be respected in the village e.g. village elders? Consider that these may not be the best people to be taught to use smartphones quickly.
- Are they already involved in the project or do you need to choose new people?
- Do you have the option to test people's aptitude without causing offence in order to find those that will learn quickest?
- If you can choose new people to be data collectors, ideally choose youngish, enthusiastic, quick learning people who may already have a knowledge of technology or phones.
- If you need to choose data collectors that do not fit this criteria, consider pairing with younger people.

# Choosing a data entry methodology

---

- The methodology for data entry may change depending on the length of the form, the abilities of the data collectors you choose and how important accuracy is.
- We recommend you pick the one most convenient method for the person collecting data and the context you are working in. For example, our octopus data collectors found handling phones with wet hands difficult so we opted for option 4 below.
- Trial different entry methods and see what works best. You may also want to transition between methods as data collectors' ability improves.

Options for data entry:

**1. Straight into the phone**

- Depending on the length of the form it may be difficult/slow to record all data in the field

**2. Into a paper form and the phone at the same time (2 data collectors)**

- Backup paper record allows you to compare the two systems and see how accurate/quick the ODK form is to complete in the field.

**3. First into a paper form and then into the phone later (1 data collector)**

- May allow the data collector to collect more records as paper entry is usually quicker. However, could introduce errors at the entry stage.

**4. First into a rough draft paper form and then into the phone and also neat paper form later (2 data collectors - 1 collects data in the field while the other measures/handles fish etc, then later on one person enters into the neat paper version and one person enters into the phone)**

- Allows the two methods to be compared to see how accurate the data entered into the phone at a later stage are and also allows data to be entered more quickly in the field.

# Checklist: before the meeting

---

- ✓ Decide on incentives and payment structure.
- ✓ Finalise and print contracts.
- ✓ Ensure phones are set up with ODK, the correct form, security settings and you have sent test from it successfully.
- ✓ Ensure phones are charged.
- ✓ Log the telephone number, make and model and user in a spreadsheet for your project
- ✓ Phone credit for everyone to practise loading credit, making calls, sending data etc.
- ✓ Reference materials and teaching aids – enough for everyone.
- ✓ Pens and paper if they need to write anything.
- ✓ Refreshments arranged for a training session longer than about 3 hours.
- ✓ Per diem, travel and accommodation payments if appropriate (depending on your organisation guidelines).

# Training Timeline

---

## Suggested lengths:

- 3 days for initial training.
  - 1-2 days for recap training depending on size of group.
  - 3 days for recap and sending data.
- 
- After the initial training session, provide regular follow-up trainings either in the office, or in the field/clinic or on a one-to-one basis.
  - If possible, this should be a couple of days after the initial training and then a couple of weeks after. These sessions should address any issues or difficulties they are having, or things they have forgotten. This is also a good opportunity for feedback to improve the form design.
  - Address and recap any issues that are evident from the forms that have been filled (e.g. bad quality photos) or issues that are raised by the users themselves.
  - It is recommended to conduct the training in stages. Train the users how to fill in new forms and then allow them a couple of weeks to practise this in a real data collection scenarios.
  - Review the data collected.
  - If the quality of data are good show them how to send data.
  - **Ask them for feedback at every opportunity and note elements that they find difficult. Modify forms based on this, as appropriate.**

# Types of training

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## **One-to-one**

- If you can do intensive one-to-one training, with follow-up training a few days after the initial training, then this has been found to be most effective. Further follow-up training and recaps should also be provided regularly and when necessary.

## **Group training/workshops**

- Workshops which combine group scenarios/activities, pair work and some one-to-one training seem to work best in a group scenario.
- The next slides show some major topics that should be covered.

# Introduction topics to cover

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- Start at the beginning: tailor the training according to the level of the users. It may be necessary to start with an introduction to phone basics.

- 

**Be enthusiastic. If you are not excited about your project the data collectors never will be.**

- Give them a brief introduction to the project: who are you and why are you/they doing this?
- What data are you collecting and why?
- What possible benefits may there be for them? E.g. feeding into local management committee, speeding up data entry for them in the long term.
- Who is looking at these data and why are they important?
- Make them appreciate they are part of something bigger than just a form on a mobile phone. Use examples of how data collection may have helped in other communities but don't over promise.
- Outline briefly the responsibilities and expectations of the role.
- Outline any incentives. If there is no payment involved you may wish to offer monthly credit packages to use for personal calls as a small incentive.
- Check they are happy with this and willing to take part.
- Before they take the phone make sure they sign a basic contract of understanding stating that the phone remains the property of your organisation and the terms of use of the device and what happens if it is lost or stolen.
- Tell them to keep the phone in a dry, non-sandy place.

# Basic phone training

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- Start simple. Many of the communities we have worked with have never used a smartphone before.
- Things we take for granted as trainers may be unknown or difficult for communities initially, so spend some time practising the basics with them.
- This should include:
  - How to switch the phone on and how to unlock it
  - How to move/swipe between screens
  - How to make and receive phone calls
  - How to store numbers
  - How to request a call back if low on credit (or need credit to send data)
  - How to load credit
  - How to check for phone signal
  - How to turn mobile data on and off
  - How to charge the phone and how to tell if it is changing

# Filling a form

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## Filling a form

1. Explain in basic terms what ODK is and how it works – data are filled in and then sent to a place online where it can be viewed.
2. Show them what the ODK icon looks like and where to find it if not on the home screen (put it on their home screen).
3. How to open ODK.
4. How to find the form they need.
5. Ask the data collector(s) to read the questions aloud as you go through the form to check understanding.
6. Check they have interpreted each question correctly and understand what it is asking for.
7. At the same time explain what to do for each different question (e.g. select from a list, enter a number, check an option).
8. Go through the form a few times together as a group helping them when they get stuck.
9. Show them how to save and finalise a form.

**STOP:** Remember to be positive, encouraging and patient!

# Filling a form continued

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10. Let them go through the form a couple of times by themselves. Only helping if they are really stuck – give them a chance to work it out for themselves.
11. Set some scenarios or examples for them to work through, perhaps as a group or in pairs.
12. Training should ideally include some real data or examples of what they will be monitoring. E.g. community mangrove data collectors should be trained both in the office and then also in the field or health practitioners should have chance to try it in a real or staged clinic.

# Editing and deleting forms

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## Editing and Saving forms

- Show them how to edit a form and **how to find a form again if they accidentally exit it.**
- Show them how to save a form halfway through filling it. This is especially useful if the battery is getting low or they have a large data set to enter e.g. a fisher arrives with 20 sharks.

## Deleting forms

- You may or may not want to teach them how to delete forms at this stage.
- It is recommended to remove this option from the menu accessible to data collectors until they are really confident otherwise they may accidentally delete the template form. This can be done in 'Admin Settings' see the section in [chapter 3](#) for more details.
- Instead, delete the forms yourself when you review the data on the phone.

# Advanced Training

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- When the data collectors are comfortable with recording data and the data are good quality you may like to provide further training.

## **Sending forms:**

- Teach them how to check and send their own data.
- Forms should be sent one at a time as mobile internet connections may be too slow to send multiple forms.
- Highlight that forms will disappear from the 'Edit data' tab once they have been sent.
- The form status with the date and time will change to 'Sent' rather than 'Saved', 'Finalised' or 'Failed' once it has been sent successfully.
- Forms will also still appear in the 'Delete forms' tab but their status will be updated to 'Sent' (rather than 'Saved', 'Finalised' or 'Failed') once it has been successfully sent.

## **Deleting forms:**

- Once they are really confident with ODK you may like to teach data collectors how to delete old template forms and sent data.

## **Downloading new forms:**

- Again, once they are really confident they may be taught how to download new forms.

# How to avoid common mistakes and problems

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- Don't assume anything is obvious or easy – check understanding.
- Try to train people to enter data straight into the phone. If they don't already use paper data collection methods, don't introduce them, unless the forms are long or difficult to complete.
- Accept that the quality of data may not be good at the start but if collectors are obliged to use the phones it should lead to better quality data recorded in the phones in the long term.
- Teach them how to find forms if they accidentally exit them whilst completing, this will avoid half-filled forms with the same data.
- Remove menu options that aren't needed to avoid forms and data being accidentally deleted.
- Run training in stages with plenty of follow-up sessions.
- Do not try to teach too much at once!
- Provide laminated reference materials addressing common question types, problems and mistakes. Talk them through this as part of the training.
- Show them how to save a form halfway through completing one. If the battery dies and the phone switches off mid form filling, the data will be lost and will need to be re-entered. Tell them this!
- Tell them to contact you if there is a problem with the phone or charger.
- Teach how them how to request a call-back.
- Try and train someone who goes to these communities on other business in basic ODK so they can assist with any problems if they are passing, e.g. a boat captain or technician.
- **Expect everything to take double the time you budget!**

# Chapter 9

## Frequently Asked Questions

ODK Collect

# Using ODK Collect

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## **Q: What's the difference between saving a form and finalising a form?**

Saving a form saves the changes without marking it as finalised (which it needs to be to be sent). We recommend setting the phone to automatically mark all saved forms as finalised – those that are completed to the end will be marked as finalised if this is set-up in ODK settings (see admin settings in [chapter 3](#))

## **Q: How do I install or reinstall ODK Collect if the internet is too slow to access Google Play?**

It is possible to install ODK offline if you have the correct files see [chapter 10](#).

## **Q: How do I put new forms on the phone if the internet is too slow to download them?**

Connect the phone to a computer. It will need to be connected to allow file transfer, not just charging. Some phones will ask you whether you want to do this when you connect them. Find the phone in 'Computer', then in the internal storage or phone storage folder on the phone find the ODK folder, and inside that, the 'forms' folder. Copy and paste the new form you want on the phone into the forms folder:

Computer\<(phonename)\Phone storage\odk\forms

See [chapter 10](#) for further details

### **Q: What language will the form and ODK be in?**

Some of the instructions in ODK will be based on the phone's language settings, such as the home screen and some constraint messages. The form itself will be in whatever language(s) you write it in. There is the option to have multiple languages, but these need to be written into the excel form during design (see [chapter 4](#) for further details). If you have programmed in multiple languages (when creating the form in excel) the language can then be changed when you view the form in ODK on the phone. This can be done by selecting the menu button (three dot icon) (see [chapter 3](#) for further details) and selecting 'change language'. If you are adding multiple languages to your form you can select which language should be the default language in the design process by adding the default language to the settings page of the excel form when you are creating it.

### **Q: Does it use less data if forms are sent in bulk from the phone?**

No but if forms are sent in bulk (in the field - depending where you are based) it can be very slow, especially if there are photos and this may cause it to fail. We recommend to send one at a time unless you have really good wifi.

### **Q: Do all of the community monitors need a data package?**

If they are sending data they will need an internet data package (how this is set-up will depend on your country), unless they can use wifi or a wifi hotspot, such as one created by another phone.

### **Q: Is it possible to use ODK with any phone network?**

You can send data with any network as long as you have data connectivity and credit/data available. You can still use ODK Collect offline without phone signal (eg. completing and saving forms).

## **Q: What should I do if ODK Collect is accidentally deleted in the field from the phone?**

Visit the community user as soon as possible to re-install ODK collect. Take the offline installer and instructions with you if there is no internet (see appendix), otherwise reinstall through the Play Store. You can avoid it being deleted again by installing an app like Applock and adding restrictions to prevent the user deleting or installing new apps.

## **Q: What happens if ODK Collect is accidentally deleted, will I lose all the data on the phone?**

The data usually stay on the phone and are retrievable when ODK is reinstalled, or when the phone is connected to a computer as the storage folder remains on the phone. If this storage folder is somehow deleted the data will be lost.

## **Q: Why can't the phone connect to the appspot?**

Things to check:

- That you have entered the EXACT details for the appspot address and the username and password. This will be the same for every phone e.g. if the data collector username/login is username1 this will be the same username for all users (not username2, 3 etc).
- Contact your ODK site manager for the appspot URL, password and username if you are unsure or [victoria@blueventures.org](mailto:victoria@blueventures.org) for assistance.
- If you have site admin access to the appspot, change the password on the site admin page of aggregate (there is no need to select a different password, you can 'change' it to the same as it was before to avoid updating all phones).

# ODK Collect Settings

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## **Q: What does the information in the General Settings menu mean?**

This information directs forms to the correct online storage site (aggregate) when they are sent from the phone, and allows new forms to be downloaded from this site. This information is specific to the site you are sending it to so it is very important to put it in correctly. If you do not add your own aggregate details to the phone you will automatically connect to the automatic ODK site which is public and you will not be able to access your own forms here.

## **Q: Why should I hide 'delete' and 'get new form' options?**

Is it recommended to hide these options for new or inexperienced users to avoid mistakes, and forms accidentally being deleted.

## **Q: How do I hide options on the main ODK collect menu such as 'delete' and 'get new form'?**

This can be done in the admin settings where you can decide which options can be accessed via the main home screen of ODK. See [chapter 3](#) for more detailed instructions

# Designing Forms

# Designing ODK forms

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## **Q: How do I create an ODK form?**

The form is created in Excel and then converted into the correct format to use on the phone and uploaded onto ODK aggregate. See [chapter 4](#) for more details.

## **Q: How many questions can a form have?**

The form can have as many questions as you want to add. Simple short forms are recommended to avoid user fatigue and long export files.

## **Q: How many languages can the form have?**

The form can have as many languages as you want to add but try to keep things simple. Also think about what language you want to appear online when the data are sent through. Too many languages with text answers will be time-consuming to translate.

## **Q: What language will be displayed when data are online or exported?**

For pre-defined lists the answers that will be displayed are defined by the 'name' column on the choices tab in the excel file when creating the form; so the final language sent will be whatever language you have used there. For textbox answers, text will appear as it has been entered. Avoid using comments boxes or text boxes for long answers if you have a form with multiple languages, unless you are willing to translate answers.

# Phone setup

# Phone setup

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**Q: How do I stop my users accidentally causing errors by pressing the wrong buttons and maybe accidentally deleting the app?**

You may like to install another app which allows control and access rights over the functions of the phone including deleting apps. Installing an app such as AppLock can be done via Google Play store. This will mean a password is required for apps to be deleted and can help prevent setting being changed or apps accidentally being deleted (see [chapter 7](#) for further details).

Training

# Training

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**Q: What is the best way to conduct training with community data collectors?**

This will depend on the context and country you are working in but a mixture of training techniques is recommended. See [chapter 8](#) for some ideas and examples of how to conduct training.

**Q: Is there something in particular I should spend a lot of time on when training users?**

Make sure data collectors are taught how to edit forms and save forms. We found that some data collectors kept accidentally closing the form halfway through completion and didn't know how to find it again. Consequently, we had lots of half-completed forms with the same information. Spend time on this to avoid problems.

**Q: What data package should we put on the phones for the training?**

Choose whatever package you like. With Telma the best ones are probably 50mb for 1 day or 100mb for 7 days.

**Q: When should we teach data collectors to send their own data?**

You may need to go back to basics on using a phone, swiping the screen, loading credit, making phone calls etc. first. It is best to give them a few weeks to practise using the phone and completing forms without worrying about sending data. After a few weeks to a month check how they get on and check the data. When you are confident the forms are being completed accurately then have another training session on how to send data.

### **Q: What training aids should I use?**

It may be a good idea to use screen shots of the various steps you are describing if you are conducting training with a large group or install a programme like [Mobizen](#) which will allow you to mirror your phone screen on a computer and projector.

### **Q: How do I do screen shots for training documents?**

This will depend on the make of the phone:

For **the Karbon A5s** you need to press and hold the volume down button (left-hand side of the phone) and the power button on the right hand side of the phone at the same time. This will be saved in the pictures>screenshots folder on the phone when you attach it to a computer.

For the **Samsung Galaxy Pocket- GT S5301** (Shark phones) press and hold the power button (right hand side of the phone) and the home button (big button at the bottom).

### **Q: Are there any other materials that would help with training?**

Providing a laminated take-away reference guide on the steps to completing a form and the different types of questions may be helpful (see appendix). Some of the data collectors we have worked with struggled with the 24 hour clock so an aid to help with this may be good if you have time questions in your form or choose a different question type to avoid confusion.

# Managing Data

# Data

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## **Q: What should I do if the villages I work in are unable to send forms?**

You will need to make a data retrieval plan. Either the users will need to go to a nearby village that has a strong enough signal to send forms, or someone from your team will have to go and retrieve the data from the phones by copying it onto a computer.

## **Q: Where do the forms go if I don't send them from the device?**

The forms stay on the device until they are sent, or deleted. They can be copied to a PC to be sent with briefcase.

## **Q: How do I retrieve data from the phones?**

You can connect the phone to the computer and copy the **ENTIRE ODK folder** from the phone onto your computer. This can then be sent later from the computer using internet via Briefcase. See [chapter 5](#) about sending data.

## Q: Can you still send data if there are ongoing changes to the form?

You shouldn't be sending data until the form is finalised (or there is a finalised trial version of the form) and it won't work unless the form is online (uploaded to aggregate). Every time there are significant changes it needs to be converted from a spreadsheet into the ODK form (XML) and re-uploaded online. Data will only upload from the phone to the matching form name online. It is possible to make small changes (such as adding names to a list) and upload this as a new version number without causing problems. Any names that are added after the first version has been uploaded to aggregate will not appear on the phone until the new version of the form is added to the phone. (See [chapter 4](#) for more details). Once a template form is uploaded online to Aggregate you will be able to send completed forms from the phone to that form .

## Q: Why won't data send to the website (aggregate)?

Things to check:

- The internet is connected and the connection is fast enough.
- The phone has the correct settings and you are sending to the correct aggregate site (see [chapter 3](#))
- The form is still active on aggregate
- You have phone credit or an active data package
- The appspot is not locked for the day (if the daily data allowance has been exceeded)

### **Q: Why won't the data send through ODK briefcase?**

- Check the URL, username and password are correct
- Check the internet connection
- Check you are logging in with a username and password listed as type 'ODK' on the site admin tab with form manager access rights.
- If you do not have form manager rights contact your appspot administrator for details of how to login.
- Check with the site administrator if the data allowance has been exceeded for the day

### **Q: How can I keep my data secure?**

- Remove the Anonymous access facility for ODK Aggregate. To do this you will need to login to aggregate as the superuser or as a site admin. Once logged in go to the admin tab, under the list of people that have access remove all the access options for the anonymous user.
- Only the person managing the site should have the superuser password. Other users should be set-up with different levels of access, as appropriate.

# Chapter 10

## Troubleshooting

# Phone Problems

# Phone problems

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## **My phone won't turn on**

- Check it is fully charged and the battery is currently in place.
- Plug it in to charge, leave it for 30 minutes and then try to turn it on. NB the Karbonn A5s phones will not show they are charging immediately if the battery is completely flat.
- Is it water damaged?

## **My phone got wet what should I do/it is not working properly:**

- Take it apart and put it in a small bag of rice or even better silica gel sacks. Leave it here for a couple of days (at least 48 hours, longer if it got very wet) without trying to switch it on. The rice/silica should absorb any excess moisture and may help avoid any further problems/allow you switch it back on.

# Phone problems

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## **My phone won't charge properly**

- Does the charging lead/solar panel/plug work on other items?
- Is the solar panel or battery pack fully charged?
- Is the battery so low that the charging light won't show up? This is common with the Karbonn A5s model – leave it for about half an hour and then press the on button. If it is charging an empty battery with a % charge sign should show up on the screen even if the battery is still too low to switch it on.

## **My phone won't connect to the computer**

- You need a USB 2.0 or faster lead to connect your phone to the computer and share data. Some leads that will charge the phone do not allow data to be shared (e.g the raster chargers that you can buy in Madagascar). Check that you have the correct cable for data sharing. If the cable is correct the phone will show-up in 'My computer' when you plug it in. Follow any prompts on the phone to connect it via USB.
- Try another USB port.
- Try another device with the same charging equipment/computer.
- Try another USB lead and try wiggling the USB lead, sometimes the port on the phone is loose.
- The Karbonn A5s phones do not fit all USB leads due to the depth of the port.

# Internet Problems

# Internet problems - phone

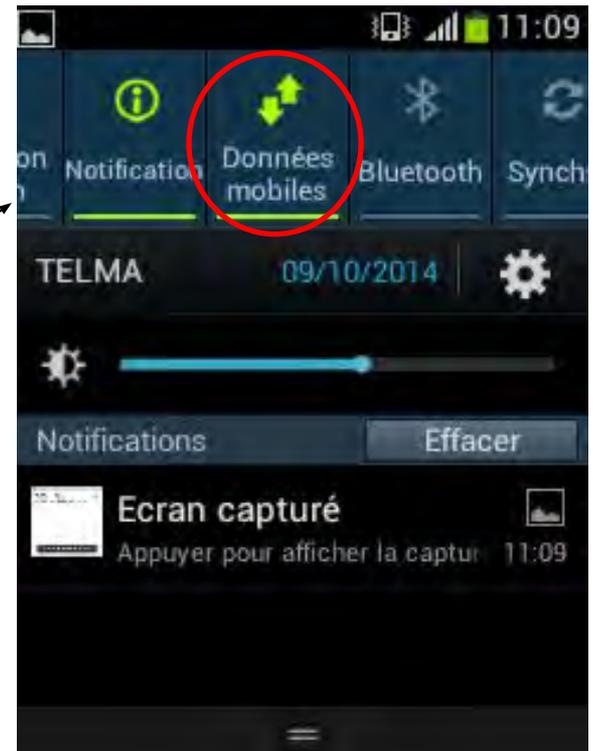
---

- There is no internet connection (see chapter 5 for further details).
- Check that you are connected to the internet.
- Check your internet or wifi is switched on.
- Check you have internet signal or are in range of the wifi.
- Check you have credit.
- Check whether your data package has expired.
- Try turning the internet off and on again.
- Try a different device with the same connection/network to determine whether it is a problem with the phone or the network.
- Check the APN is not missing (see following pages).

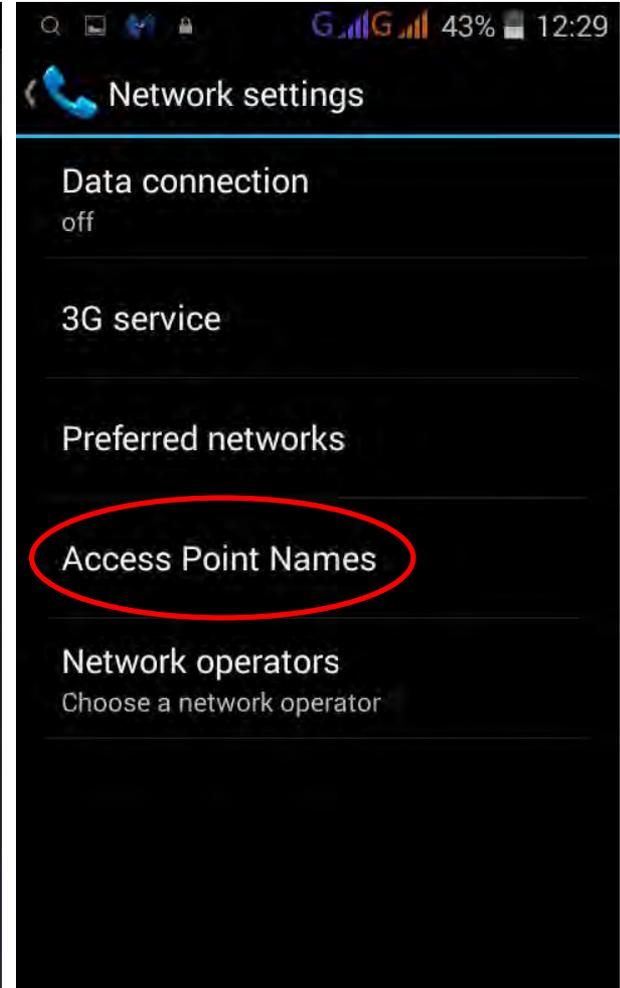
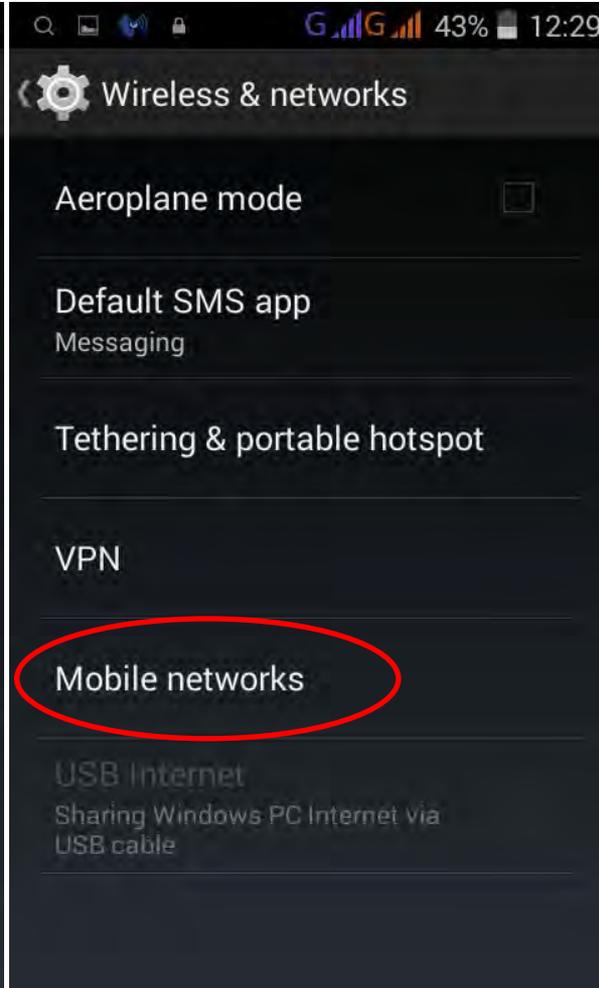
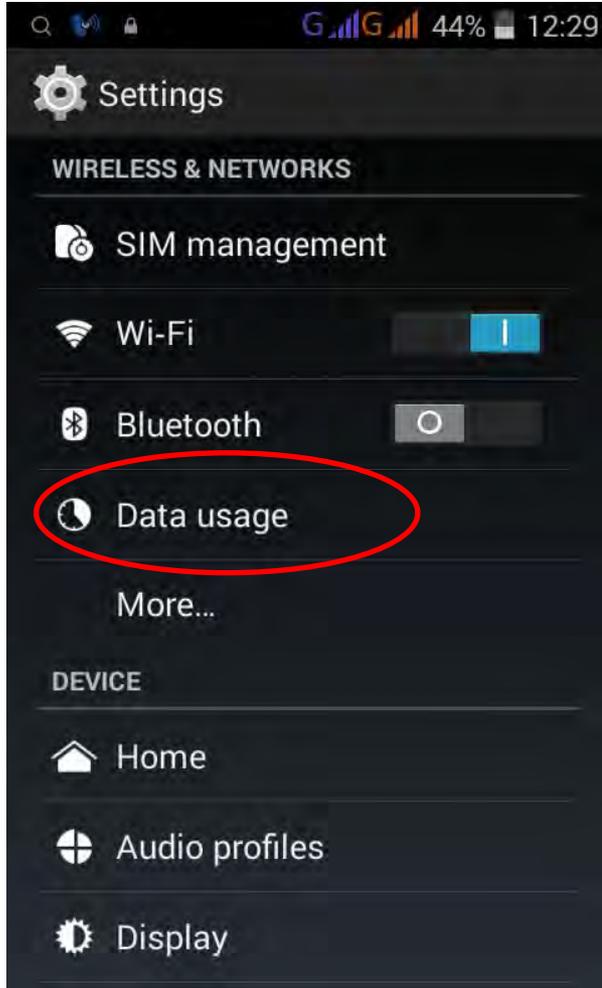
# No internet - checking for internet connection



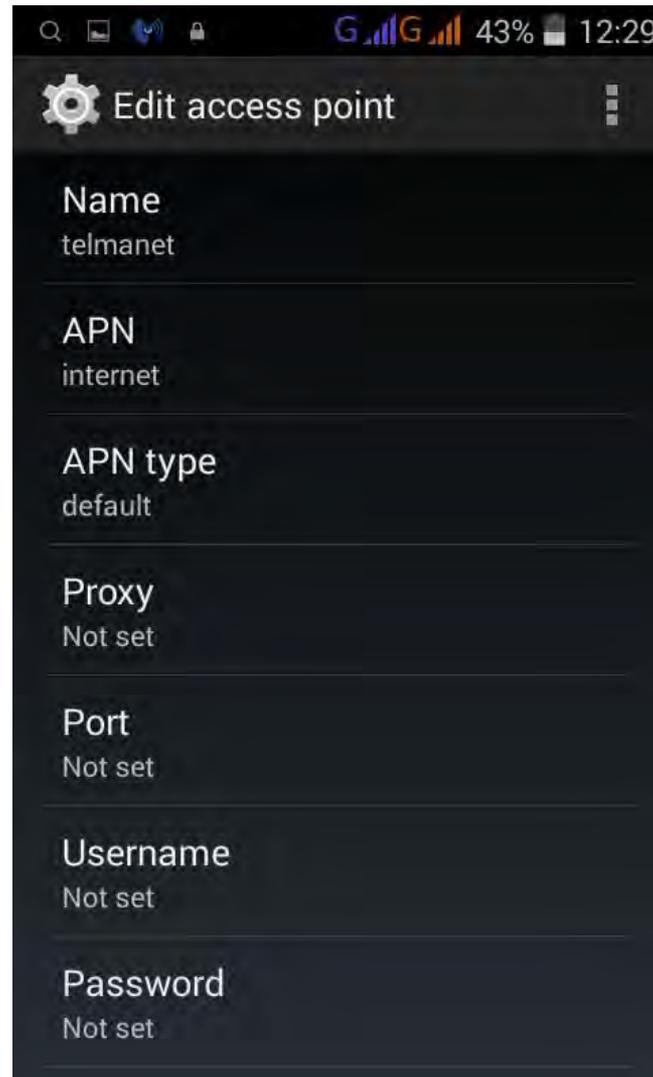
Make sure internet is switched on



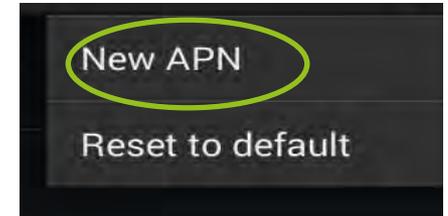
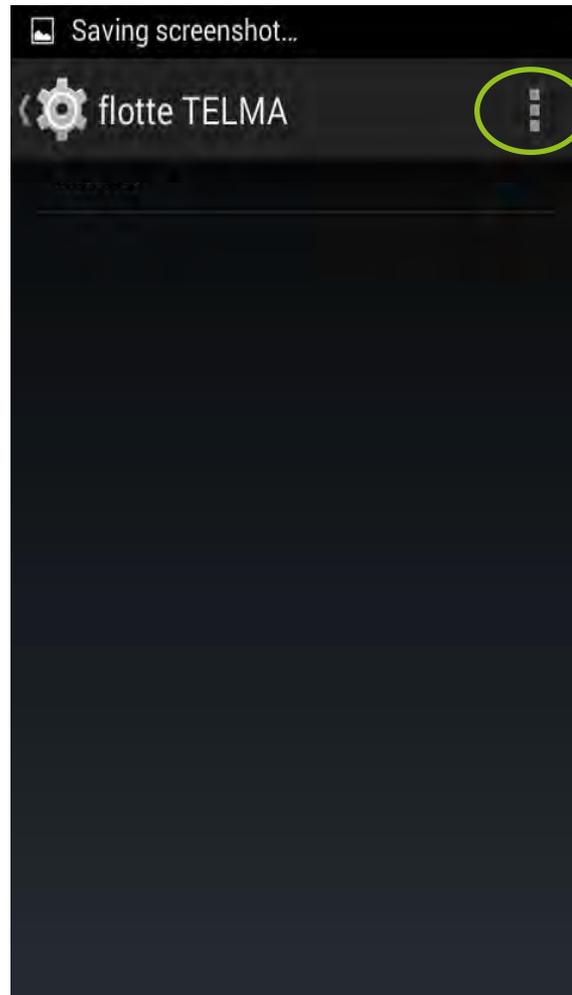
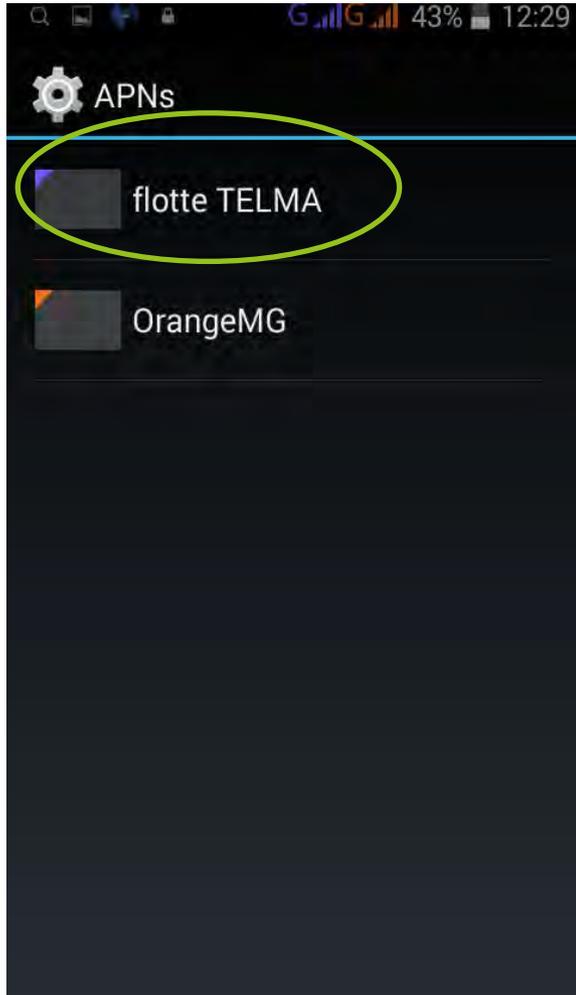
# Checking APN



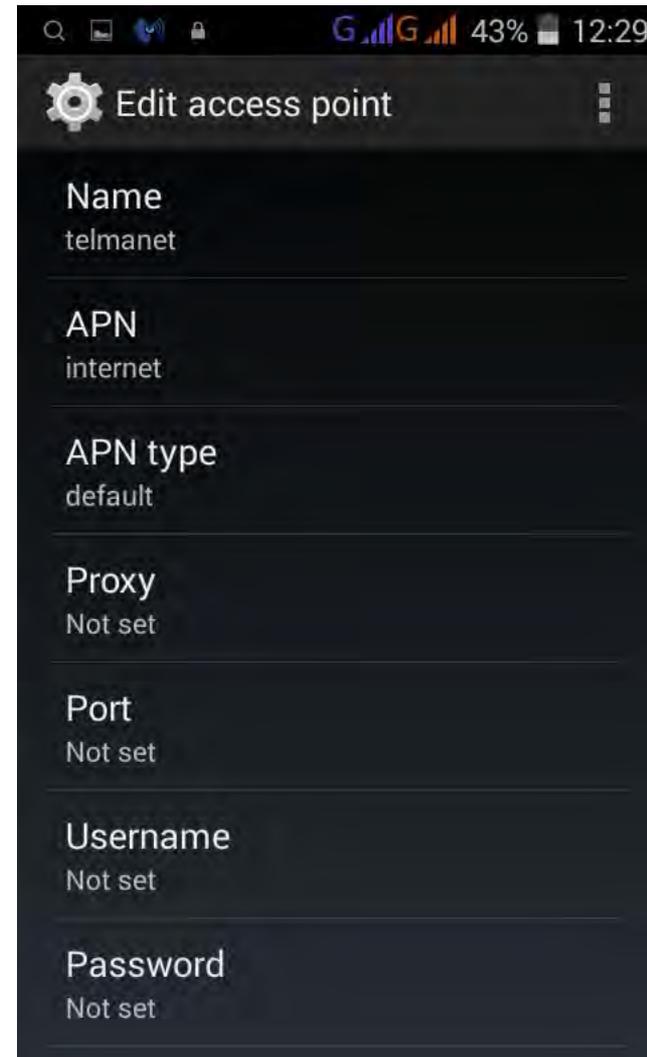
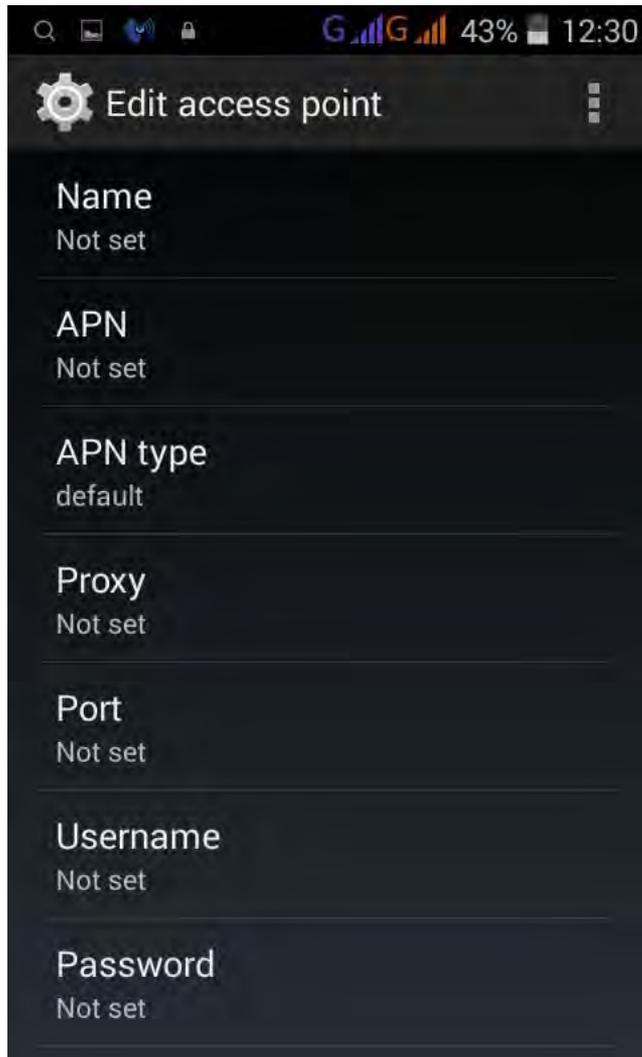
# How it should look with correct APN settings (Telma)



# Adding a new APN



# Change the name and APN name



# Creating Forms

# My excel file will not convert into XML

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- The online converter will tell you roughly what the problems are and the line number of the problem.
- Common problems and things to check include:
  - Mismatched brackets or parenthesis
  - Missing information : type, name or label
  - Mismatch group starts and ends, or repeats
  - Questions with the same name
  - Missing choice lists e.g. select\_one animals and there is no list named 'animals' in the choices tab.
- Carefully check all the questions before submitting
- If you have a large form it may help to submit small chunks at a time for testing.

# Problems with the form

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- Names listed in the name column 'name' in the choices tab in the excel file should always be in lowercase letters. If there are capitals this can cause problems with converting the form or uploading the data e.g. answers can be removed from the form once it is finalised if there are capitals in the name column of the choices for that question.
- In one case it was not possible to open a new form on one particular tablet. Here the issue was not with the form itself but with this particular Tablet. IT was solved by deleting ODK collect, connecting the device to a computer and deleting the folder called ODK too and then reinstalling ODK.

ODK Collect

# Internet is too slow to download ODK or new forms

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## It is possible to install and add these manually offline. You will need:

- A computer
- The phone and a lead
- A file management system on the phone so you can access the file you copy across e.g. [File Comm](#) (most newer phones have this already).
- A copy of the offline installer for ODK, or the xml file you are adding

## Installing ODK offline:

- Use the offline installer file: <http://apk-dl.com/download/android/org.odk.collect.android/>
- Change the phone settings to allow installations from unknown sources. The location of this will vary but it can usually be found in the phone menu: General settings>security>Unknown sources (allow installations from unknown sources).
- Check the box to allow this.
- Remember to uncheck the box once you are finished so this is not a security risk.
- Copy the offline installer file to a place accessible directly on the phone. 'Download' or 'downloads' is usually best. Use the phone's file manager system to navigate to the location you copied the file to.
- You can then add form files directly to the ODK folder on the phone (see next page).

# Adding a form offline

---

- Drop and drag the xml file into the ODK>forms folder located on the memory of the phone.
- The xml file can be a file directly from the online conversion website, or one that has been copied from another phone.
- If you have recently added ODK to the phone offline, the ODK storage file folder may not appear immediately. To force the folder to appear you may need to disconnect the phone, open ODK Collect on the phone and then select the 'Get new form' options to force this folder to be created on the phone. You do not usually need to actually download anything just make the phone think that you want to.

# Manually adding media files associated with forms

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## Adding associated media files where downloading online is not possible

- Create a new folder with the same name as the form but with '-media' at the end of the name. This is where images that are associated with the form should be stored e.g. a logo for the form.
- The folder name needs to be typed very specifically. For example if the form name is Shark\_2015 the folder name will need to be named: Shark\_2015-media
- The files inside the media file you just created should be named with the same name that is used in the excel form (typed into the image column for the relevant question) but without the file type. E.g shark.jpg is how it would be referred to in the excel form but the file in the media folder will be called simply shark.
- The file you want to appear as the logo on the first page should be labelled as follows:  
form\_logo

**NB:** Any media files and the media folder that are associated with a form downloaded onto the phone via ODK collect will be named differently to those that have been added manually, so take care when naming folders. E.g. the above example would be named Shark 2015-media if it were downloaded directly via ODK Collect but if you are adding media files and therefore a media folder manually use \_ instead of spaces (as above).

# ODK has stopped working

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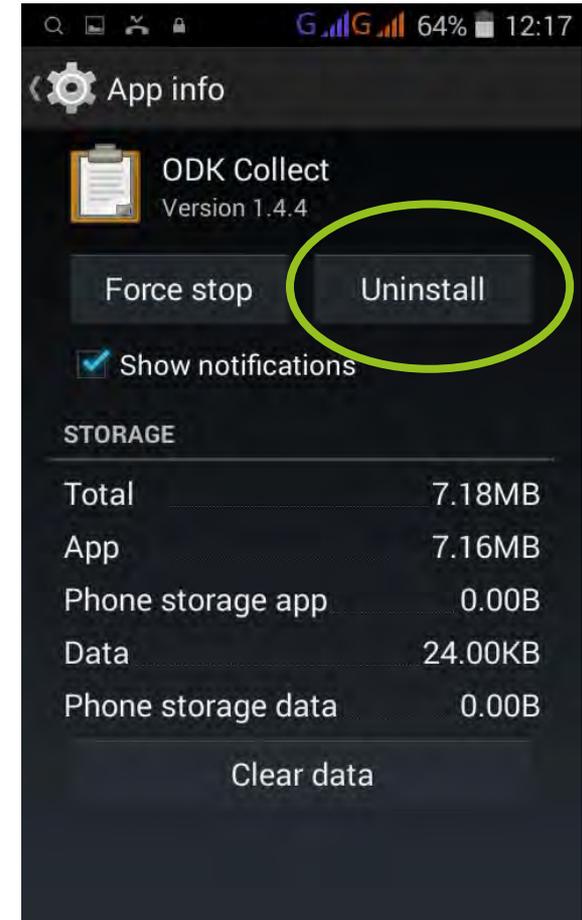
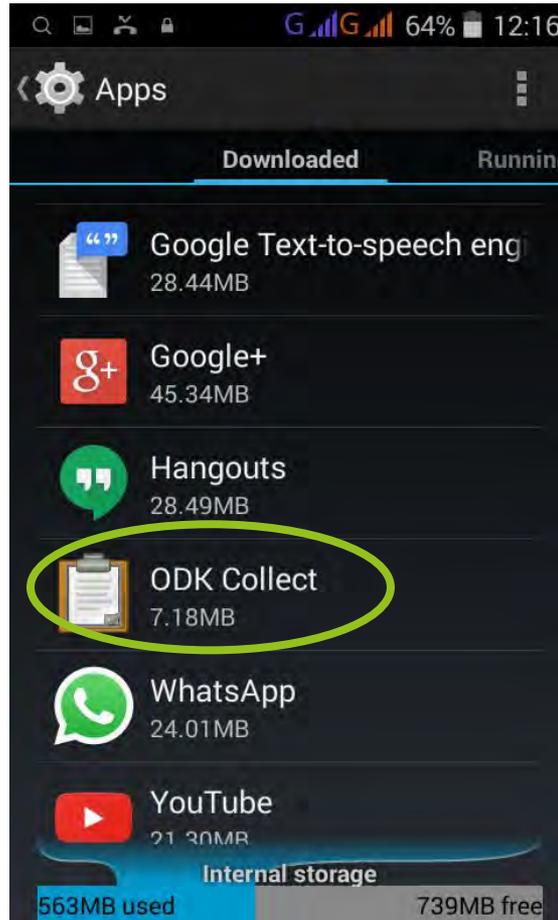
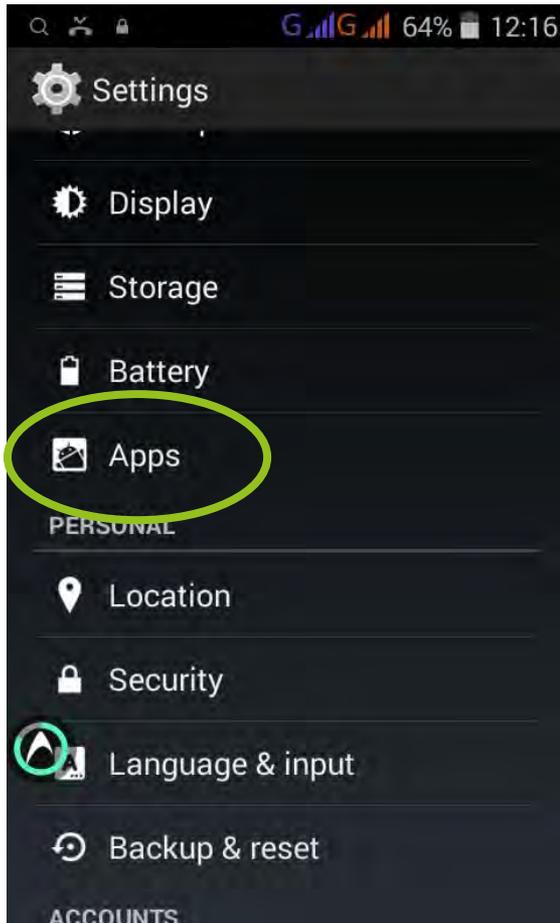
- If ODK stops working halfway through filling a form the only option is to close ODK and open it again.
- If there are continuous problems with ODK try updating it if you have an old version.
- If ODK is already up-to-date try deleting and reinstalling it (see next pages for deleting).
- To update go to the Play Store and search for ODK as if you were downloading it for the first time.
- If there is an update available it will give you the option to update where the usual Install button would be.
- If this does not fix the problem it may be a problem with the phone.
- There may be a virus – consider downloading an antivirus software from the Play Store such [AVG](#) (free) antivirus for phones. Scan the phone and fix any issues identified.
- It may be a problem with the SD card. Try removing the SD card if there is one and re-download ODK. ODK should download onto most phones without an SD card. However, if it was downloaded onto the SD card and there is a problem with the SD card it will stop working.
- Try taking out the SD card, deleting ODK and re-downloading it.
- If this does not work as the particular phone model requires an SD card to be inserted then try replacing with a new SD card. There may be a problem or a virus on the SD card that is causing the problem.

# Deleting ODK Collect (if there are continuous problems)

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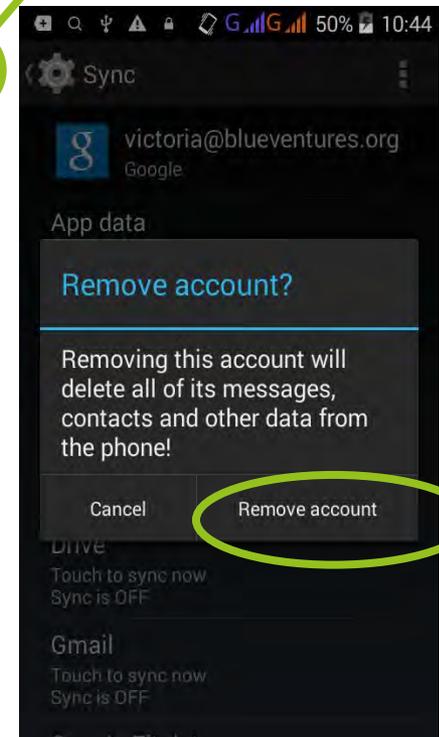
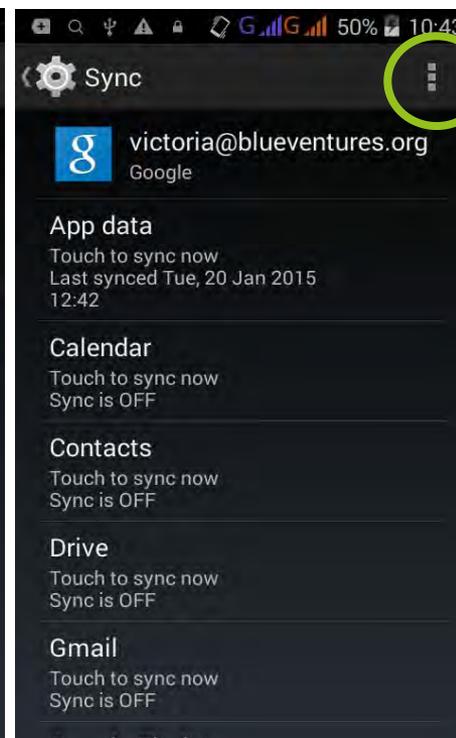
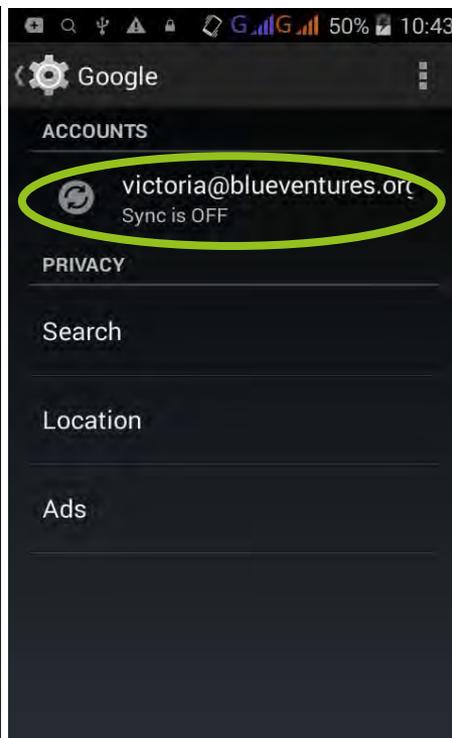
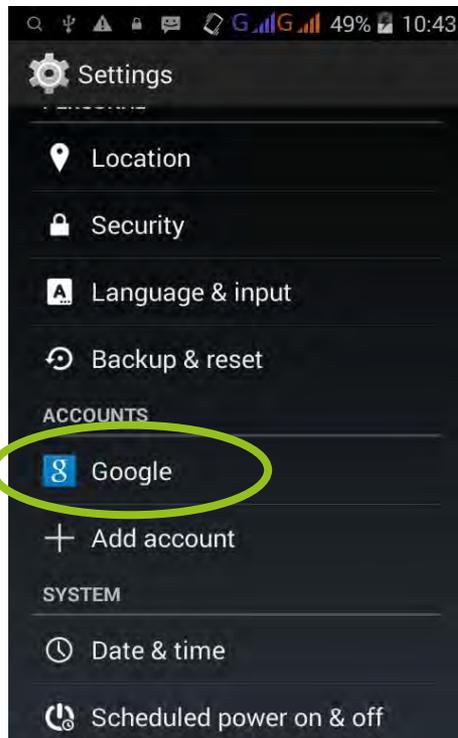
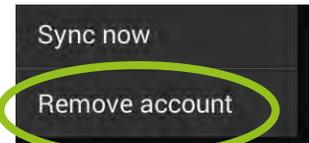
- Delete and then reinstall ODK.
- It will need to be deleted from the phone itself, not just the shortcut to the app.
- The folders will be restored with any remaining data once ODK is reinstalled as long as you delete ODK through the phone menu rather than connecting to a computer to delete it.
- To delete find the apps option in the settings menu, this will depend on phone model e.g. Apps or Manage applications
- Find ODK in the list of downloaded apps.
- Select uninstall.

# How to delete ODK Collect



# Deleting the Gmail account on the phone to add a different one

- You may need to remove the Gmail account if you want to change the email address associated with the phone e.g it is being used for a different project or it has a personal email address associated with it and you want to change it to a generic one.



# Problems with uploading data to Aggregate

# Sending data from the device

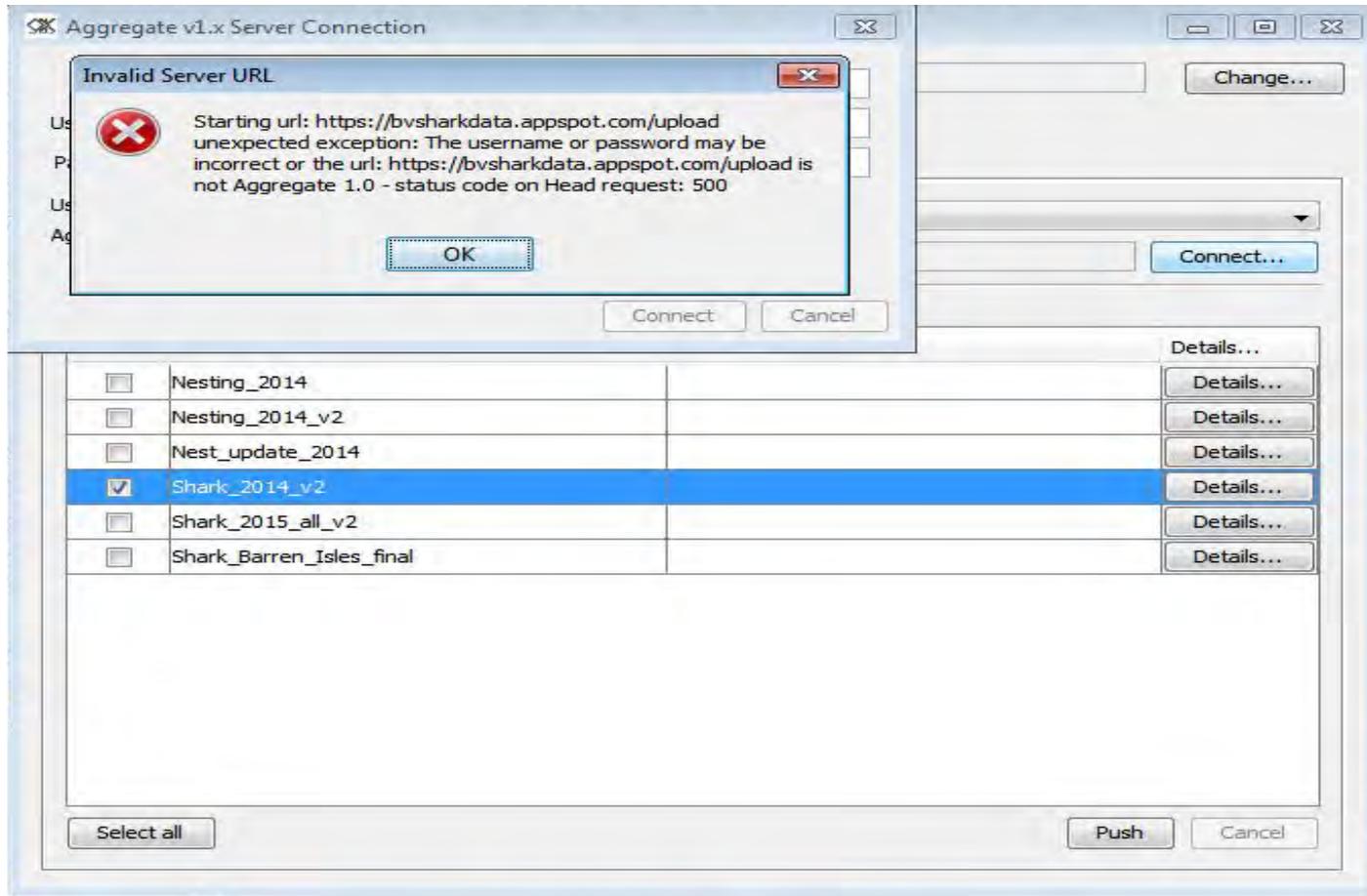
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## Why are data not sending?

- Check the phone settings. Check the correct password and username and aggregate site are entered in the 'General Settings' panel (see [chapter 3](#) for more details).
- Check the internet connection.
- Check the form is linked to a live online version. Did you download this form through ODK or was it manually added? If it was manually added there is a chance that it may be a different version to the one online in which you will need to manually copy the data to a computer and aggregate data through briefcase, then delete the form and download the new version before entering more data.
- Was there a public submission key in the excel file? If so this can cause problems with uploading data. Remove this from the excel file before converting it to XML.
- Check whether the site has exceeded the usage limits for the day (see [chapter 2](#)).

# Problems uploading via briefcase

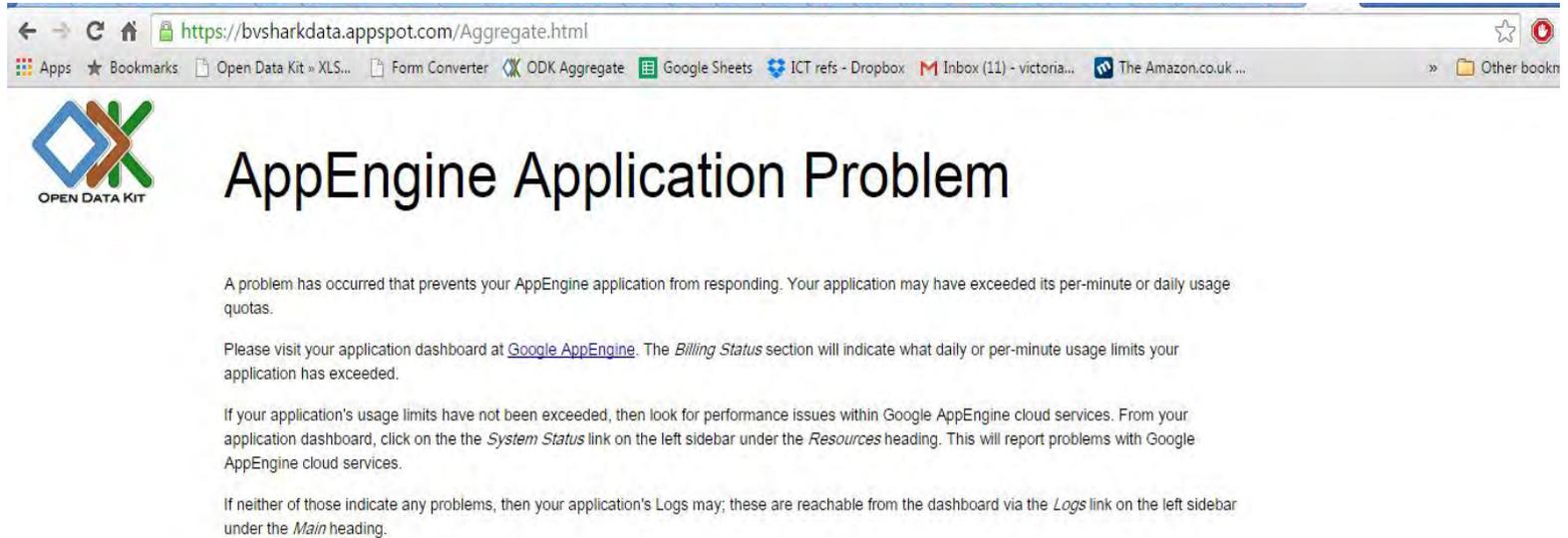
- If you are sure you have entered the correct login details, this error message may indicate the daily data limits have been exceeded.



# Exceeding your quota

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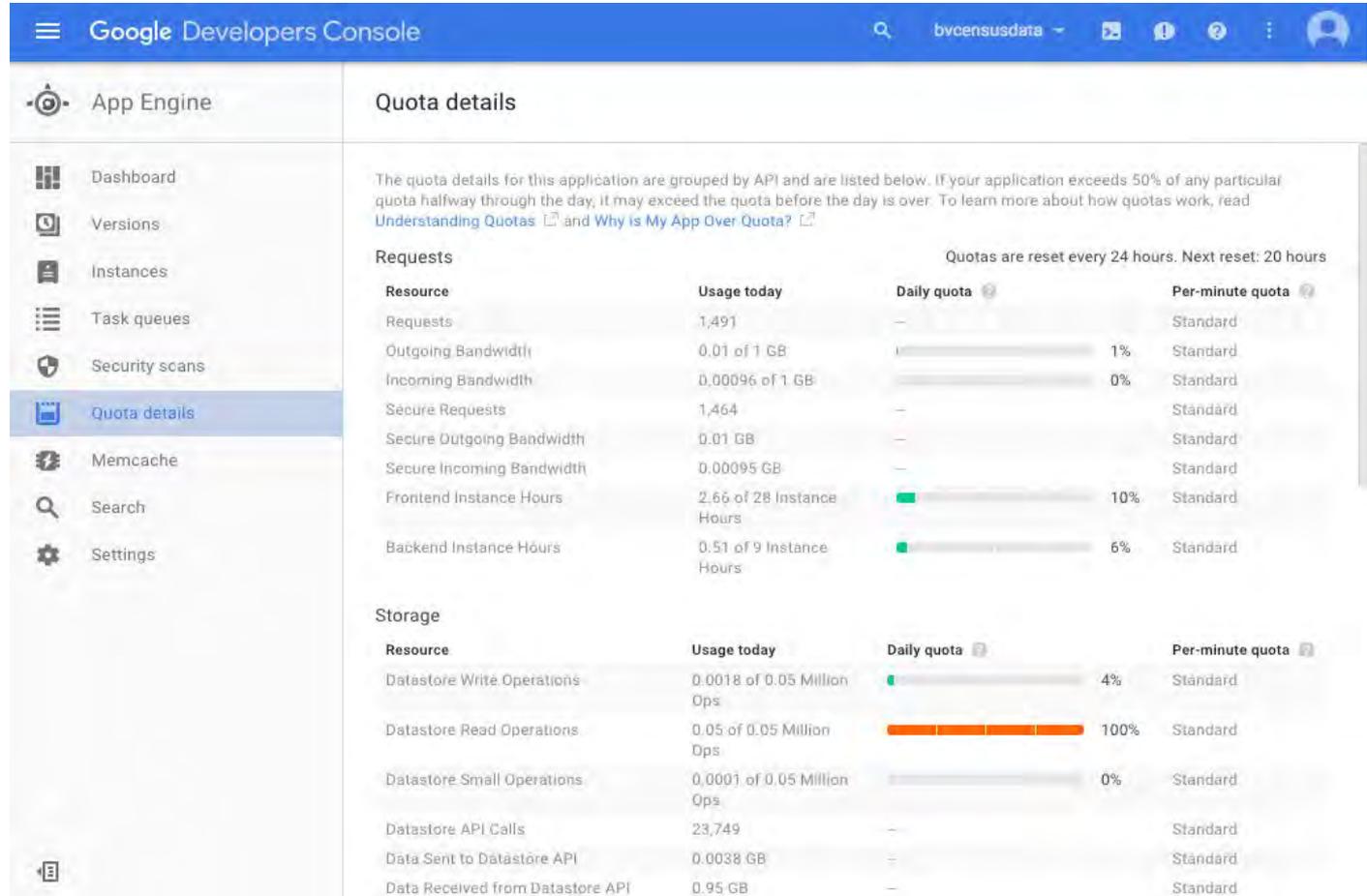
- You will get this message when you try to login to aggregate if quotas are exceeded
- You will be locked out the account until the quotas reset (8am GMT)



The screenshot shows a web browser window with the address bar displaying <https://bvsharkdata.appspot.com/Aggregate.html>. The browser's address bar and tabs are visible, including tabs for 'Apps', 'Bookmarks', 'Open Data Kit - XLS...', 'Form Converter', 'ODK Aggregate', 'Google Sheets', 'ICT refs - Dropbox', 'Inbox (11) - victoria...', and 'The Amazon.co.uk ...'. The main content area features the Open Data Kit logo on the left, which consists of a blue diamond shape and a green 'X' shape. To the right of the logo is the heading 'AppEngine Application Problem'. Below the heading, there is a message: 'A problem has occurred that prevents your AppEngine application from responding. Your application may have exceeded its per-minute or daily usage quotas.' This is followed by instructions: 'Please visit your application dashboard at [Google AppEngine](#). The *Billing Status* section will indicate what daily or per-minute usage limits your application has exceeded.' Another paragraph states: 'If your application's usage limits have not been exceeded, then look for performance issues within Google AppEngine cloud services. From your application dashboard, click on the the *System Status* link on the left sidebar under the *Resources* heading. This will report problems with Google AppEngine cloud services.' The final paragraph reads: 'If neither of those indicate any problems, then your application's Logs may; these are reachable from the dashboard via the *Logs* link on the left sidebar under the *Main* heading.'

# Exceeding daily data allowances

- Go to your console to check: <https://console.cloud.google.com>
- This red bar shows that 100% of the daily read operations have been used up. This is usually due to data being downloaded or linked to another website and updating too frequently - such as Google Fusion tables. See end of [chapter 6](#) for more details



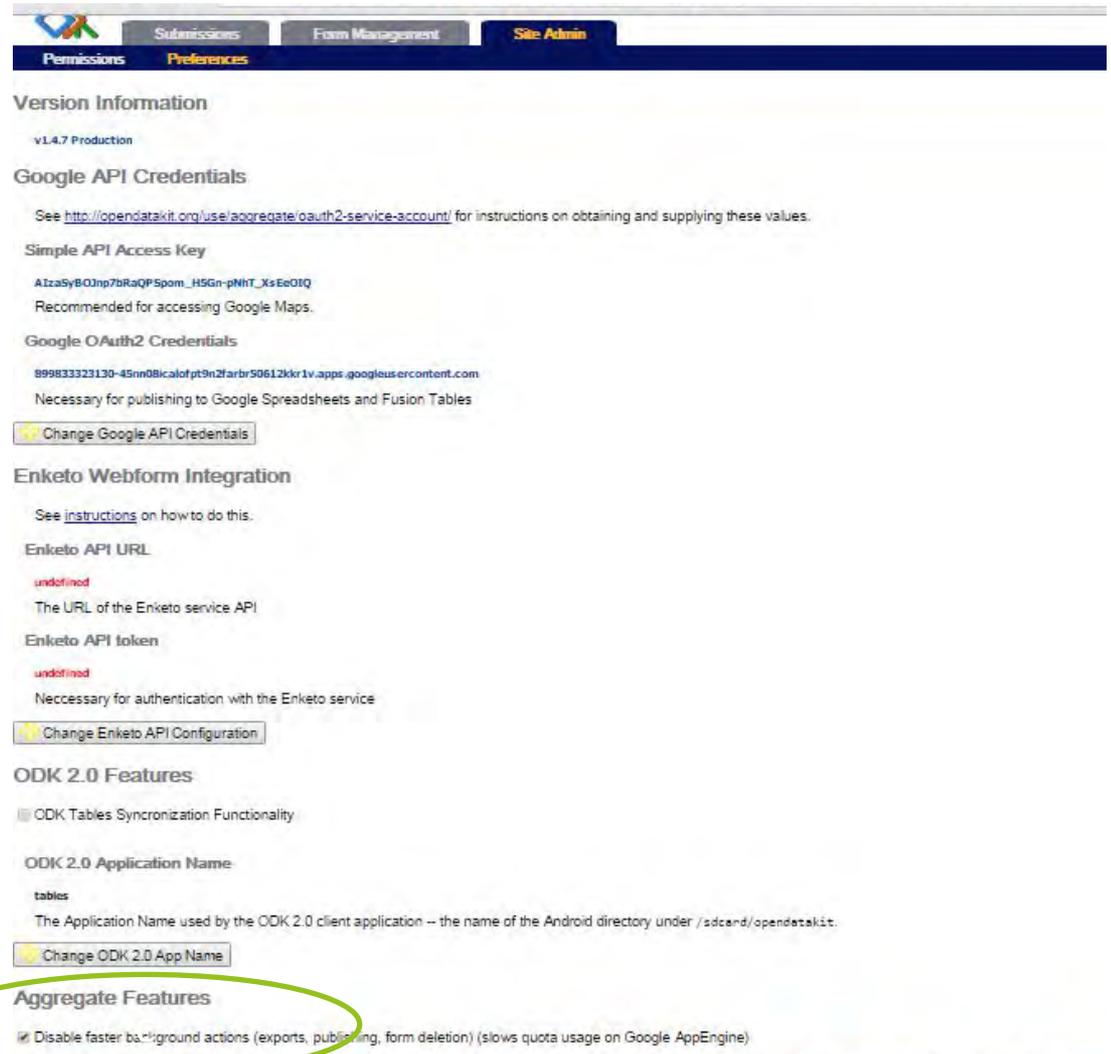
# Ways to avoid going over the daily data quota

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- Do not leave your browser open on the Aggregate submissions page.
- Only publish each instance or set of data to one place.
- Remove old versions of published data from within aggregate ([see next pages](#)).
- This will remove the link to the publisher but not the published results themselves (i.e. the Google Fusion table will not be deleted from your drive just the link). However, if you delete the fusion table from your drive and not the 'link' in Aggregate this may still use data if it continues to try and publish.
- Check the 'disable faster background actions' option - see next page

# Reduce quota

- Make sure this box is checked to slow Aggregate publishing to other sources



The screenshot shows the Admin interface for ODK Aggregate. At the top, there are navigation tabs: Submissions, Form Management, and Site Admin. Below these are tabs for Permissions and Preferences. The main content area is titled 'Version Information' and shows 'v1.4.7 Production'. The 'Google API Credentials' section includes a link to instructions, a 'Simple API Access Key' (AtzaSyBC0hp7bRaQF5pom\_H5Gn-pNtT\_XsEe0IQ), and 'Google OAuth2 Credentials' (89983323130-45nn08icalofpt9n2farbr50612kkr1v.apps.googleusercontent.com). Below this is a 'Change Google API Credentials' button. The 'Enketo Webform Integration' section has a 'Change Enketo API Configuration' button. The 'ODK 2.0 Features' section includes a 'Change ODK 2.0 App Name' button. The 'Aggregate Features' section at the bottom has a checkbox labeled 'Disable faster background actions (exports, publishing, form deletion) (slows quota usage on Google AppEngine)' which is checked and circled in green.

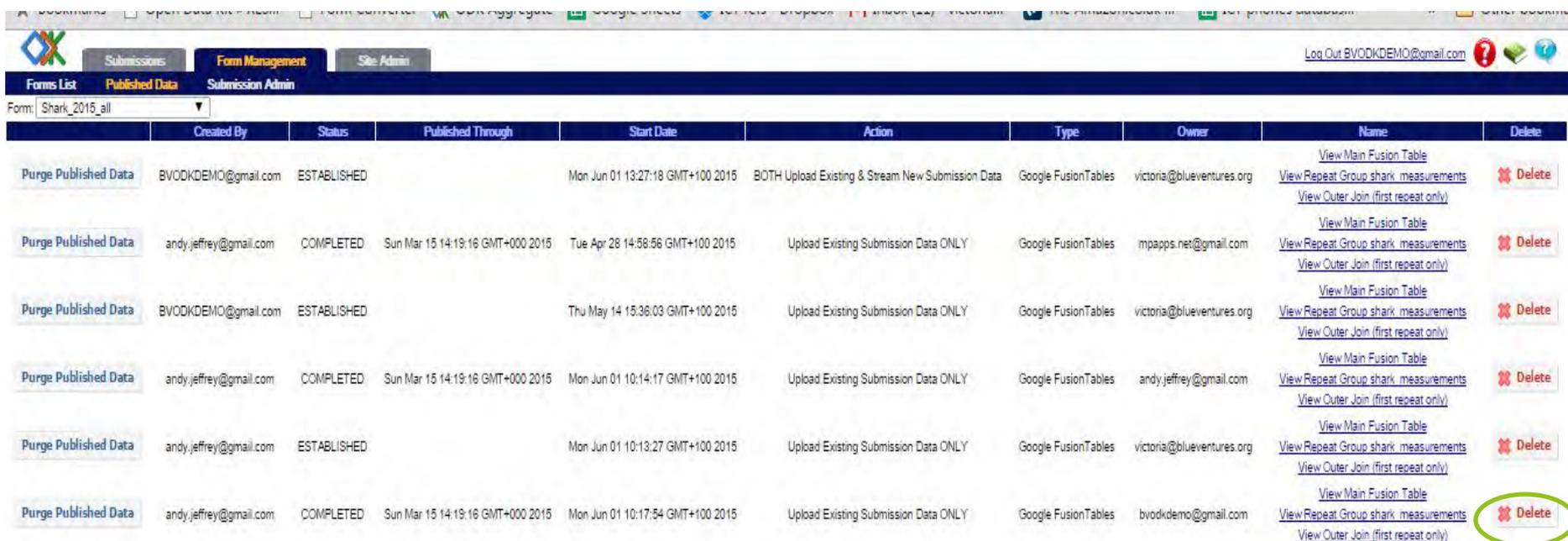
# Check where data are being published

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- Under Form Management>Published Data you can view the list of publishers (e.g Google Fusion tables)
- 'Active' publishers will continue to use data allowance even if you can't see them in the Google Drive they were published to when they were created. Remove unwanted publishing routes by clicking delete on the far right hand side of the item you want to remove (see next page)

**NB:** You need to have 'Form Manager' access rights to be able to view this. Otherwise ask your site administrator to check this.

# Deleting unwanted data publishing links



	Created By	Status	Published Through	Start Date	Action	Type	Owner	Name	Delete
Purge Published Data	BVODKDEMO@gmail.com	ESTABLISHED		Mon Jun 01 13:27:18 GMT+100 2015	BOTH Upload Existing & Stream New Submission Data	Google FusionTables	victoria@blueventures.org	<a href="#">View Main Fusion Table</a> <a href="#">View Repeat Group shark_measurements</a> <a href="#">View Outer Join (first repeat only)</a>	Delete
Purge Published Data	andy.jeffrey@gmail.com	COMPLETED	Sun Mar 15 14:19:16 GMT+000 2015	Tue Apr 28 14:58:56 GMT+100 2015	Upload Existing Submission Data ONLY	Google FusionTables	mpapps.net@gmail.com	<a href="#">View Main Fusion Table</a> <a href="#">View Repeat Group shark_measurements</a> <a href="#">View Outer Join (first repeat only)</a>	Delete
Purge Published Data	BVODKDEMO@gmail.com	ESTABLISHED		Thu May 14 15:36:03 GMT+100 2015	Upload Existing Submission Data ONLY	Google FusionTables	victoria@blueventures.org	<a href="#">View Main Fusion Table</a> <a href="#">View Repeat Group shark_measurements</a> <a href="#">View Outer Join (first repeat only)</a>	Delete
Purge Published Data	andy.jeffrey@gmail.com	COMPLETED	Sun Mar 15 14:19:16 GMT+000 2015	Mon Jun 01 10:14:17 GMT+100 2015	Upload Existing Submission Data ONLY	Google FusionTables	andy.jeffrey@gmail.com	<a href="#">View Main Fusion Table</a> <a href="#">View Repeat Group shark_measurements</a> <a href="#">View Outer Join (first repeat only)</a>	Delete
Purge Published Data	andy.jeffrey@gmail.com	ESTABLISHED		Mon Jun 01 10:13:27 GMT+100 2015	Upload Existing Submission Data ONLY	Google FusionTables	victoria@blueventures.org	<a href="#">View Main Fusion Table</a> <a href="#">View Repeat Group shark_measurements</a> <a href="#">View Outer Join (first repeat only)</a>	Delete
Purge Published Data	andy.jeffrey@gmail.com	COMPLETED	Sun Mar 15 14:19:16 GMT+000 2015	Mon Jun 01 10:17:54 GMT+100 2015	Upload Existing Submission Data ONLY	Google FusionTables	bvoddemo@gmail.com	<a href="#">View Main Fusion Table</a> <a href="#">View Repeat Group shark_measurements</a> <a href="#">View Outer Join (first repeat only)</a>	Delete

- Do not select Purge Published Data - this will delete the data from aggregate!

If you have any feedback or questions please contact [odk@blueventures.org](mailto:odk@blueventures.org)

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