4.7 Data Collection Servers

Overview

When beginning a mapping project, many organizations ask if they need to have a server. After collecting data, you'll need to get the data from the devices. Sometimes, it works to simply collect and process data directly from the data collection devices. However, this does not scale well when you get more people collecting data, and also means your data is not backed up - if you lose the device, you can lose the data. Prior to data collection, it is important to have a data management strategy that is suited for your operations.

Using a data collection server allows for much better management of forms and deployments, collection and aggregation of responses, and can offer additional features for viewing, analysing and exporting data. Use of a server may be restricted by available resources (cost of a physical server) and/or internet connection (access to cloud server). Servers used in HOT workflows include:

- POSM
- OpenMapKit Server
- Kobo Toolbox

If the use of a server is not available to you, it is still possible and crucial to store backups of data. In this case, data will need to be downloaded or otherwise shared with a central location, such as a laptop computer, and cloned to a secondary location such as a hard-drive or second computer.

Cloud server vs. Physical server

Which should I use?

I want to use a server that…	Kobo Toolbox	OpenMapKit Server	POSM
Is physical or does not require internet connection for upload	☒	☒	☒
Is cloud-based (data upload via internet)	☒	☒	☒
Accepts ODK data	☒	☒	☒
Accepts KOBO Collect data	☒	☒	×
Accepts OMK data	×	×	×
Can provide data visualizations	×	×	×
Provides a map visualization of GPS data collected	×	×	☒

Kobo Toolbox

Kobo Toolbox is an online application that allows users to build Kobo/ODK surveys as well as store, aggregate, and perform analysis of Kobo/ODK data.

Skill level to implement and manage Easiest

Skills and Technology Needed:

Use Kobo Toolbox Server if:

- OpenMapKit is NOT being used.
- Geospatial data collection does not include polygons - GPS points are accepted

Resources

Set-up

Data Management

OpenMapKit Server

OpenMapKit Server is a cloud based storage system for specially designed to store and compile OpenMapKit data. Data collected through OpenDataKit can also be uploaded to an OpenMapKit Server.

Skill level to implement and manage

Moderate

Skills and Technology Needed:

Use OpenMapKit Server if:

Resources

Set-up Set up and hosting is provided by HOT for local OSM communities and projects that HOT has an active agreement with.

Data Management

POSM

Portable OpenStreetMap, or POSM, is a physical server that contains a set of OpenStreetMap tools, including OpenMapKit server. POSMs allow multiple users to connect and upload data from data collection devices to a central location without the need for internet access. This data can then be aggregated using the OMK Server and synced with OSM directly or downloaded for analysis and processing.

Skill level to implement and manage Hardest

Skills and Technology Needed: Hardware

Use POSM if:

- Surveyors will not have access to internet for data upload
- Surveyors will be able to convene for upload to POSM (i.e. able to gather to return to a location where the POSM is kept)
- Project managers are able to procure and purchase a POSM device

Resources

Set-up http://posm.io/docs/posm/setup/

Data Management