STRABOSPOT OFFLINE

SETUP AND USER GUIDE

What is StraboSpot Offline?

StraboSpot Offline allows members of the Strabo community host their own Strabo backend as an offline server. This is especially useful in a field-camp scenario, where internet access likely isn't available. StraboSpot offline allows users to back up their application data, upload shapefiles, create custom downloadable maps, and maintain versioned copies of projects and datasets; all without internet access.

How does StraboSpot Offline Work?

StraboSpot Offline is a web application packaged in a container that can be run on a variety of computer systems. A container is a standard unit of software that packages up code and all its dependencies, so the application runs quickly and reliably from one computing environment to another. StraboSpot Offline uses a Docker container, which is a lightweight, standalone, executable package of software that includes everything needed to run an application: code, runtime, system tools, system libraries and settings.

What is Needed to Run StraboSpot Offline?

StraboSpot Offline will run on nearly any computer. For an offline field-camp scenario, this will likely be a laptop, but StraboSpot Offline will also run on any desktop or server. Docker software is available for Mac, Windows, and Linux.

In addition to a laptop for running the Docker image, a network device will also be needed. There are a variety of travel WIFI routers that are suitable, many of which can be powered by USB battery banks which make using in the field quite easy.

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Install Docker:

Visit https://www.docker.com/products/docker-desktop and download Docker Desktop for your operating system. If you don't already have a Docker account, you will need to create one. Once the download is complete, install the application.

Docker desktop is an application that runs in the background of your host machine that controls any containers you have running. It also provides you with command-line tools to control the installation/running of Docker containers.

Build StraboSpot Offline Containers:

In order to run StraboSpot Offline on your machine, the necessary Docker containers need to be built and choreographed.

From a command prompt, change directory to your StraboSpotOffline directory and start the containers with the command “docker-compose up -d”:

OSX:

```
fieldcamp-macbook:~ strabo$ cd ~/Desktop/StraboSpotOffline
fieldcamp-macbook:StraboSpotOffline strabo$ docker-compose up -d
```

Windows:

```
C: \Users\strabo>cd Desktop\StraboSpotOffline
C: \Users\strabo\Desktop\StraboSpotOffline> docker-compose up -d
```

When you issue this command, Docker will proceed to build all of the containers necessary for running the application. Please be patient, this process will take quite some time.

Accessing StraboSpot Mobile:

Once Docker has finished building and running the containers, StraboSpot Offline should be available at the following address:

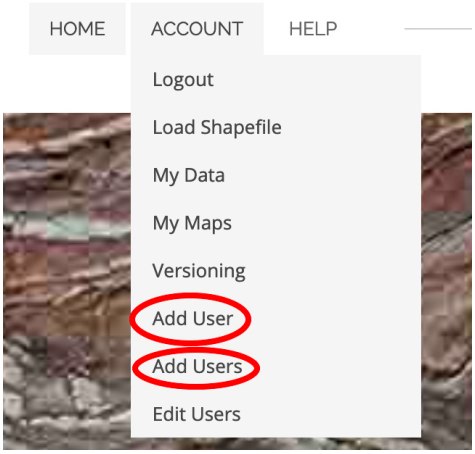
http://localhost

You should be presented with an interface that looks much like the normal StraboSpot web page, but several options have been removed for offline use.

When StraboSpot Offline is first installed, there is only one user account with the following credentials:

Username: `admin`
Password: `StraboR0cks`

When logged in as admin, there are options for creating a single new user, and multiple new users. This will allow the creation of users that will need access to StraboSpot Offline:



Enabling Network Access:

In order for users to access the newly created Docker containers, a network must be created between devices (Docker laptop and mobile devices).

The best solution for creating this network is to have a mobile WIFI access point available in the vicinity of all devices. Any consumer-grade WIFI access point should work, but there are a few options that are ideal for situations where a/c power is not available. These routers can be powered easily by a travel USB power bank:

1.		GL.iNET GL-MT300N-V2 Mini Travel Router https://www.amazon.com/gp/product/B073TSK26W

2.		GL.iNet GL-AR750S-Ext Gigabit Travel AC Router https://www.amazon.com/dp/B07GBXMBQF

All devices (including Docker laptop) must be connected to the WIFI access point in order to use StraboSpot Offline.

Obtaining Server IP Address:

In order for Strabo Mobile device clients to communicate with the newly-created Docker containers, network settings must be set for each client device.

First, the IP address of the StraboSpot Offline Docker server/laptop must be determined. After connecting the Docker laptop/computer to the WIFI network, use the following commands to determine its IP address:

OSX:

From Terminal, run the command “ifconfig”

```
fieldcamp-macbook:~ strabo$ ifconfig
```

You should see a resulting row that looks something like “inet 192.168.0.xxx” or similar:

```
inet 192.168.0.121 netmask 0xffffff00 broadcast 192.168.0.255
```

Take note of the inet address for use later.

Windows:

From Command Prompt, run the command “ipconfig”

```
C: \Users\strabo\Desktop\StraboSpotOffline> ipconfig
```

You should see a resulting row that looks something like “IPv4 Address . . . 192.168.0.xxx” or similar:

```
IPv4 Address. . . . . . . . . . . : 192.168.0.129
```

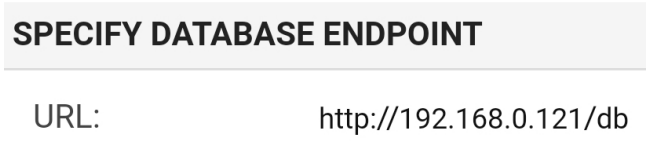
Take note of the IPv4 Address for use later.

Setting up Strabo Mobile App:

For each device that needs access to StraboSpot Offline, the server address (from above) must be entered into the StraboSpot mobile app.

From within the StraboSpot mobile app, click on the menu in the upper left, and navigate to HELP -> Miscellaneous.

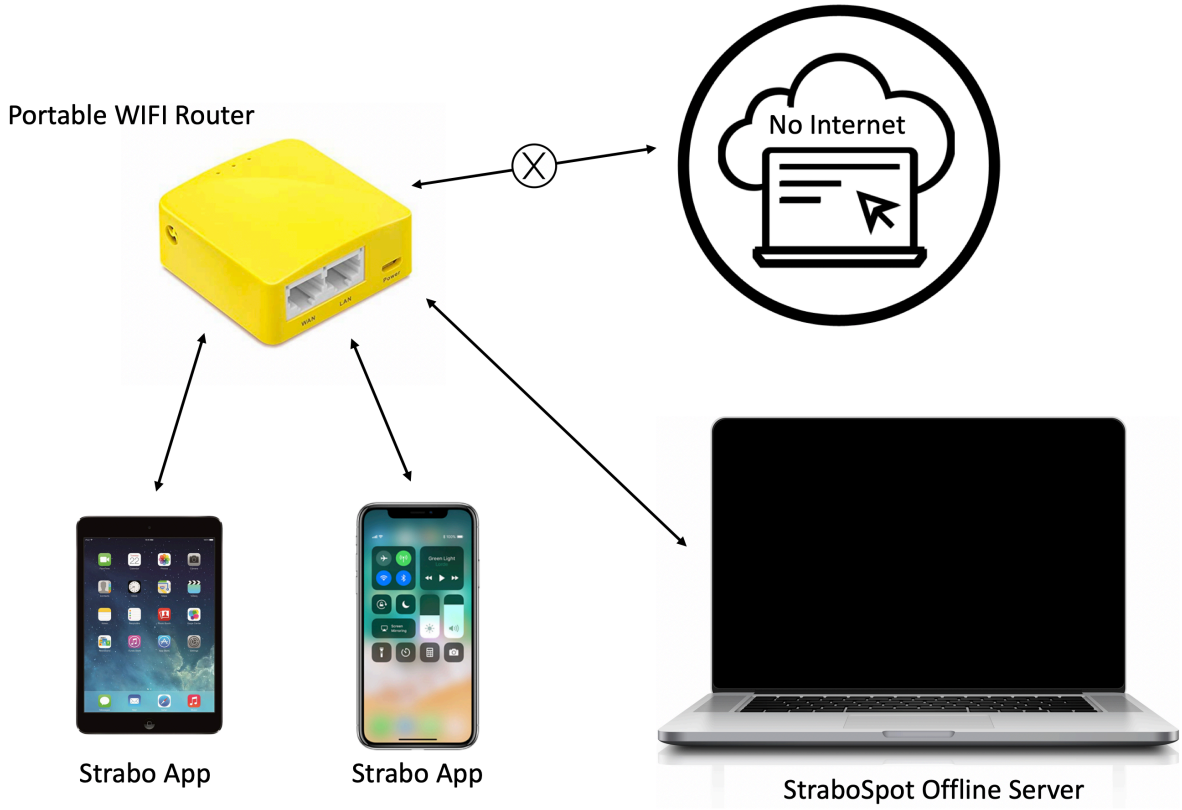
In the Miscellaneous menu, change the database endpoint URL to http://xxx.xxx.xxx.xxx/db where xxx.xxx.xxx.xxx is the server IP address you found above:



Important! Make sure the URL looks exactly like above. It must be an http: URL and NOT an https: URL. Also, make sure that there is a trailing /db.

Network Topology:

For clarification, the StraboSpot Offline mobile network will look something like this:



Final Thoughts:

If all of the steps above have been completed, mobile devices should be able to access the StraboSpot Offline system. Using the StraboSpot Offline system, field users should be able to:

1. Backup device data to offline server.
2. Create maps suitable for downloading to device using GeoTIFF files.
3. Upload shapefiles for downloading to device.
4. Maintain versioned copies of all projects and datasets.