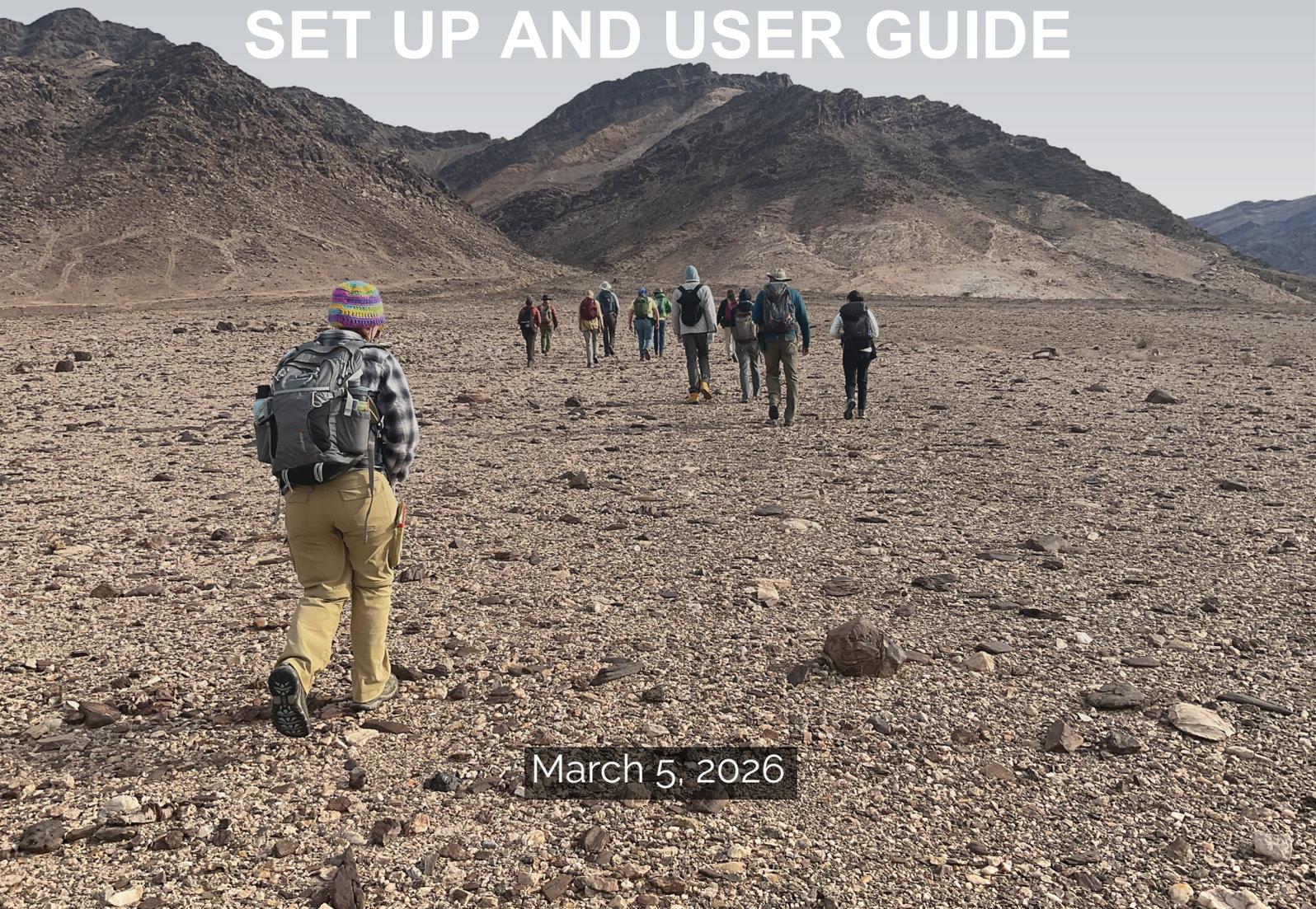




STRABOFIELD OFFLINE

SET UP AND USER GUIDE



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1 StraboField Offline

1.1 What is StraboField Offline?

StraboField Offline enables members of the StraboSpot community to host their own StraboField backend as a self-contained, locally-run server. This is particularly useful in field camp scenarios where reliable internet access is unavailable. StraboField Offline allows users to:

- Back up application data
- Upload shapefiles
- Create custom downloadable maps
- Maintain versioned copies of projects and datasets

All of the above functionality is available without an internet connection.

1.2 How Does StraboField Offline Work?

StraboField Offline is a web application packaged as a **Docker container** — a lightweight, standalone, executable software package that includes everything needed to run the application: code, runtime, system tools, system libraries, and settings. Containerization ensures that StraboField Offline runs quickly and consistently across different computing environments, regardless of the host system's configuration.

1.3 System Requirements

StraboField Offline is compatible with nearly any modern computer running macOS, Windows, or Linux. In a field camp setting, a laptop is the most practical host machine, though any desktop or server is equally supported.

In addition to a host computer, a **local network device** is required to allow multiple users to connect simultaneously. Compact travel Wi-Fi routers are well-suited for field use, and many models can be powered via USB battery banks, making them practical for remote deployments.

1.4 Installing Docker

Visit <https://www.docker.com/products/docker-desktop> to download Docker Desktop for your operating system. A free Docker account is required to download the software — if you do not already have one, you will be prompted to create an account during the download process.

Once the download is complete, run the installer and follow the on-screen instructions to complete the installation.

Docker Desktop is a background application that manages all containers running on your host machine. It also provides command-line tools for installing, configuring, and controlling Docker containers.

1.5 Building the StraboField Offline Containers

Before StraboField Offline can run, the necessary Docker containers must be built and orchestrated. This is done via a single command from your system's terminal or command prompt.

Open a terminal and navigate to your `StraboFieldOffline` directory, then run the following command:

```
docker-compose up -d
```

The full sequence of commands for each operating system is shown below.

macOS:

```
cd ~/Desktop/StraboFieldOffline
docker-compose up -d
```

Windows:

```
cd Desktop\StraboFieldOffline
docker-compose up -d
```

Once issued, Docker will begin building all containers required to run the application. This process may take several minutes – please allow it to complete before proceeding.

1.6 Accessing StraboField Offline

Once Docker has finished building and starting the containers, StraboField Offline will be accessible in any web browser at the following address:

```
http://localhost
```

The interface closely resembles the standard StraboField web application, with certain features removed or restricted for offline use.

1.6.1 Default Administrator Account

Upon first installation, StraboField Offline includes a single default administrator account with the following credentials:

Username	admin
Password	StraboR0cks

It is strongly recommended to change the default password after first login.

1.6.2 Creating User Accounts

When logged in as `admin`, StraboField Offline provides options to create either a single new user or multiple new users simultaneously. Use these options to provision accounts for all team members who will require access to StraboField Offline during the field campaign.

1.7 Enabling Network Access

For mobile devices to communicate with the Docker host machine, all devices must be connected to a shared local network. The recommended approach is to use a portable Wi-Fi access point placed within range of all devices.

1.7.1 Choosing a Wi-Fi Access Point

Any consumer-grade Wi-Fi router is compatible with StraboField Offline. However, for field camp deployments where AC power is unavailable, a **portable travel router** is strongly recommended. When selecting a travel router for field use, look for the following specifications:

- **USB bus power** – the router should be powerable via a standard USB port, allowing it to run off a portable battery bank
- **Compact form factor** – travel routers are significantly smaller and lighter than standard home routers
- **802.11ac (Wi-Fi 5) or newer** – provides sufficient throughput for multiple simultaneous users
- **Multiple LAN ports** (optional) – useful if a wired connection to the host laptop is preferred for reliability

Compact travel routers meeting these specifications are widely available from electronics retailers and online marketplaces at modest cost. A USB battery bank with a capacity of 10,000 mAh or greater is sufficient to power most travel routers for a full field day.

1.7.2 Connecting Devices

All devices – including the laptop running Docker – must be connected to the same Wi-Fi access point in order to access StraboField Offline. Once connected, users can reach the application in any mobile browser at:

`http://<host-laptop-ip-address>`

Note: The host laptop's local IP address can be found by running `ipconfig` (Windows) or `ifconfig` (macOS/Linux) from a terminal.

1.8 Obtaining the Server IP Address

Before mobile devices can connect to StraboField Offline, the local IP address of the Docker host machine must be identified. This address is assigned by the Wi-Fi access point when the laptop joins the network, and is used by all client devices to reach the server.

Ensure the Docker host laptop is connected to the shared Wi-Fi access point before proceeding.

1.8.1 macOS

1. Open **Terminal** (Applications → Utilities → Terminal, or search `Terminal` in Spotlight).

2. Run the following command:

```
ifconfig
```

3. The output will contain multiple network interfaces. Look for the entry corresponding to your Wi-Fi adapter – typically labelled `en0` – and locate the line beginning with `inet`:

```
en0: flags=8863<UP, BROADCAST, SMART, RUNNING, SIMPLEX, MULTICAST> mtu 1500
    inet 192.168.0.105 netmask 0xfffff00 broadcast 192.168.0.255
```

4. The value following `inet` (e.g. `192.168.0.105`) is your server IP address. Make a note of this – it will be needed when configuring client devices.

1.8.2 Windows

1. Open **Command Prompt** by pressing `Windows + R`, typing `cmd`, and pressing `Enter`.

2. Run the following command:

```
ipconfig
```

3. The output will list multiple network adapters. Locate the section labelled **Wireless LAN adapter Wi-Fi** and find the line beginning with `IPv4 Address`:

```
Wireless LAN adapter Wi-Fi:
    Connection-specific DNS Suffix . :
    IPv4 Address. . . . . : 192.168.0.105
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.0.1
```

4. The value to the right of `IPv4 Address` (e.g. `192.168.0.105`) is your server IP address. Make a note of this – it will be needed when configuring client devices.

Note: The IP address assigned to the laptop may change each time it reconnects to the Wi-Fi network. If client devices lose connection to StraboField Offline, repeat the steps above to verify the current IP address and update client settings accordingly.

1.9 Configuring the StraboField Mobile App

The following steps must be completed on **each mobile device** that will connect to StraboField Offline. Ensure each device is connected to the shared Wi-Fi access point before proceeding.

1. Open the **StraboField** mobile app.
2. Tap the **Home Menu** icon in the upper-left corner of the screen to open the side navigation panel.
3. Navigate to **App Settings Section** → **Advanced Options**.
4. In the **Advanced Options** settings, locate the **Use Custom Database Endpoint** toggle.
5. Toggle **ON** and replace the existing value with the following:

```
http://xxx.xxx.xxx.xxx/db
```

where `xxx.xxx.xxx.xxx` is the server IP address obtained in the previous section (e.g. `http://192.168.0.105/db`).

6. Save the setting and return to the main screen.

Important

When entering the database endpoint URL, the following requirements must all be met:

- The URL must begin with `http://` – **not** `https://`. Using `https://` will prevent the app from connecting to the local server.
- The URL must end with `/db` – the trailing `/db` is required and must not be omitted.
- The IP address must exactly match the server IP address identified in the previous section.

A correctly formatted URL will look like: `http://192.168.0.105/db`

1.10 Verifying the Installation

If all previous steps have been completed successfully, mobile devices connected to the shared Wi-Fi network should now be able to access StraboField Offline. To confirm, open the StraboField app on a client device and attempt to log in using the credentials created in Section 1.6.2.

Once connected, the following functionality is available to field users:

- Back up device data to the offline server
- Create maps suitable for downloading to a device using GeoTIF files
- Upload shapefiles for use on connected devices
- Maintain versioned copies of all projects and datasets