**Software Usage Procedure**

1. Start each drone and SkyController. Remove each drone’s lens cap. Wait for each to be paired (solid blue LED on the controller).
2. *Recommended*: Using the FreeFlight 6 mobile app, connect to each drone (via WiFi or through a USB connection to the SkyController) and perform drone and gimbal calibration if needed
3. Place the drones on flat ground with adequate separation between them (at least 6 feet). Ensure that the propellers are not obstructed (i.e. don’t put them in tall grass).
4. If running the software in a VM, start the VM
5. Connect SkyController(s) to computer via USB
   1. If using a VM, ensure the device is connected directly to the VM (VMWare will prompt immediately after connecting)
6. Ensure that there is one network interface for each SkyController (inside VM if applicable) via `ip a` or similar. The interfaces should be sequential: ens35u1, ens35u2, ens35u3, ...
7. Map each SkyController network interface to a unique IP via the config\_network script. Example for 3 controllers:
   1. ./config\_network.sh setup ens35u1 192.168.54.1 201
   2. ./config\_network.sh setup ens35u2 192.168.55.1 202
   3. ./config\_network.sh setup ens35u3 192.168.56.1 203
8. *Recommended*: Use the takeoff\_land test script to verify each drone is connected and functioning
9. Open a terminal tab for each drone and source the Olympe environment in each
10. Start the SDK wrapper server for each drone on a unique port. Example for 3 controllers:
    1. ./run.sh 30000 192.168.54.1
    2. ./run.sh 30001 192.168.55.1
    3. ./run.sh 30002 192.168.56.1
11. Start a mission server for each drone with a unique swarm port. Each instance must map to one of the SDK wrapper servers. Example arguments for 3 drones:
    1. -Sh 127.0.0.1 -Sp 20000 -Dt parrot-anafi -Dh 192.168.54.1 -Wh 127.0.0.1 -Wp 30000
    2. -Sh 127.0.0.1 -Sp 20001 -Dt parrot-anafi -Dh 192.168.55.1 -Wh 127.0.0.1 -Wp 30001
    3. -Sh 127.0.0.1 -Sp 20002 -Dt parrot-anafi -Dh 192.168.56.1 -Wh 127.0.0.1 -Wp 30002
12. Start the operator interface with a unique swarm port. Example arguments:
    1. -Sh 127.0.0.1 -Sp 10000 -Hh 127.0.0.1 -Hp 8080
13. Open the operator interface in a browser (<http://localhost:8080/> in above example)
14. Configure and start mission in operator interface
    1. Add each drone using its mission server host/port (in the above example, 127.0.0.1:20000, 127.0.0.1:20001, and 127.0.0.1:20002).
    2. Define the search area and altitude parameters
    3. Click “Start”
15. Verify each drone launches. Depending on the size of the area and operating altitude, this may take a minute.
16. Wait for detections to appear in the operator interface

Note:

* If a SkyController is unplugged, steps 6-7 must be repeated for that controller.
* An internet connection is required to load the map tiles in the operator interface. This can be done before going to the mission area or on-site through a hotspot.
  + Warning: If the interface has to be refreshed, the tiles tend to not be completely cached, so an internet connection may be required once again.