4G VPN Telemetry guide

Using ZeroTier

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Introduction

This document is intended for users of the 4G VPN Telemetry unit in combination with the DeltaQuad Pro. It outlines how to install and manage groundstations based on ZeroTier connectivity. For instruction on Enterprise 4G VPN Telemetry please contact support@verticaltechnologies.com

Your account credentials

When ordering the 4G VPN Telemetry solution, you will receive your ZeroTier account details. The details consist of the following information:

ZeroTier username   (e.g. info@droneinc.com)
ZeroTier password
Network name   (e.g. droneinc1)
Network ID   (e.g. 93afae5963d4ce59)

You can use this information to log on to https://my.zerotier.com. Here you will be able to manage your networks and authorize groundstations to access the network.

When ordering multiple vehicles with 4G VPN Telemetry, multiple networks will be created within the same account. Your network names will match the label on your vehicle.

Setting up your ZeroTier

The following steps only need to be performed once for every groundstation.

To connect your groundstation to your vehicle you will need to install the a ZeroTier client and join the network. You can download the appropriate client for your device here: https://www.zerotier.com/download.shtml

The following example shows how to connect an Android client to your vehicle. On other operating systems the steps are similar.
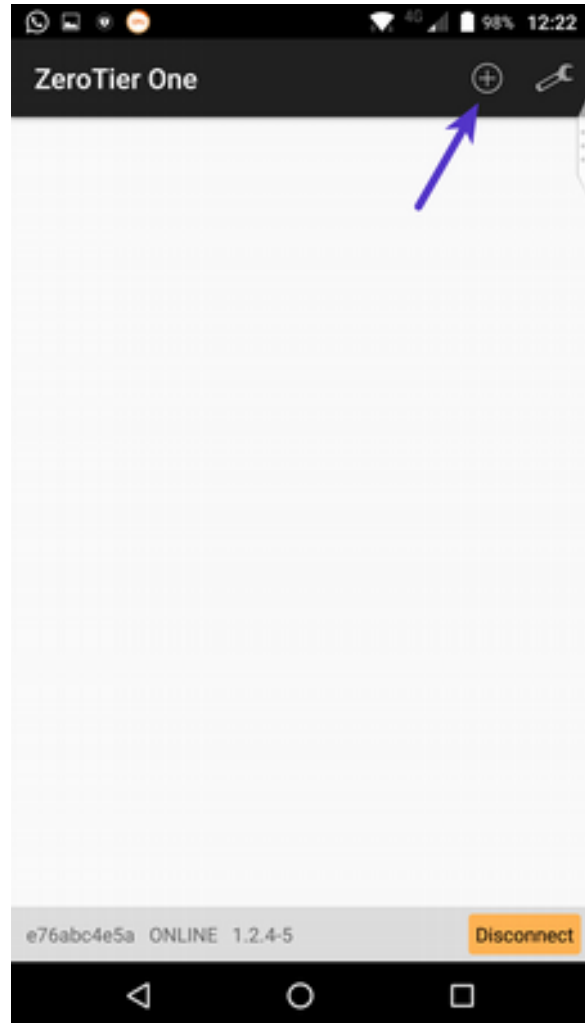
Note: On Windows the ZeroTier icon is located in the system tray:

Step 1:

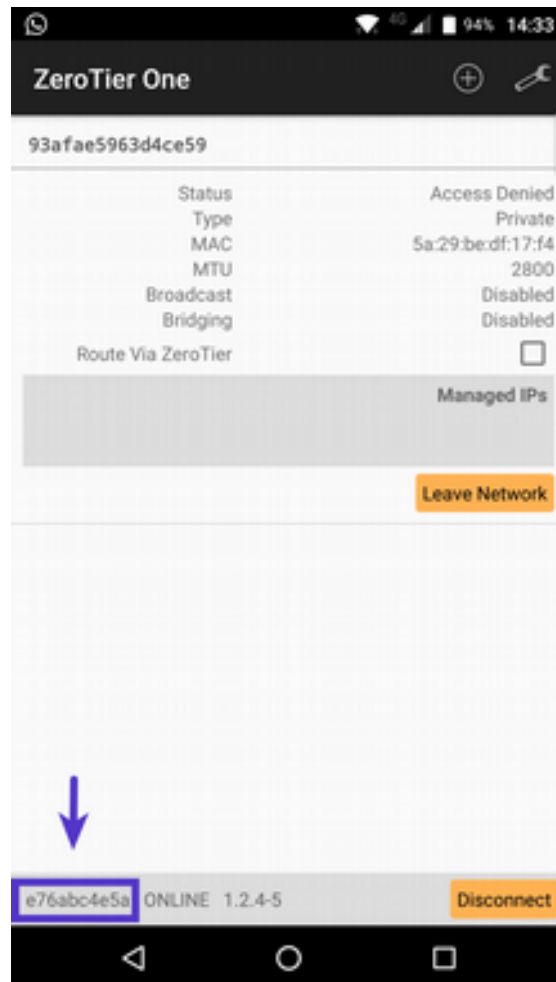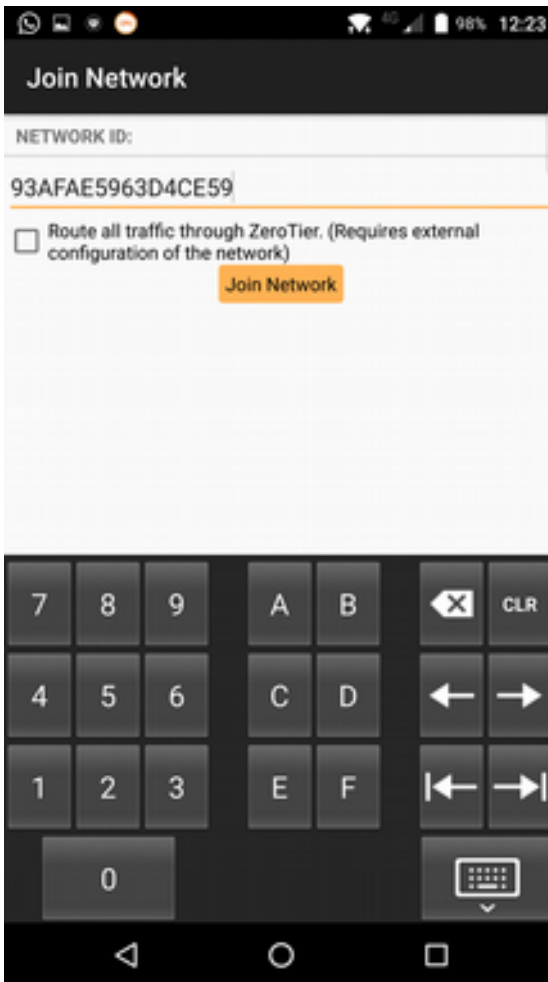Open the ZeroTier app and press Connect
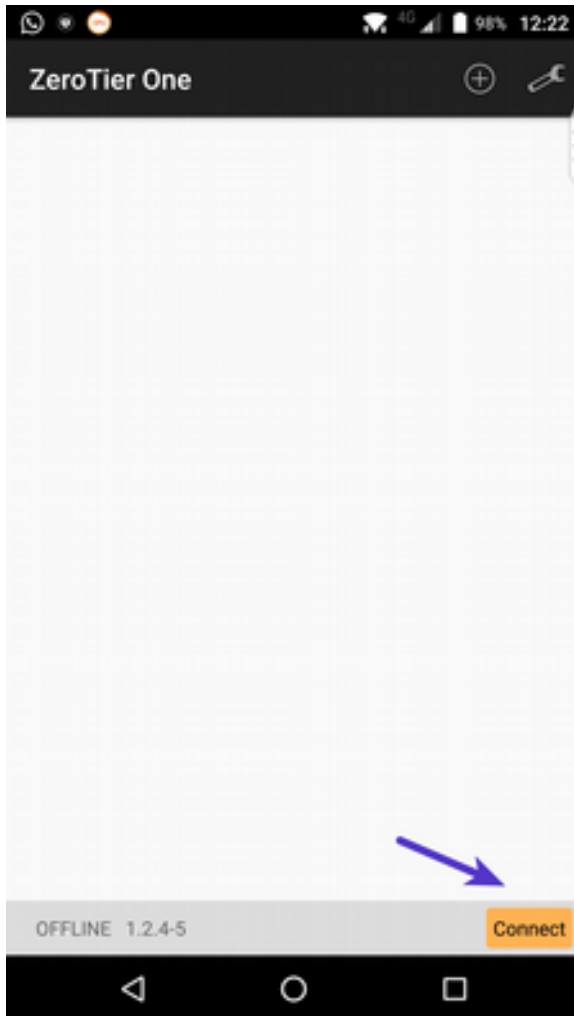
Step 2:

Add a network by pressing the + icon

Step 3:

Enter the Network ID that was supplied in the account details and click Join Network

After joining you will see a screen indicating your join request is pending. Please take a note of your address in the bottom left of the screen for the next step.
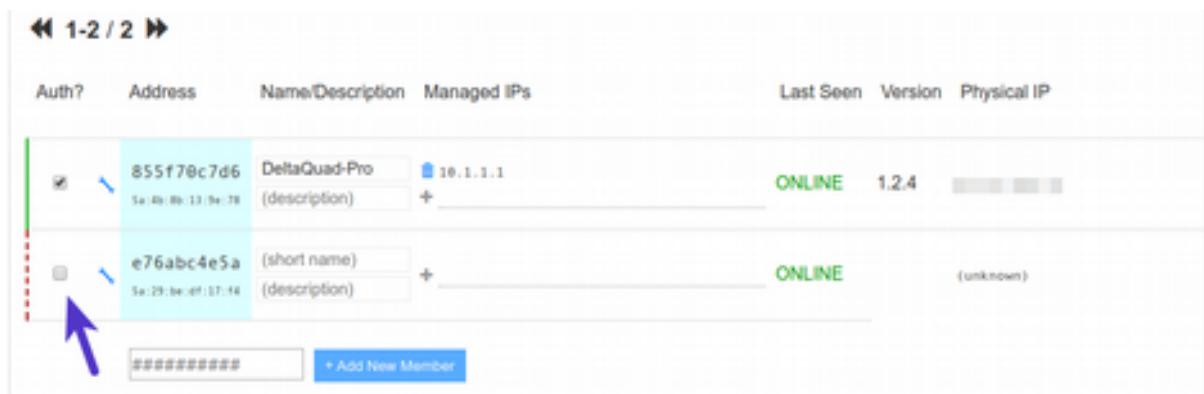
Step 4:

Log in to https://my.zerotier.com using the user name and password from your account details and click in the Networks button in the top menu bar. Then click on the network that matches your vehicle.
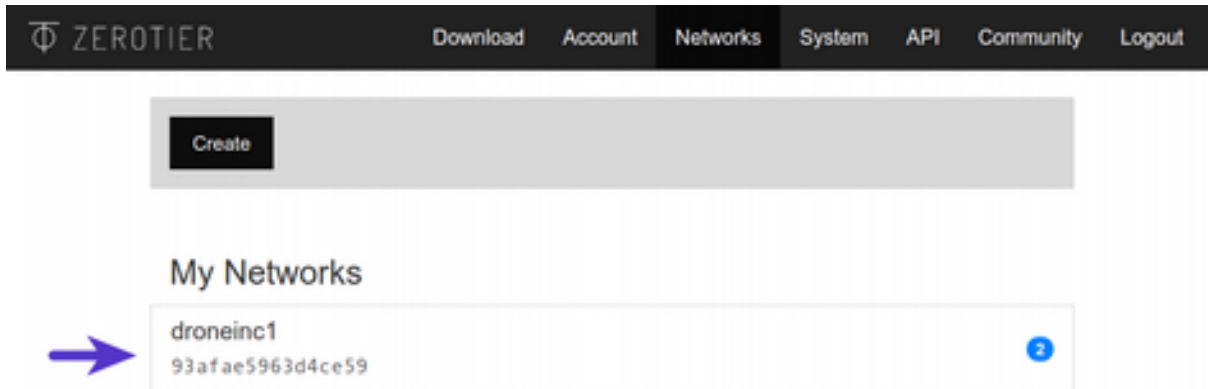
Step 5:

Under the 'Members' section you will see the list of devices. It will at minimum include your DeltaQuad and you should also see your newly connected device.

Make sure you verify that the address of the unauthorized device matches the address displayed on your groundstation. If it does then you can check the Auth box for the device and optionally name your device.

The changes are saved instantly and you should see the status in the ZeroTier client on your groundstation change to "OK".

The ZeroTier client is configured to start and connect automatically when there is an Internet connection. In the client settings you can change this behavior.

Installing QGroundControl

The DeltaQuad uses QGroundControl as its default Ground Control Station. QGroundControl is available for download from:

https://docs.qgroundcontrol.com/en/getting_started/download_and_install.html

Download the appropriate version and follow the instructions as indicated on the download page to install the application.

You can now start QGroundControl on your groundstation. When your vehicle is powered on and equipped with an Internet connection it should be automatically detected by QGroundControl.

Troubleshooting

If your ground control station does not connect to your vehicle please check the following;

- Reboot your vehicle and ground control station

- Make sure your vehicles 4G USB stick is connected. This should be indicated by a solid light blue light on the 4G USB dongle. If the 4G stick is not connected please check the following;

  ○ Make sure the a sim card with access to the Internet is inserted in the 4G stick

  ○ Make sure the 4G stick has an Internet connection by inserting it in your computer. Once inserted after approximately 30 seconds you can view the sticks status by visiting http://192.168.8.1

- Make sure your groundstation has an active internet connection and is connected to your ZeroTier network. This can be verified by following the installation steps set forth in this manual.

If none of the troubleshooting suggestions work, please contact support@verticaltechnologies.com for assistance.