
OpenVPN Guide

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Document Revisions

2018-01-24	YC	Initial Version.
2021-04-23	YC	Support new VPN certificates
2025-01-20	YC	Update for VR linux board 6.x and Android 14

Overview

This document describes the steps to setup a OpenVPN connection on the VR Android board:

- VR linux board 6.x with Variscite VAR-SOM-MX8M-PLUS
- Android 14 (Upside Down Cake)
- OpenVPN for Android version 0.7.51

1 Steps to Setup OpenVPN

Now it is the time to start the OpenVPN application:

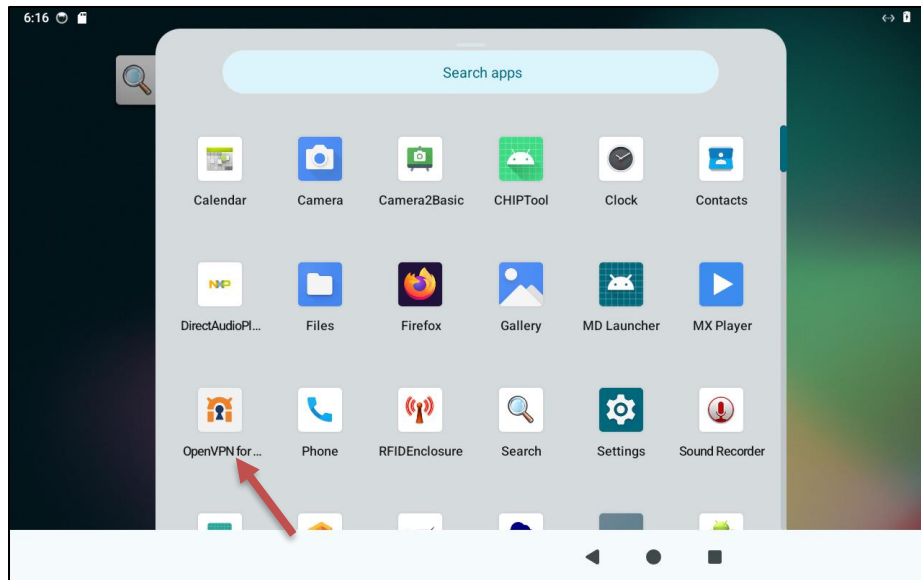


Figure 1. Open the VPN application

When the app is loaded, click the third button on the top-right corner to import the configuration file from “/sdcard/vrdevicevpn-android.conf”.

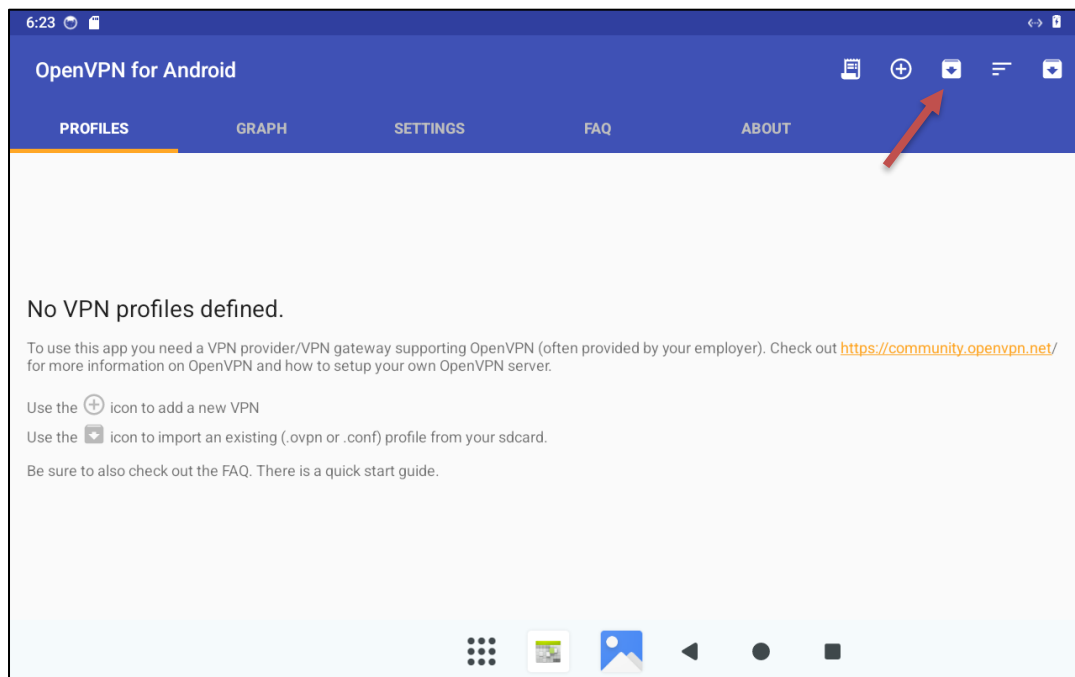


Figure 2. Import Configure File

Select the folder – VR_MX8 from the left panel:

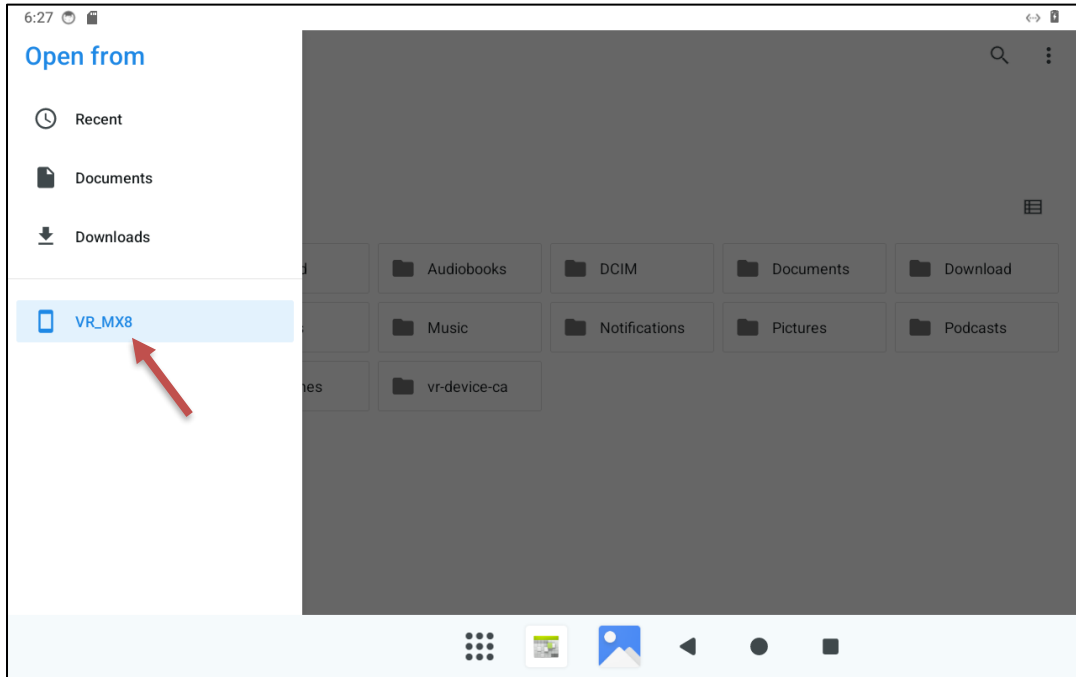


Figure 3. Select the folder – VR_MX8

Select the configure file – vrdevice-android.conf:

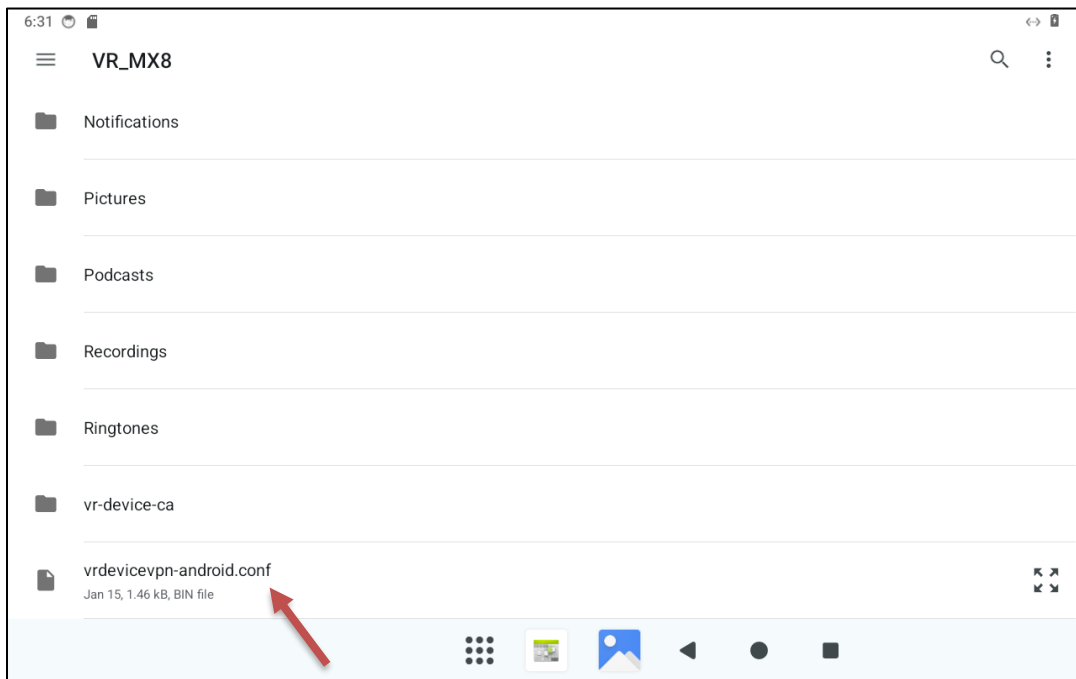


Figure 4. Select the file – vrdevice-android.conf

After the configure file is selected, need to manually import certificate files from the folder – /sdcard/vr-device-ca:

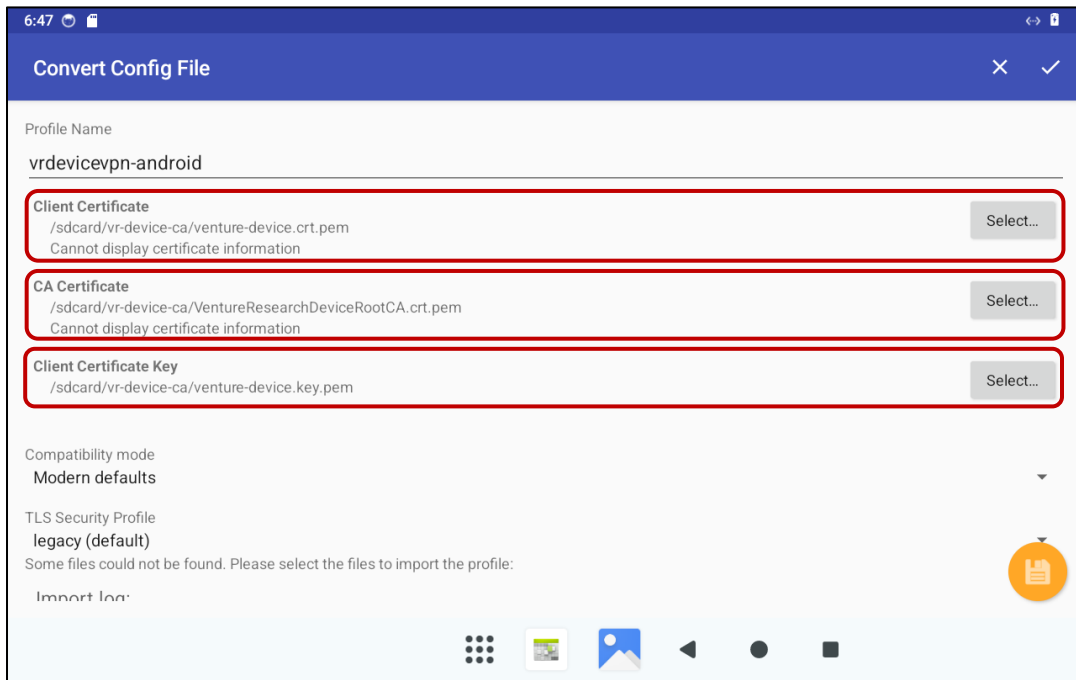


Figure 5. Import Certificate Files

Import the Client Certificate – venture-device.crt.pem:

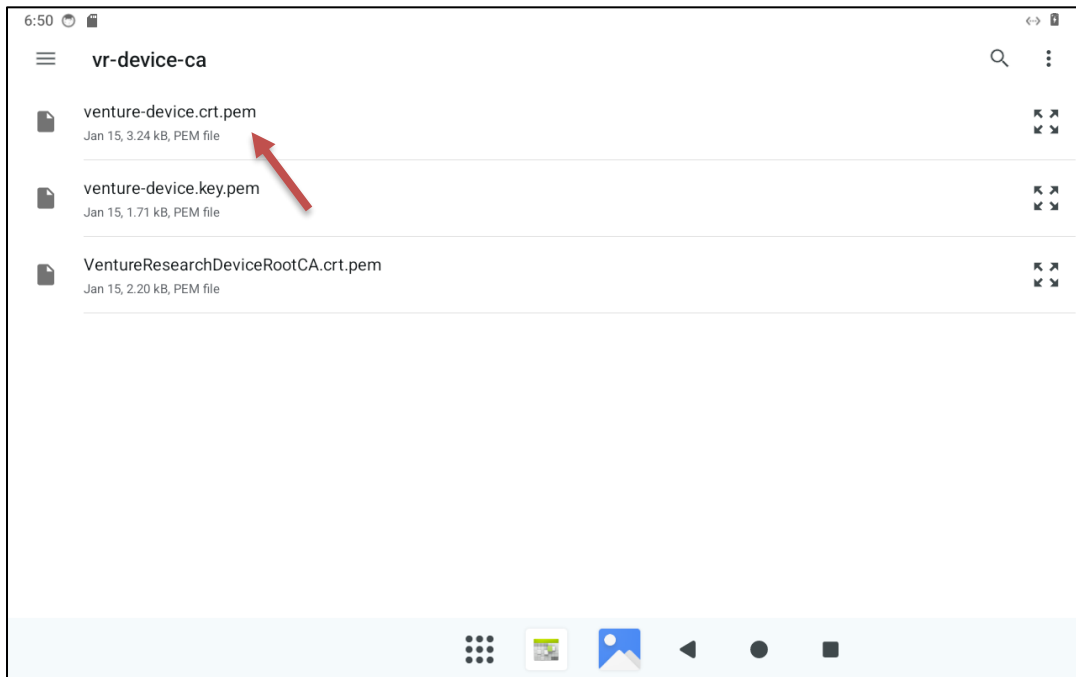


Figure 6. Import the Client Certificate

Import the CA Certificate – VentureResearchDeviceRootCA.crt.pem:

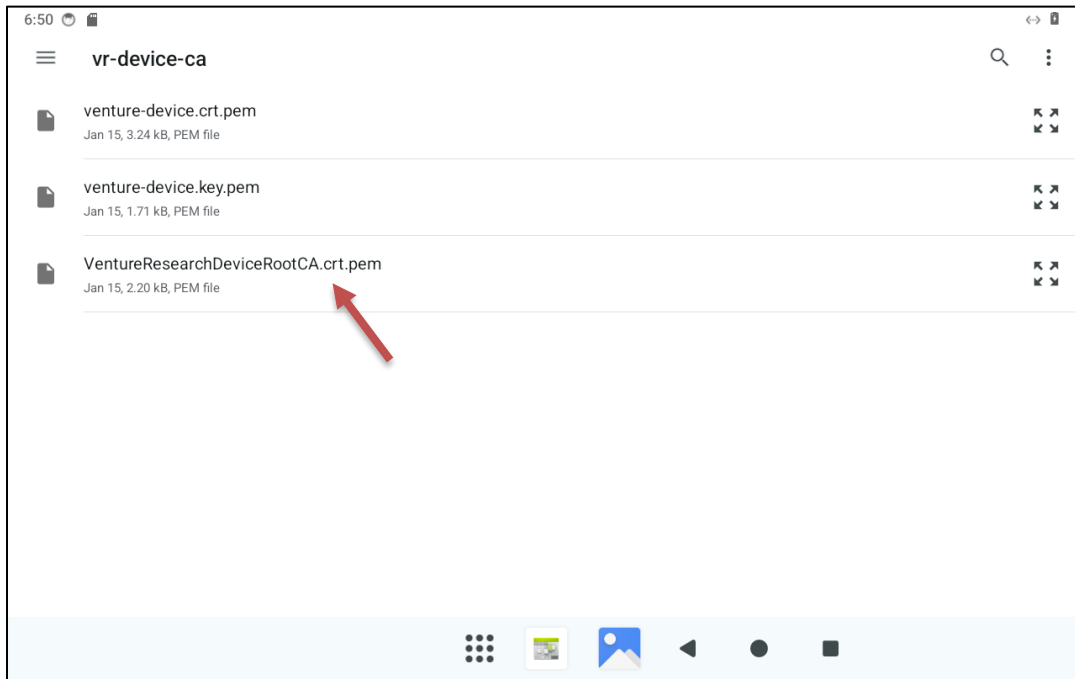


Figure 7. Import the CA Certificate

Import the Client Certificate Key – venture-device.key.pem:

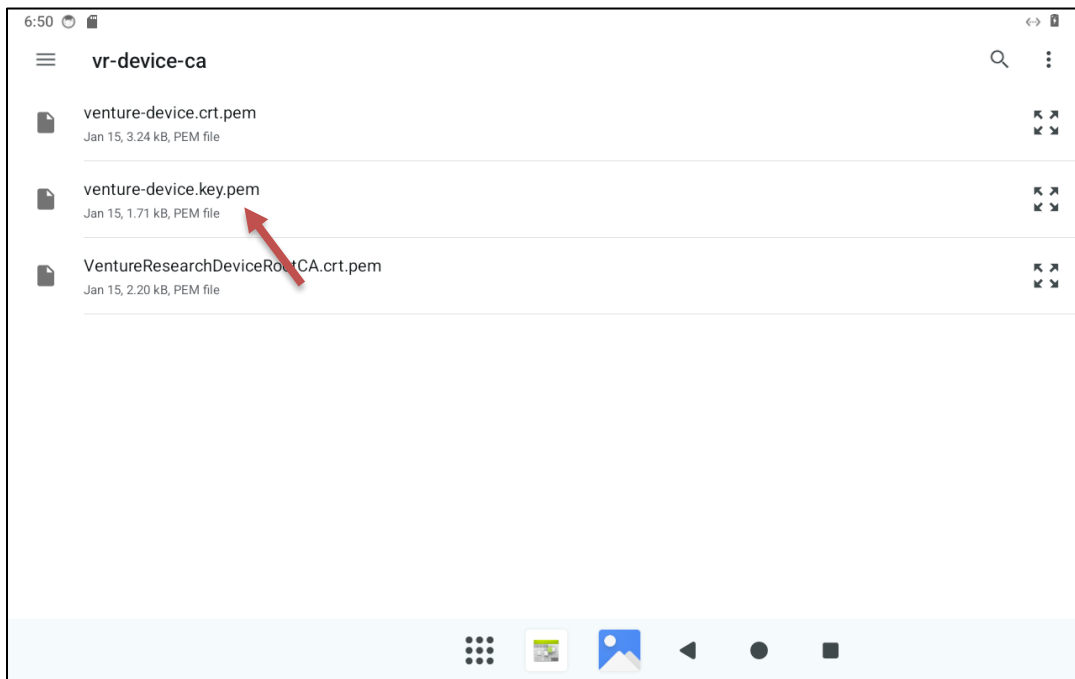
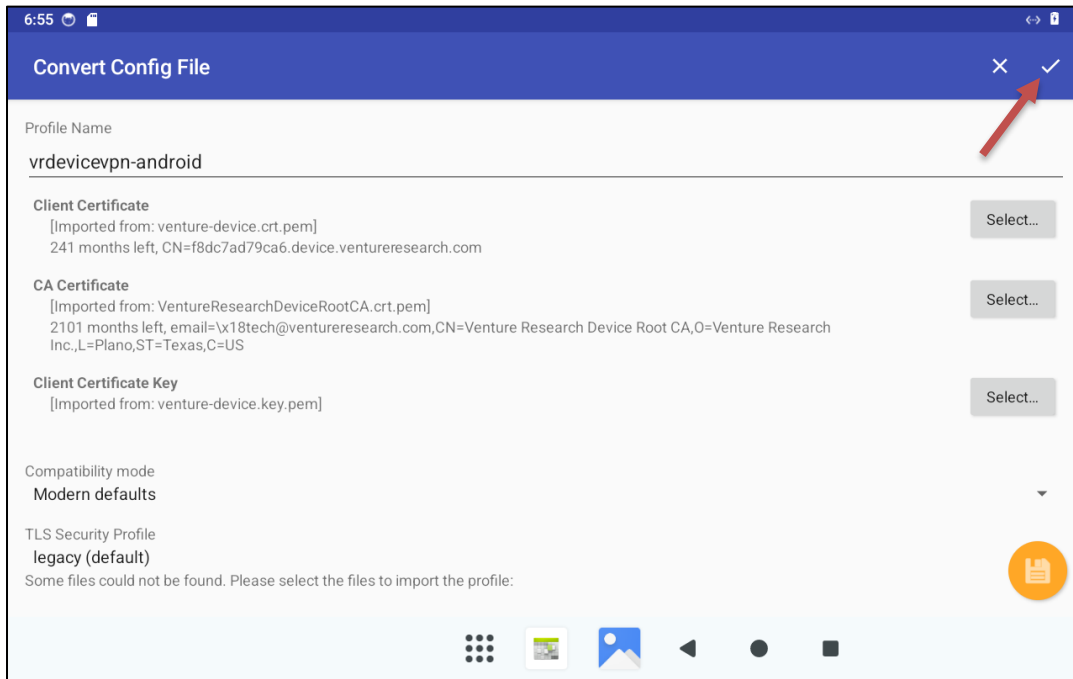


Figure 8. Import the CA Certificate

After all certificates are imported, click the check button:



Thus, the VPN profile – vrdevicevpn-android is created. Click the edit button:

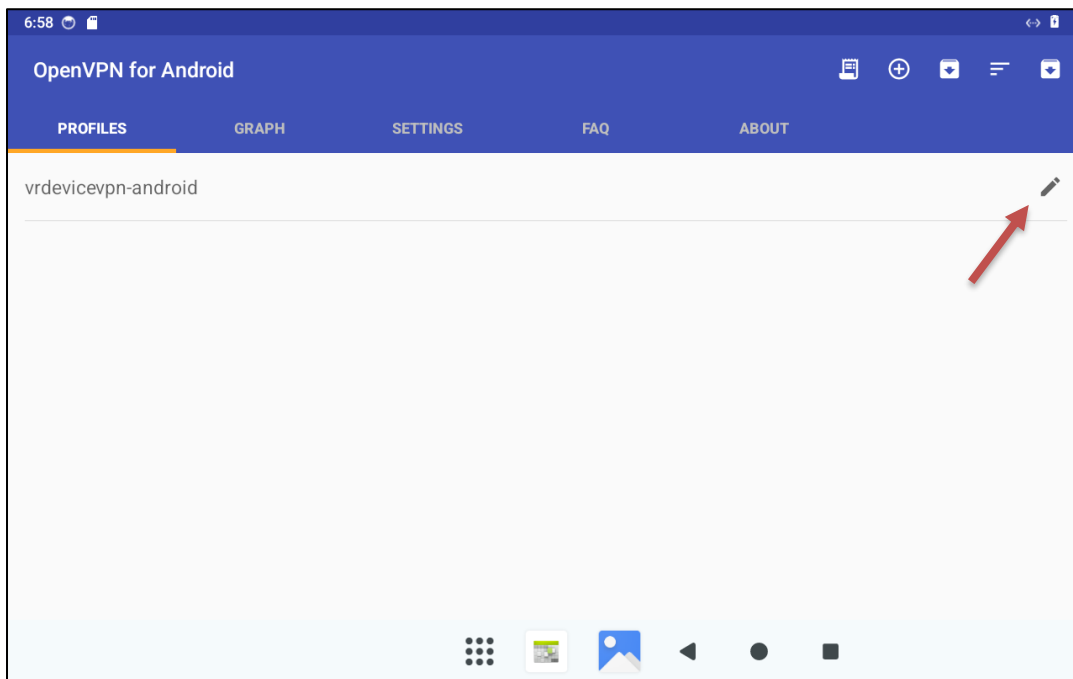


Figure 9. Edit the VPN Profile

Go to the page – “ADVANCED”, click “Connection retries”, change to “Unlimited reconnection retries”:

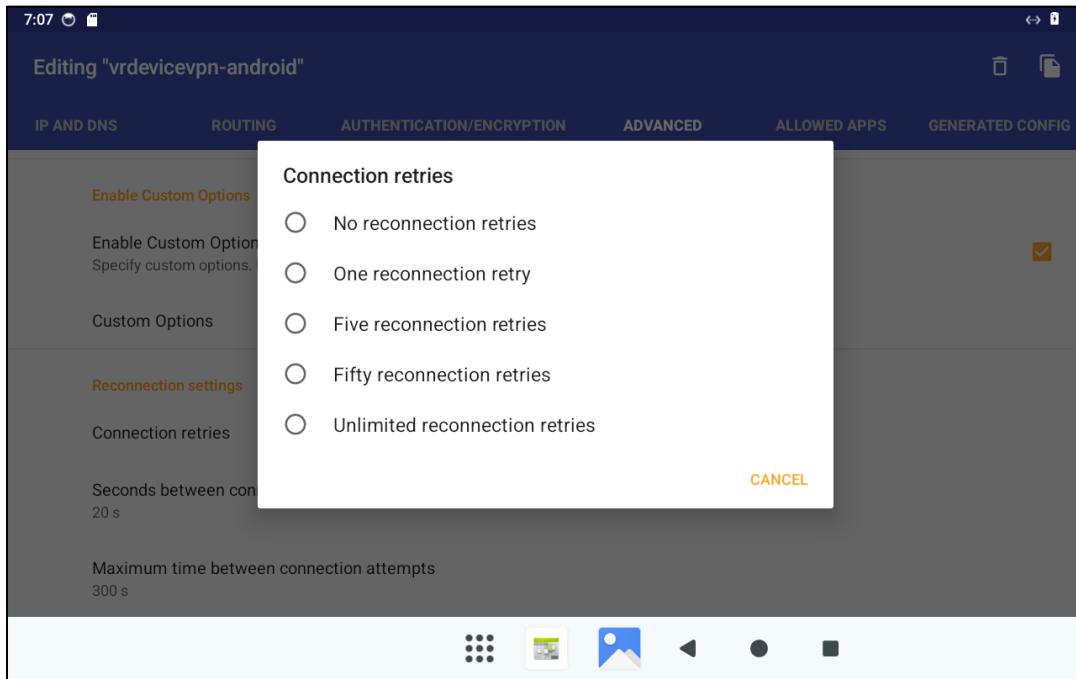


Figure 10. Set "Unlimited Reconnection Retries"

Click the back button on the bottom bar of the screen. On the initial page of the app, click the profile to start the VPN connection:

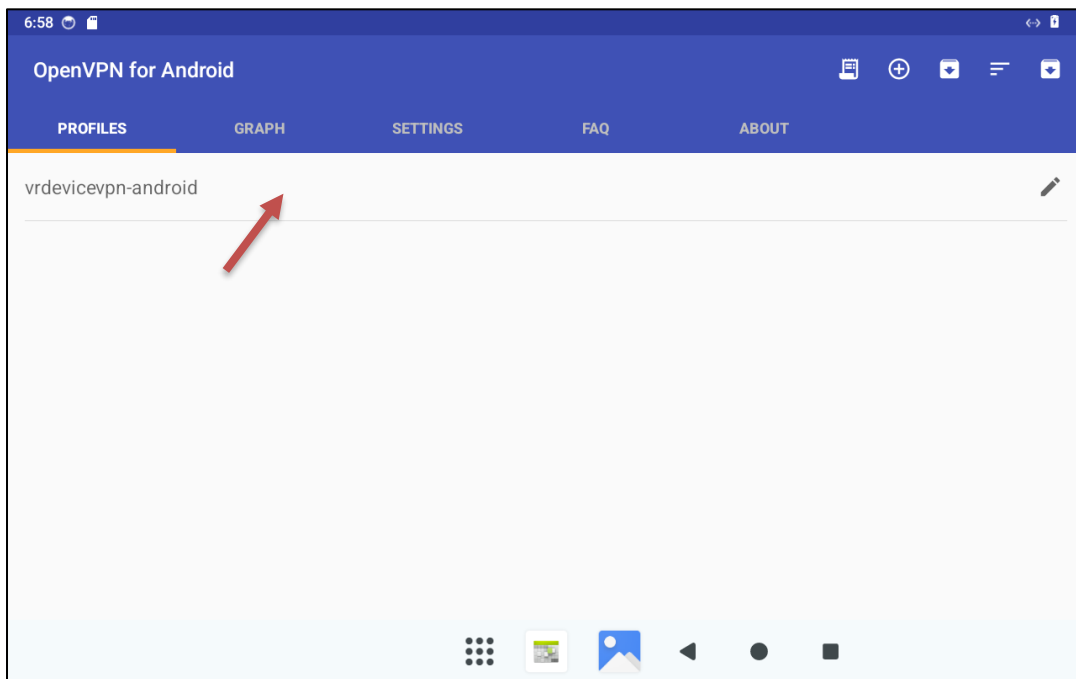


Figure 11. Click to Start the VPN Connection

The VPN is connected:

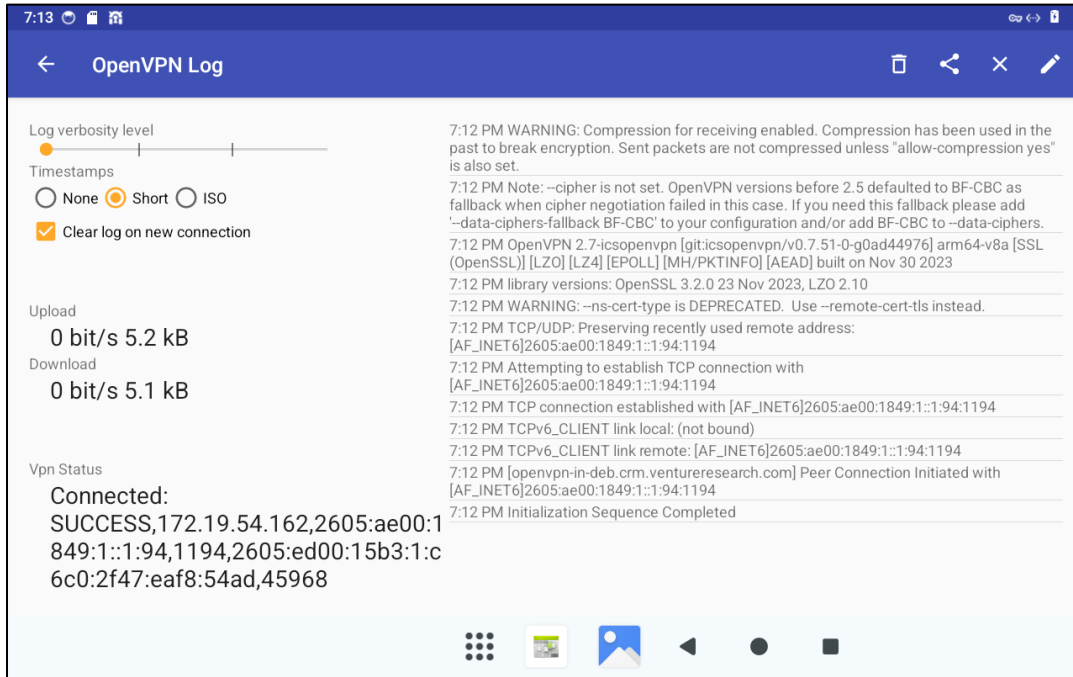


Figure 12. The VPN is connected

Once the VPN is connected, click the back button. Then go to the page – “SETTINGS”:

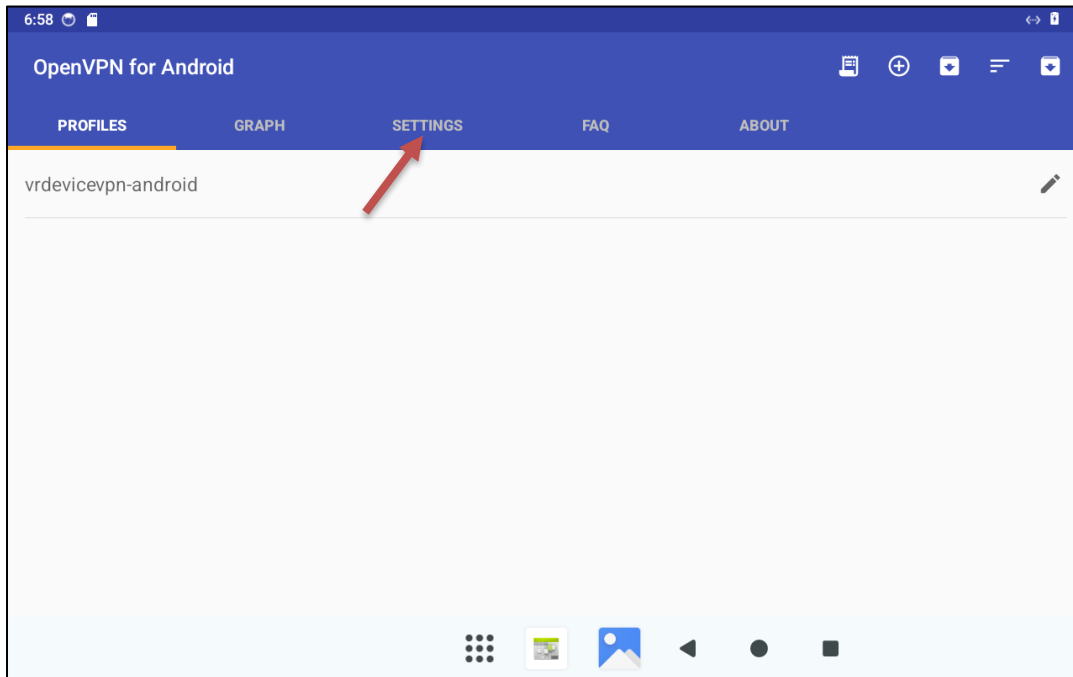


Figure 13. Select “SETTINGS”

Set the default VPN:

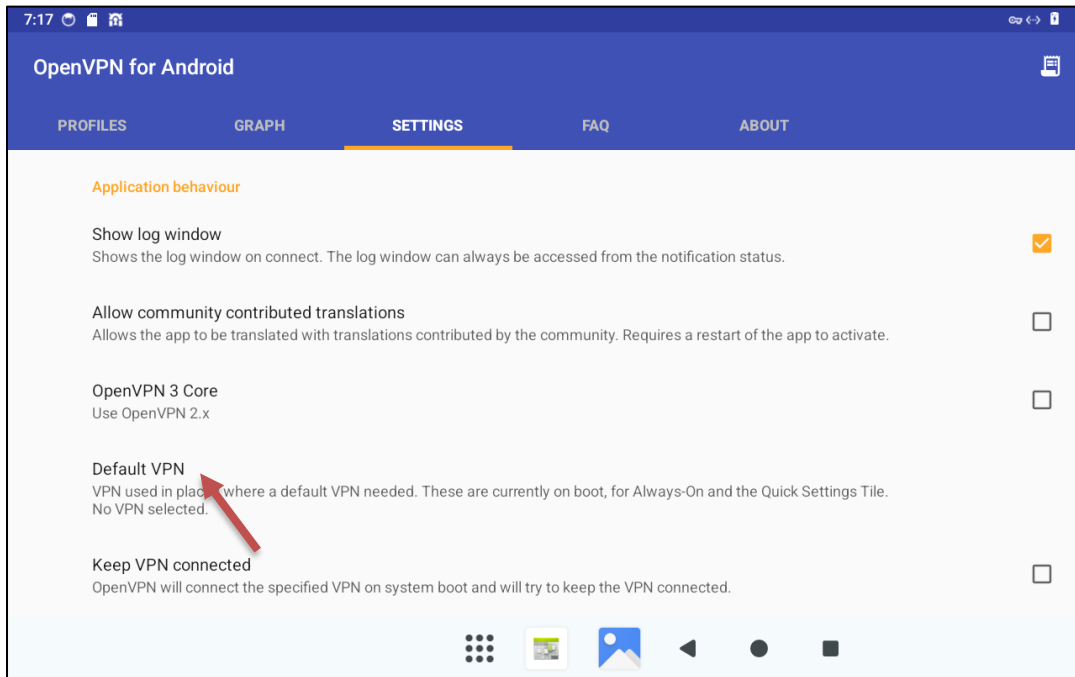


Figure 14. Click - Default VPN

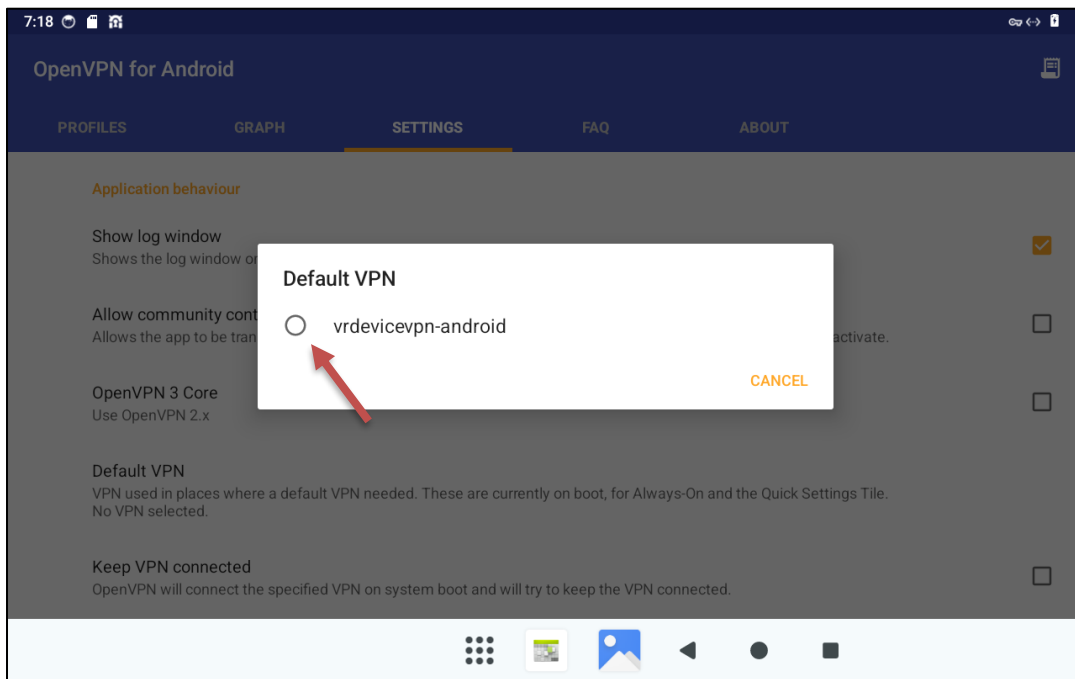


Figure 15. Select "vrdevicevpn-android" as the Default VPN

Enable “Keep VPN connected”:

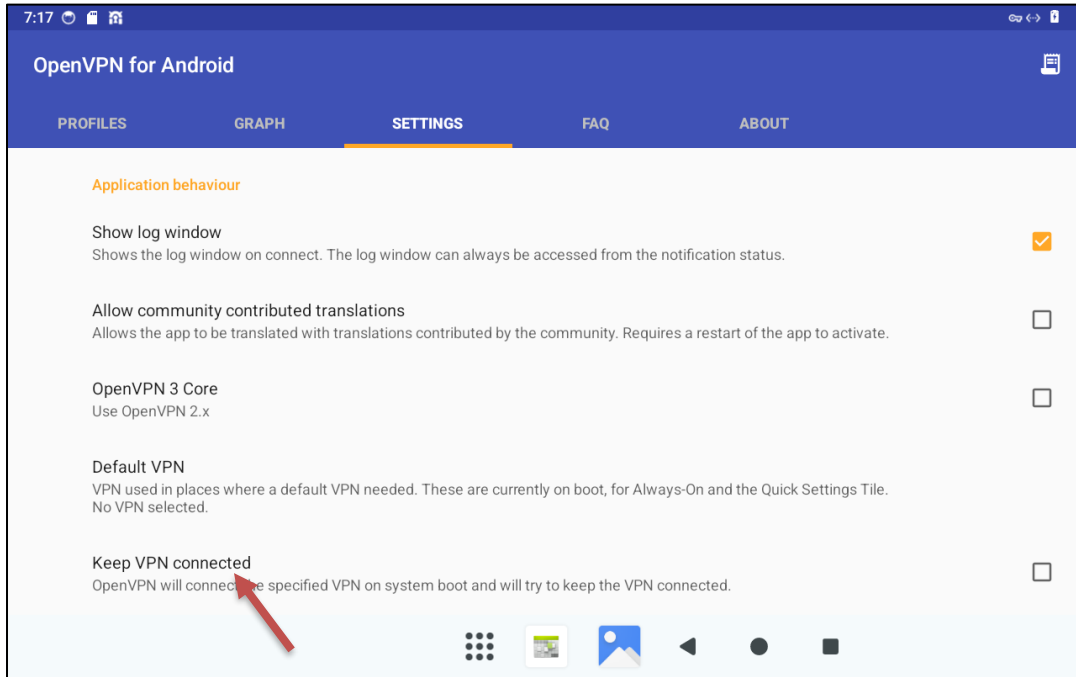


Figure 16. Click to Enable "Keep VPN connected"

Extra step to set by clicking “OPEN VPN SETTINGS”:

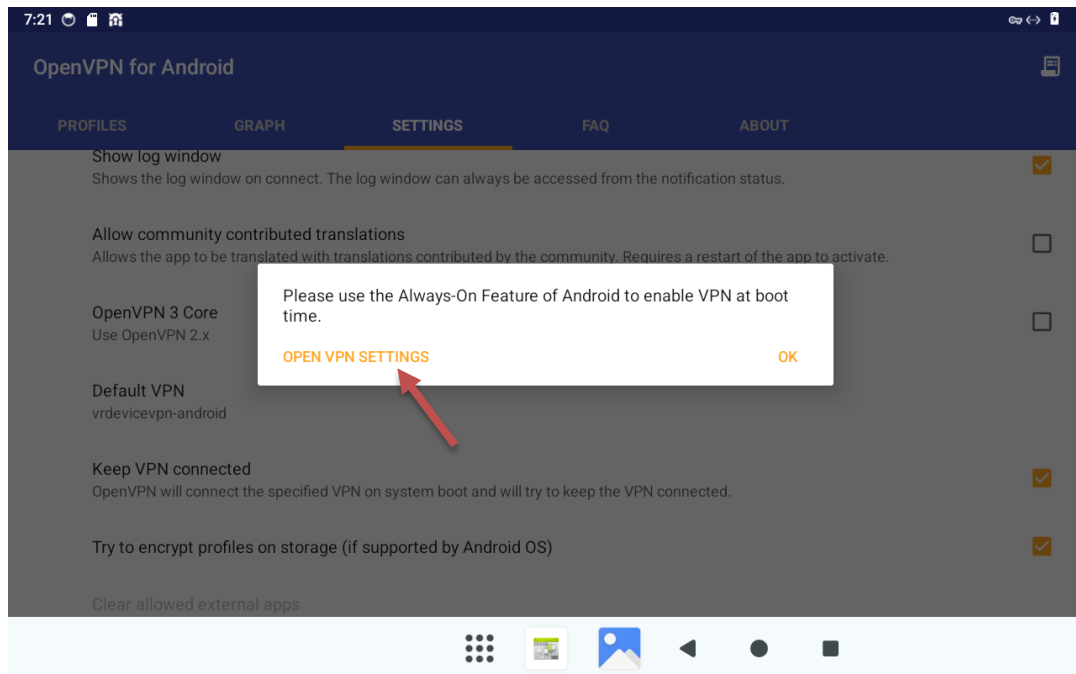


Figure 17. Go to System Settings for Open VPN

In the system settings for VPN, click the configure button:

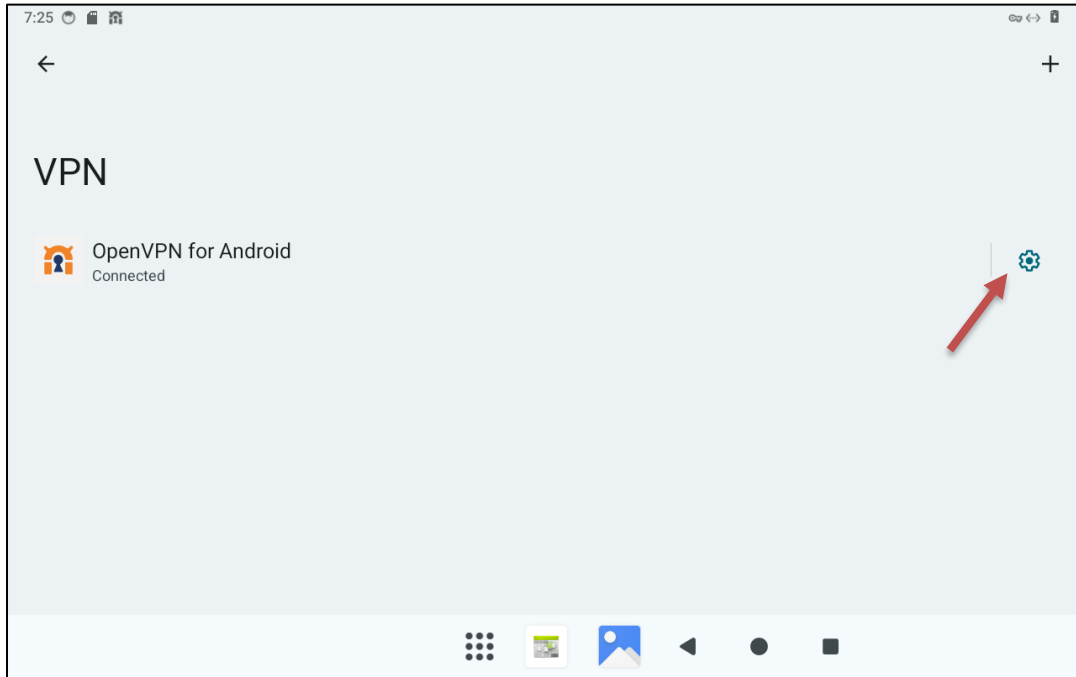


Figure 18. Configure OpenVPN for Android

Enable "Always-on VPN":

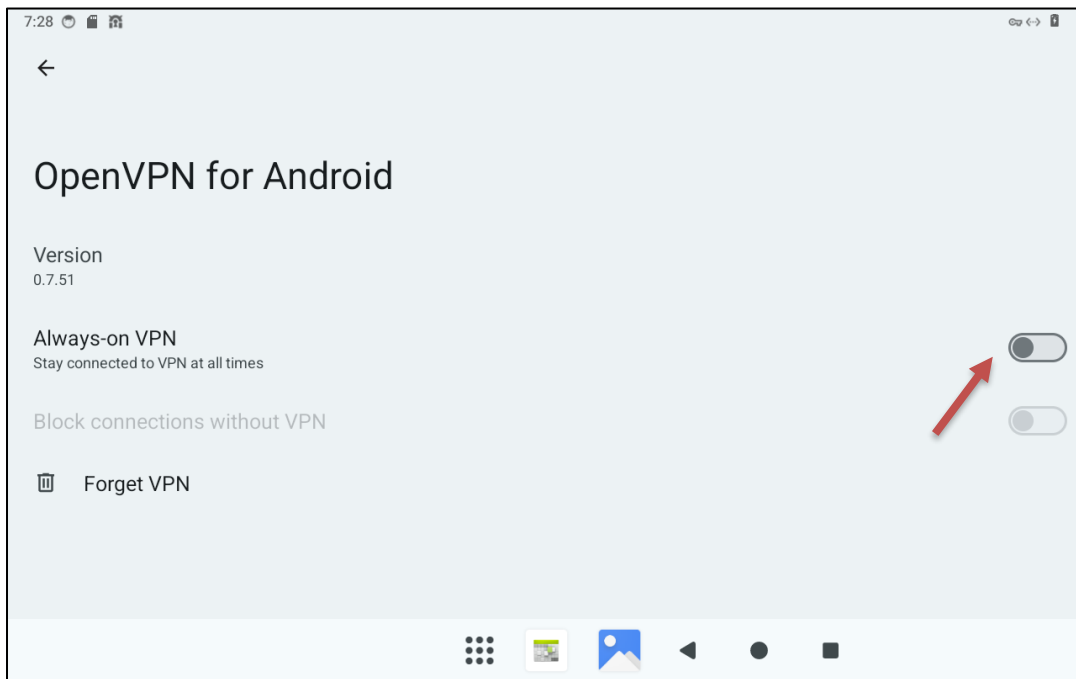


Figure 19. Set VPN to be Connected at All Times

2 Delete Existing OpenVPN

Before add a new OpenVPN profile, you can delete the existing one first:

- Click the edit button on the right to edit.
- Click the delete button on the top right to delete the OpenVPN file.

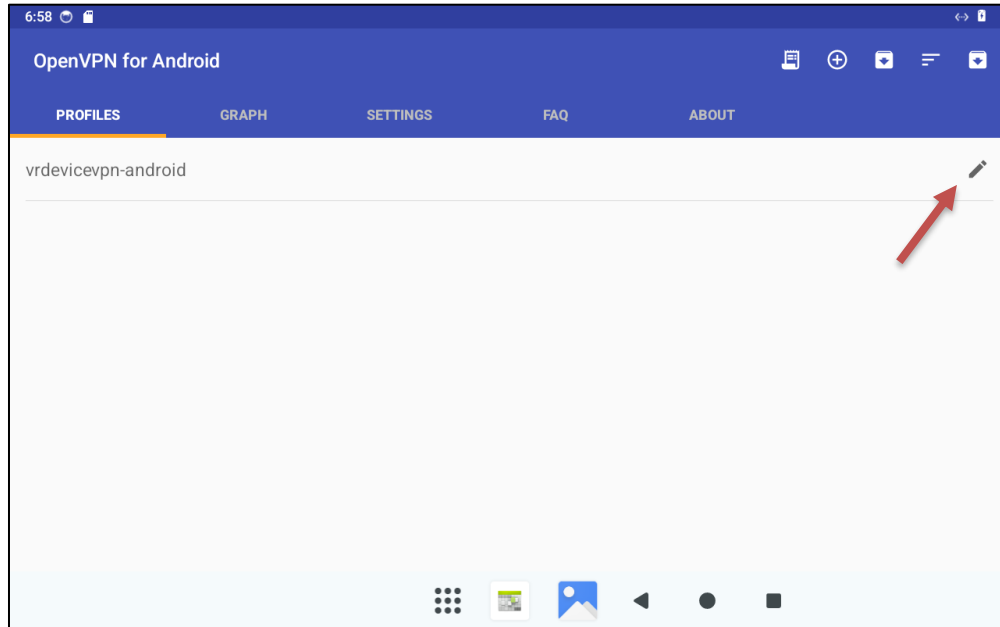


Figure 20. Delete OpenVPN – Edit Profile

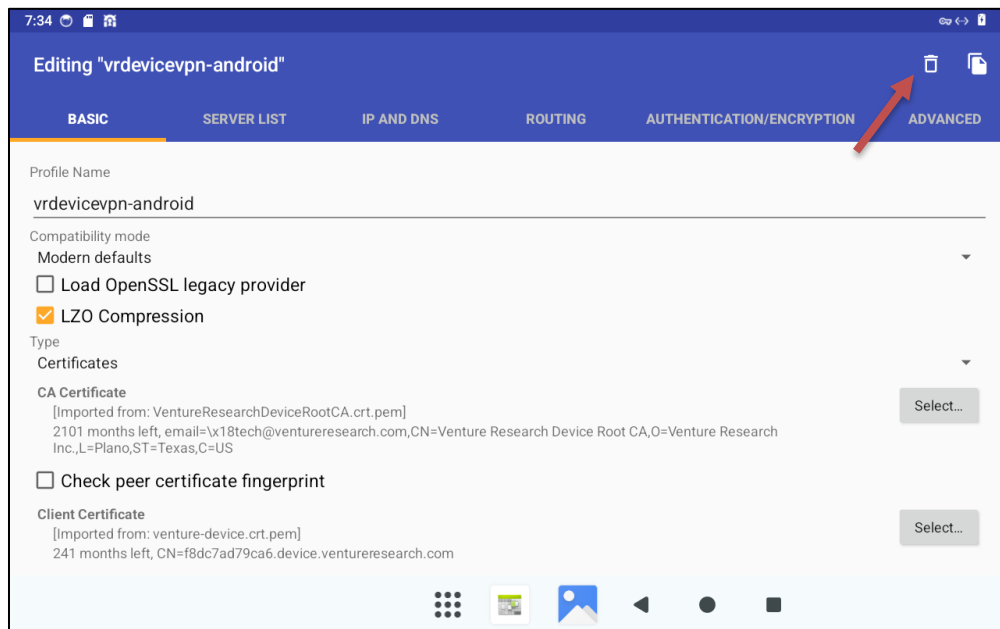


Figure 21. Delete OpenVPN – Delete

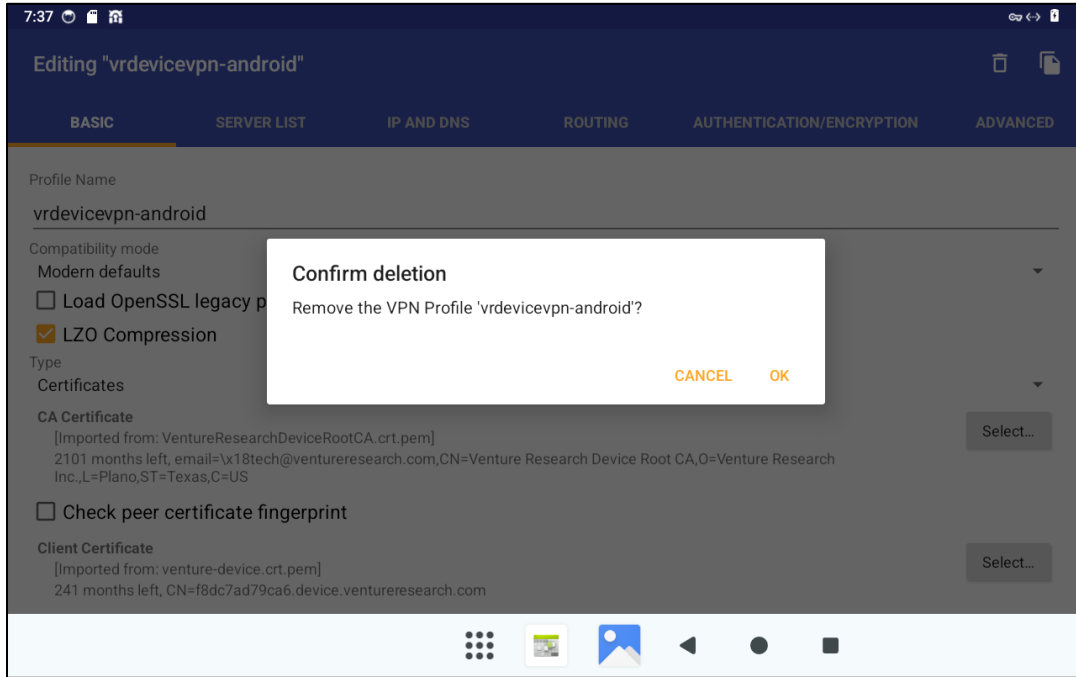


Figure 22. Delete OpenVPN – Delete Confirmation