

On GWN 7000

**Detailed instructions and parameter definitions can be found in our official [GWN 7000 VPN Guide](#) . I will break down the steps through this guide.

Step 1: Generate Self-issued Certificate Authority (CA)

Navigate to System Settings > Cert. Manager > Certificates >> CAs

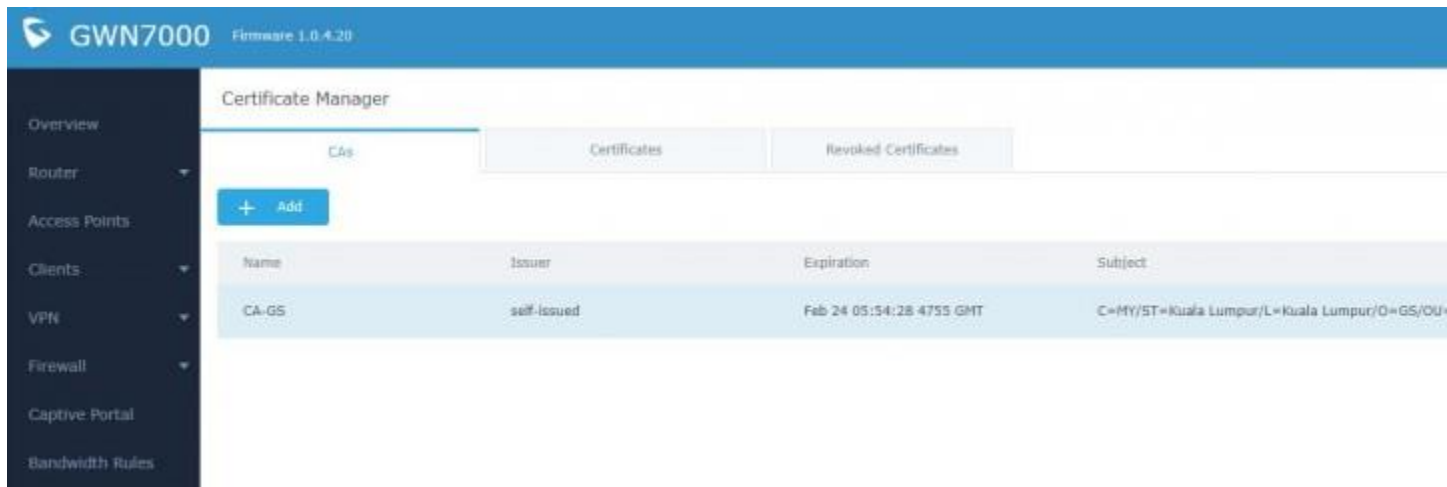


Figure 1 : Step 1 - Create CA and It is named as CA-GS in this example

Step 2: Create user

Navigate to System Settings >> User Manager tab >> Click 'Add' >> to create a new user: ShiYiingGXP2135


Edit


Enabled

PPTP Server


Full Name


Username

Password 

IPSec Pre-Shared Key 

Enable PPTP Client Subnet

OpenVPN Subnet 

[Add new item](#) 

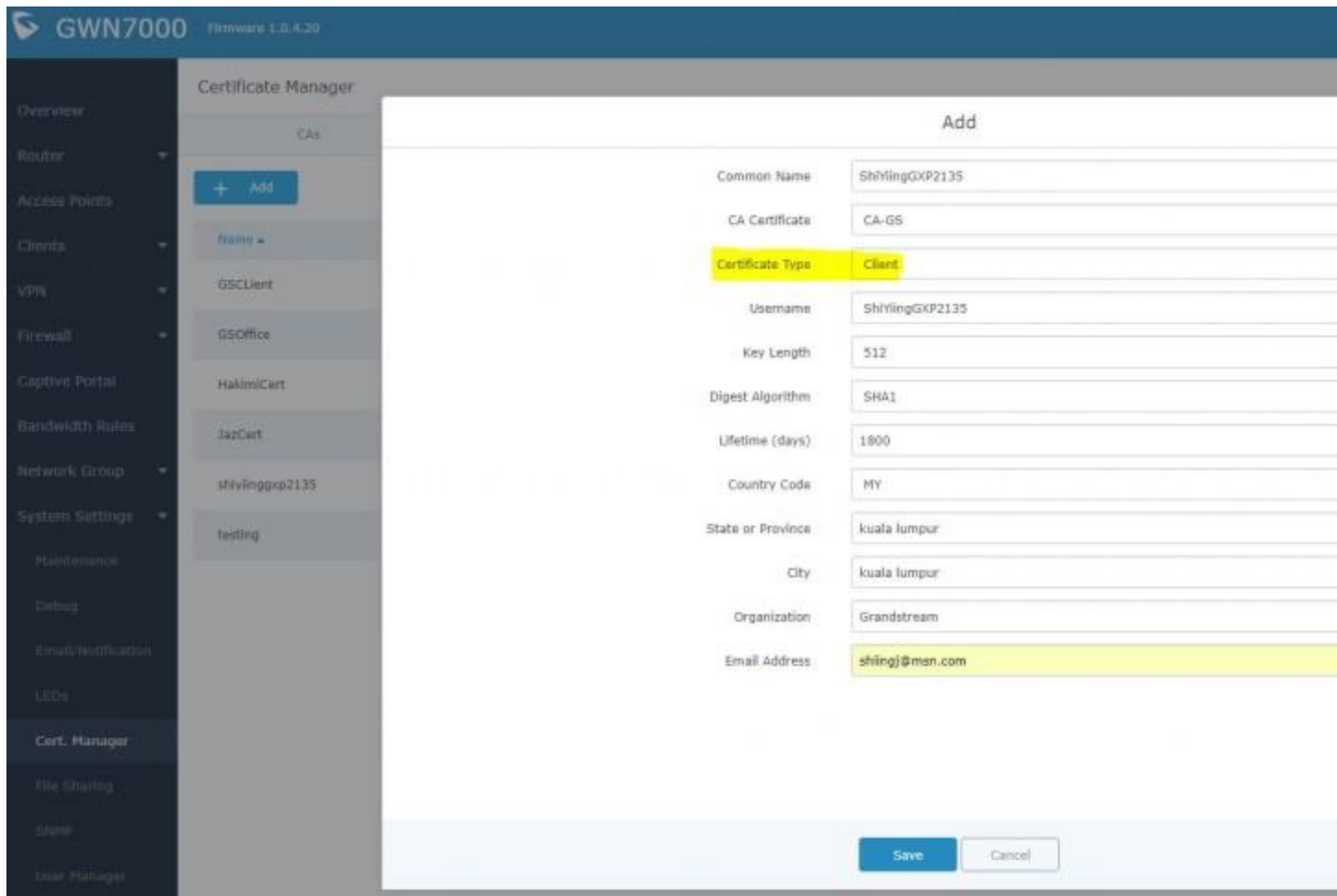
Save

Cancel

Step 2 : Create User in GWN 7000 with username ShiYiingGXP2135

Step 3: Create Client Certificate

Navigate to System Settings > Cert. Manager > Certificates >> Client. Client certificates generated from the GWN7000 need to be downloaded and uploaded to the GXP phone. You can download the files by clicking the Export Key button under Action column.



Step 4: Create OpenVPN Server

Navigate to VPN >> OpenVPN >> Server tab >> Add New >> GS_Office_2. Please note that you must enter the network range that the GWN7000 will be serving from to the OpenVPN® clients in format x.x.x.x/x.

Edit ✕

Configuration
Clients

Enabled

VPN Name

Server Mode

Protocol

Interface

Local Port

Encryption Algorithm

Digest Algorithm

TLS Authentication

Allow Duplicate Client Certificate

Certificate Authority

Server Certificate

IPv4 Tunnel Network

Redirect Gateway

Save
Cancel


Figure 4 : Enter network range for OpenVPN clients under IPv4 Tunnel Network when you create VPN server

On GXP Phones

Step 5: To configure the OpenVPN on the phone, you will need to have 2 certificates files and 1 key file.

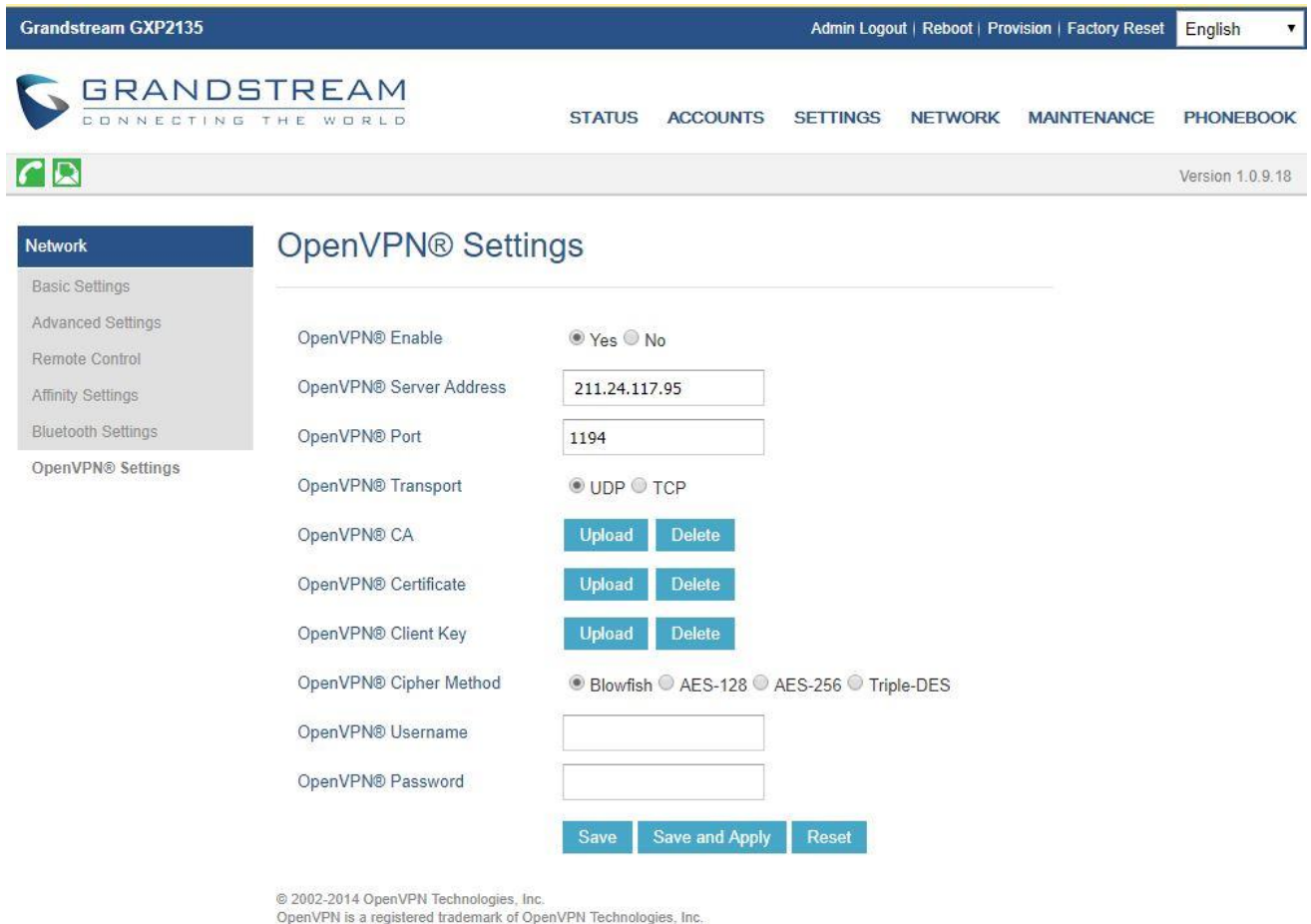
These files can be downloaded from GWN 7000 Web UI >> System Settings > Cert. Manager > Certificates >> Client

1. Certificate Authority (.crt file)
2. Client certificate (.crt file)
3. Client key (.key file)

-  ca0.crt
-  ca0.key
-  shiyiinggxp2135.key
-  shiyiinggxp2135.crt

Step 6: Input the following details:

1. Please set “OpenVpn Server Address” to the Public IP address of GWN. You can find this info in GWN 7000 Web UI >> Router >> Status >> Wan Status (Screen shot)
2. Upload Certificate Authority (.crt file)
3. Upload client certificate (.crt file)
4. Upload client key (.key file)
5. Save and Apply this



The screenshot shows the Grandstream GXP2135 web interface. At the top, there is a navigation bar with 'Grandstream GXP2135' on the left and 'Admin Logout | Reboot | Provision | Factory Reset | English' on the right. Below this is the Grandstream logo and a menu with 'STATUS', 'ACCOUNTS', 'SETTINGS', 'NETWORK', 'MAINTENANCE', and 'PHONEBOOK'. The 'OpenVPN® Settings' page is displayed, featuring a left sidebar with 'Network' selected and sub-items like 'Basic Settings', 'Advanced Settings', etc. The main content area contains the following settings:

- OpenVPN® Enable:** Radio buttons for Yes (selected) and No.
- OpenVPN® Server Address:** Text input field containing '211.24.117.95'.
- OpenVPN® Port:** Text input field containing '1194'.
- OpenVPN® Transport:** Radio buttons for UDP (selected) and TCP.
- OpenVPN® CA:** 'Upload' and 'Delete' buttons.
- OpenVPN® Certificate:** 'Upload' and 'Delete' buttons.
- OpenVPN® Client Key:** 'Upload' and 'Delete' buttons.
- OpenVPN® Cipher Method:** Radio buttons for Blowfish (selected), AES-128, AES-256, and Triple-DES.
- OpenVPN® Username:** Text input field.
- OpenVPN® Password:** Text input field.

At the bottom of the settings area are three buttons: 'Save', 'Save and Apply', and 'Reset'. A copyright notice at the very bottom reads: '© 2002-2014 OpenVPN Technologies, Inc. OpenVPN is a registered trademark of OpenVPN Technologies, Inc.'

Figure 6 : OpenVPN Setting in GXP phones

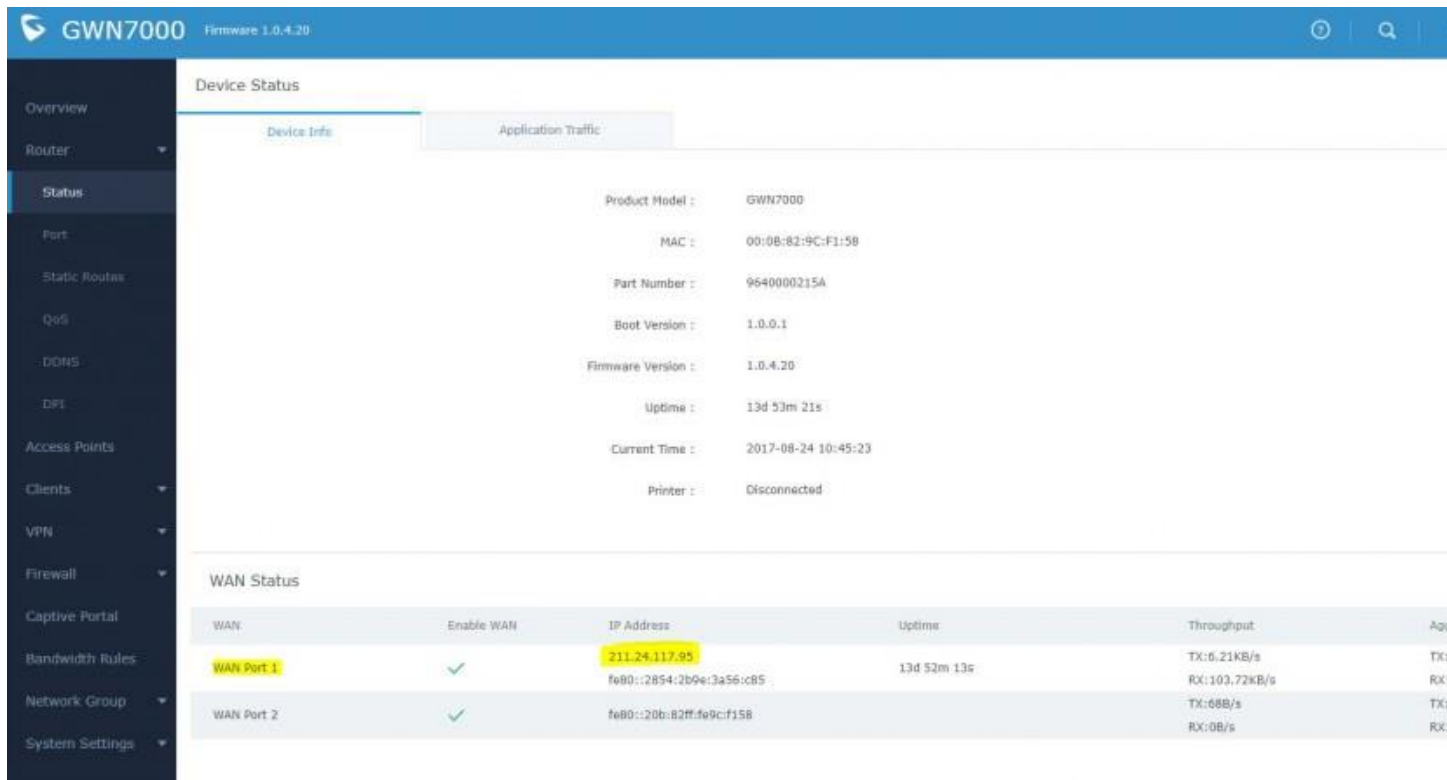


Figure 7 : Refer WAN Port IP address of GWN 7000 to OpenVPN Server Address under GXP's Phone OpenVPN Setting

Step 7: Save and Apply the Settings, followed by a phone reboot

Step 8: Obtain GXP's OpenVPN IP address from GWN 7000

Navigate to Phone Menu >> Status >> Network Status >> OpenVPN IP.

In this example, the OpenVPN IP assigned is 10.0.0.14 This is because we define 10.0.0.1/24 under IPv4 Tunnel Network when we create VPN Server in GWN 7000.

Now, you can use this OpenVPN IP to access phone web interface and verify the Network Status page >> OpenVPN IP.

The screenshot shows the Grandstream GXP2135 web interface. The browser address bar displays '10.0.0.14/#page:status_network'. A warning banner at the top states: 'You are currently using the default password to login. We strongly recommend you to update y...'. The page title is 'Grandstream GXP2135'. The Grandstream logo and tagline 'CONNECTING THE WORLD' are visible. Navigation links for 'STATUS', 'ACCOUNTS', and 'SETUP' are present. A sidebar menu on the left includes 'Status', 'Account Status', 'Network Status', 'System Info', 'Programmable Keys Status', 'Virtual Multi-Purpose Keys', and 'Softkeys'. The main content area is titled 'Network Status' and contains the following table:

MAC Address	00:0B:82:8A:A6:88
IP Setting	Static IP
IPv4 Address	192.168.0.20
IPv6 Address	0:0:0:0:0:0:0:0
OpenVPN® IP	10.0.0.14
Subnet Mask	255.255.255.0
Gateway	192.168.0.1
DNS Server 1	8.8.8.8
DNS Server 2	192.168.0.1
PPPoE Link Up	Disabled
NAT Type	Unknown NAT

Below the Network Status table is a section titled 'NAT Traversal' with the following table:

Account 1	VPN
Account 2	No
Account 3	No
Account 4	No

Figure 8 : GXP phone's OpenVPN IP will show in Network Status page of the web interface

On the other hand, you can find out how many OpenVPN Client connected successfully in GWN 7000.

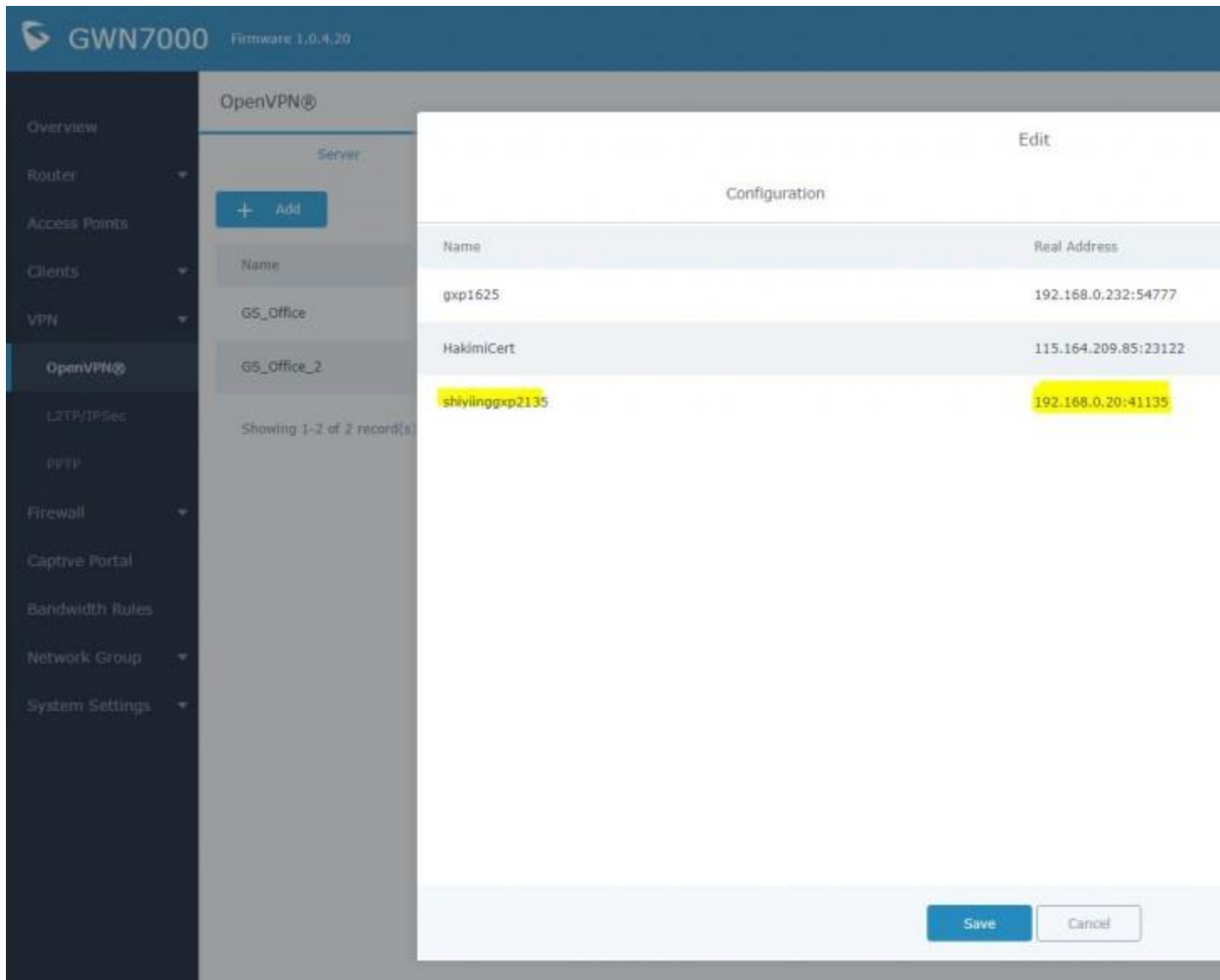


Figure 9 : Navigate to GWN 7000 Web Interface >> VPN >> OpenVPN >> click Edit button >> Clients tab >> to find out the client's real address

Step 9: Register the phone to UCM through VPN connection

Navigate the GXP Web UI >> Account >> Network Setting >> NAT traversal >> Select VPN

Hence you will be able to see the phone successfully registered to the SIP Server (UCM 6104)

The screenshot shows the 'Manage Extensions' interface in a system labeled 'UCM6104'. On the left is a dark sidebar menu with options: 'System Status', 'Extension / Trunk', 'Extensions' (highlighted), 'Extension Groups', 'Analog Trunks', 'VoIP Trunks', 'SLA Station', and 'Outbound Routes'. The main area has a title 'Manage Extensions' and a toolbar with buttons: '+ Add', 'State', 'Delete', 'Import', 'Export', 'E-mail Notification', and 'Follow Me Options'. Below the toolbar is a table with the following data:

<input type="checkbox"/>	Status	Presence Status	Extension #	CallerID Name	Message	Terminal Type
<input type="checkbox"/>	Idle	Available	1006		Messages: 0/0/0	SIP
<input type="checkbox"/>	Idle	Available	1014		Messages: 0/0/0	SIP
<input type="checkbox"/>	Idle	Available	1818	Wonder Woman	Messages: 0/0/0	SIP
<input type="checkbox"/>	Idle	Available	1919	Iron Man	Messages: 0/0/0	SIP
<input type="checkbox"/>	Idle	Available	2000	monkey king	Messages: 0/0/0	SIP

Figure 11 : You will notice that the OpenVPN IP is shown in the UCM page