**Spectralink**
Quick Network
Connect (QNC) Guide

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The Spectralink 84-series phone is a wireless device; however, it will not have any wireless configuration by default; it would not understand what network it is going to be set up with. There is a device called the Spectralink Quick Network Connect (QNC), where you can configure the Spectralink 84-series wireless setting as described in this QNC guide. The QNC allows you to configure up to 4 Spectralink 84-series phones at a time. The main purpose of this QNC guide is to enable the phone to acquire the IP address from the wireless network.

QNC device has a built-in IP address of 192.168.1.1. You need to connect the QNC directly with the PC point to point. You will need to define a static IP address in the PC in order to communicate with the QNC. Once connected, the QNC can be browsed with the address 192.168.1.1.

In the first screen, we need to select Spectralink 84-series.

There are five wireless security types configurable on the Spectralink phones. You can choose to use any one of them. The following are two examples of configuring two of the five Wireless security types.

*Note: Step A must be chosen for each Wireless Security Type and steps B, C, D, and E are common to all.*

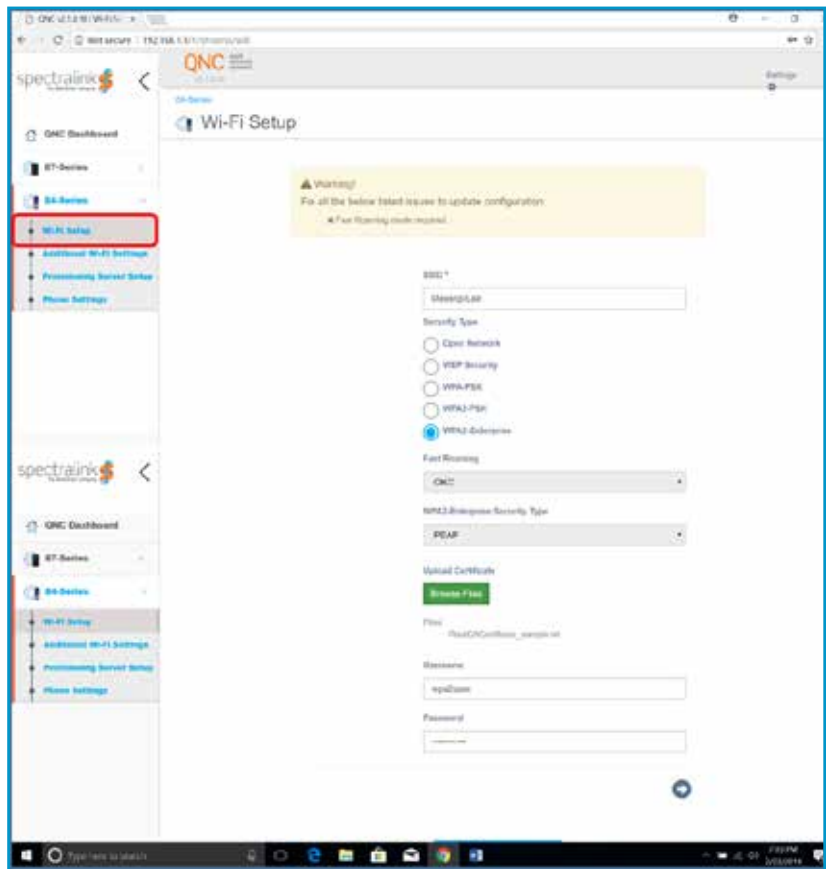Wireless Security type configurations:

a. **WPA2- Enterprise Wireless Security Type**

   In the Wi-Fi settings,

   • Put the SSID. Below it is shown as 'MasergyLab'.
   • Choose the security type. Below, it is WPA2-Enterprise.
   • Fast Roaming is 'OKC'
   • WPA2-Enterprise security type is chosen to PEAP.
   • If PEAP is chosen, then we need to load Root CA certificate of the authenticating server. We can do that by choosing 'Upload Files'. If we choose some other security types such as WPA2-PSK, we need not load any certificate. *NOTE: The certificate file must be in TEXT format. If you upload certificate in CER or binary (\*.cer) format, it will let you upload it; however, when the certificate is in CER format, the data from the QNC cannot be loaded to the phone.*
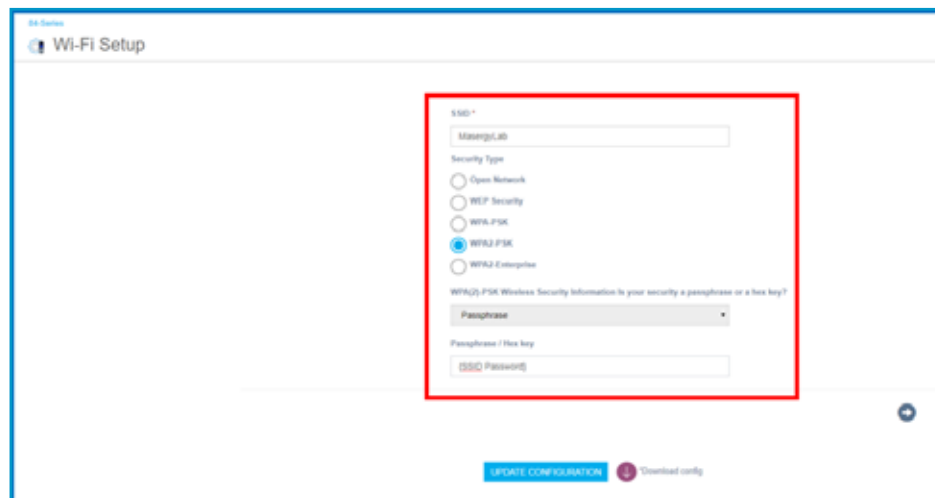   • Then we need to put 'Username' and 'Password' which can authenticate with the radius server and the user can log in.
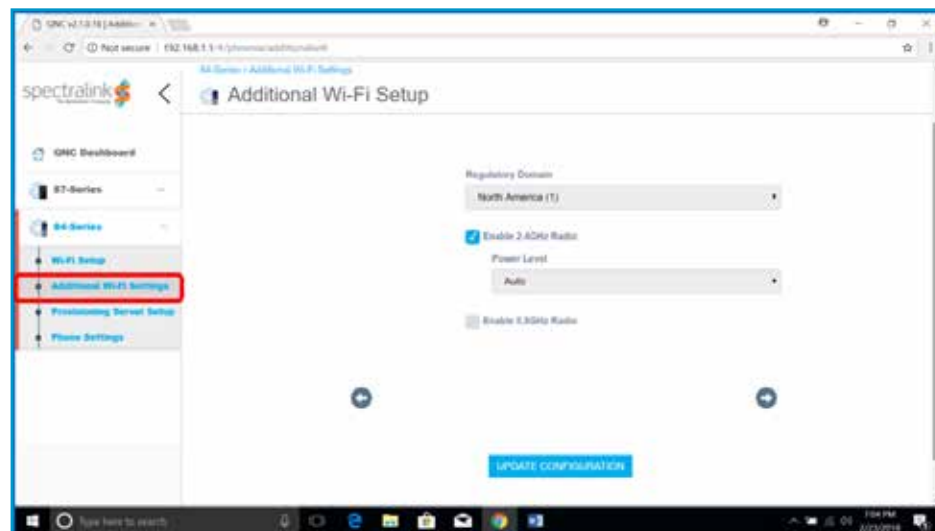
b. **WPA2-PSK Wireless Security Type**

In the Wi-Fi settings,

- Put the SSID. Below it is shown as 'MasergyLab'.
- Choose the security type. Below, it is WPA2-PSK
- Put the appropriate paraphrase (passcode) for the network SSID.



c. **Additional Wi-Fi Setup**

Regulatory domain is region based. It is chosen as 'North America'. Then, we can chose the frequency level 2.4 GHz or 5.0 GHz.



d. **Provisioning Server Setup.**

You can define the provisioning serve in one of the two ways – DHCP or static. If it is DHCP, it will automatically grab the server. Below, we have shown how you may enter a static server. The server is 'ftp.broadcore.com'.
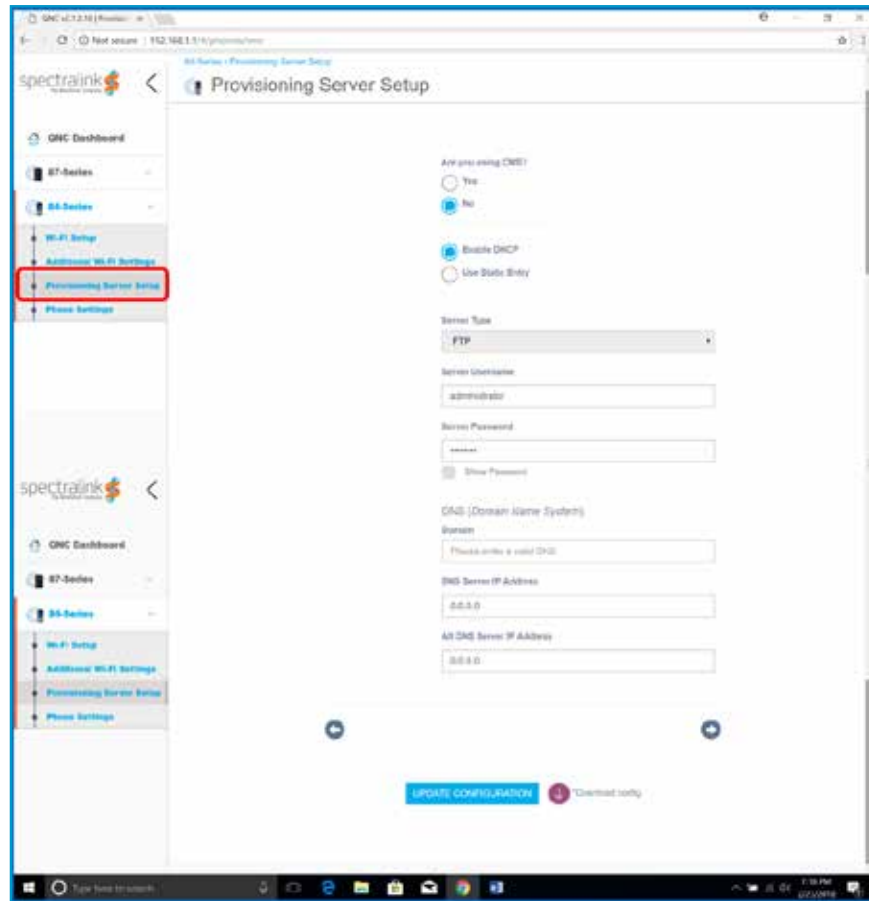
**IMPORTANT:**

In some cases, you may need to enter the username and password for the FTP user. The default username and password for the Spectralink is:
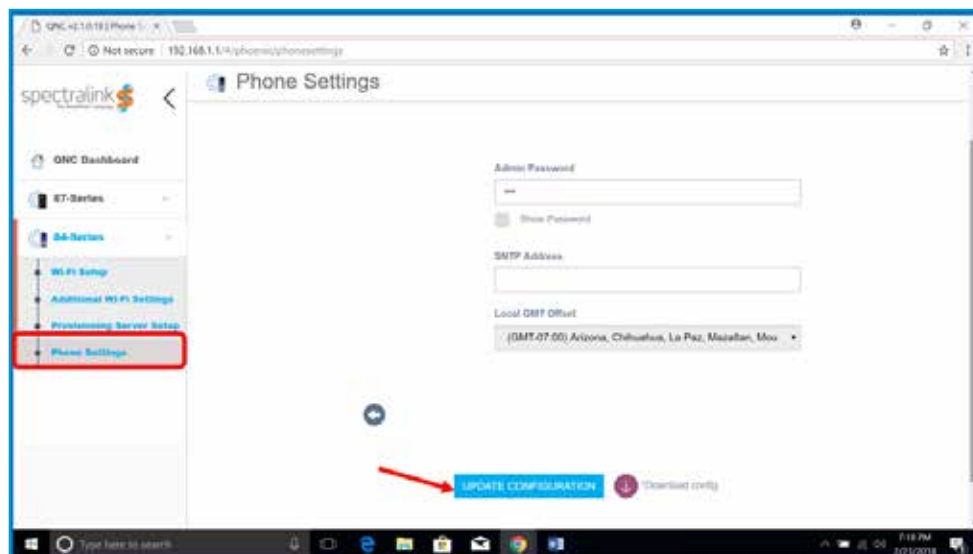
Username: *adminstrator*

Password: *admin123*
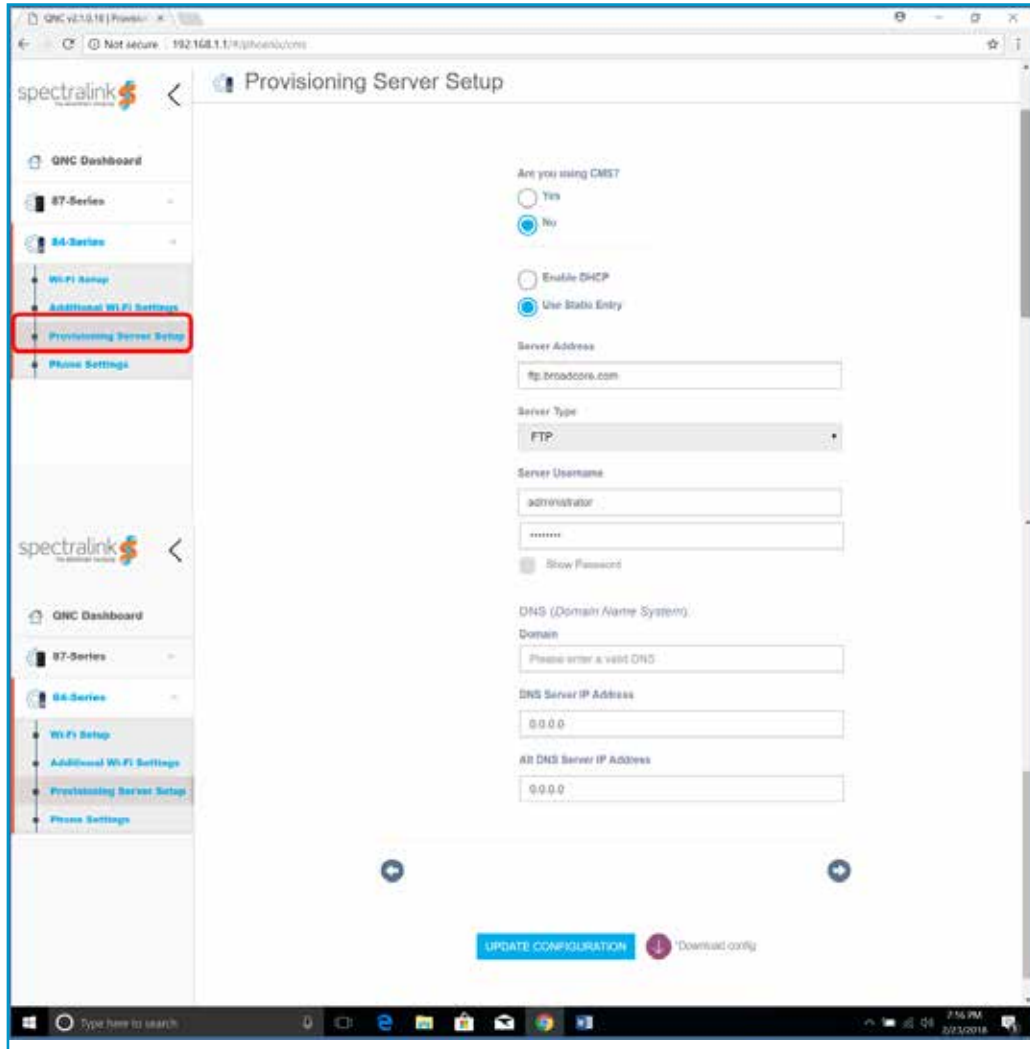


Or, as below by enabling the DHCP, whereby the phones grabs the server using Option 66. We may also define DNS or SNTP if required.

e. **Transferring above data to the phone:**
At the end of the QNC configuration, please click on the '**UPDATE CONFIGURATION**' at the bottom center of the screen. This saves the configuration with the QNC.

Now, the wireless data that QNC has will need to be transferred (downloaded) to the phone. The transfer of data is done using a USB cable which comes with the QNC device. (You can connect up to 4 phones at a time using the 4 USB ports, provided you have four connecting cables.) In order to download the wireless configuration from the QNC, the phone must be done in a FACTORY RESET mode. Normally, a brand new phone is already factory reset.

Factory reset procedure (if needed):
- Go to the phone menu:
- Settings ► Advanced Settings ►
- Password: 456 (the default password is 456 unless it was changed by someone).
- Administration Settings ► Reset to Defaults ► Reset to Factory ► Yes

The factory reset phone needs to be connected with the QNC with the USB cable. As you connect the phone with the QNC, the phone will make a peculiar sound, and starts rebooting. You should see the phone rebooting within 15 seconds. At this point, you will no longer need to keep the phone connected to the QNC. Even if you keep the phone connected, it will not matter. (Also, when you start factory resetting the phone should not matter while it is connected to the QNC).

If the phone does not reboot, you may need to manually update configuration as follows:
- Go to the phone menu:
- Settings ► Basic Settings ► Update Configuration

The phone should now start rebooting. If not, there could be some issue.

As the phone reboots, it will take the wireless information, and the phone will get an IP address. To check if the phone gets the IP address:
- Go to the phone menu:
- Settings ► Status ► Network ► TCP/IP Parameters

There you will see the IP address, subnet mask, and the default gateway per your wireless network configuration. **Again, the main purpose of this QNC guide is to enable the phone to acquire the IP address from the wireless network.**

**Manual Configuration of the Wireless Phone (without the QNC)**

Except for loading certificate (if necessary), you can configure/edit the phone's wireless settings manually – without using the QNC – albeit this could be cumbersome for some. In the phone, we can navigate to the following:

Settings ► Advanced Settings ► Administration ► Network Configuration ► Network Interfaces ► Wi-Fi Menu

Under the Wi-Fi Menu, you should complete the following configurations:

    a. Enabled: Yes
    b. DHCP: Enabled
    c. SSID: {Put the name of your wireless network SSID}
    d. Security: Choose as per customer's configuration: WPA2-PSK, WPA2-Enterprise, etc.

For example:

- If you choose WPA2-PSK above, Click on WPA2-PSK, then, you enter the paraphrase.
- If you choose WPA2-Enterprise, click on WPA2-Enterprise, then data-fill other options as desired.

Here is the example of how you enter passphrase with **WPA2-PSK security.**

You need to go to the security type under the Wi-Fi menu. In the Wi-Fi menu, the security types are:

- **WEP**
- **WPA2-PSK**
- **WPA2-Enterprise**

Click on the "WPA2-PSK" as above. Then, you can enter the passphrase.

It says:

- **PSK Type: Passphrase**
- **Passphrase: *******

You click on the Passphrase, and you will be able to enter the new passphrase.

    e. Radio: Choose either 2.4 Hz or 5.0 Hz and the same **MUST** be enabled.
       Radio ► Regulatory domain: 01 – for North America (SHOULD NOT BE 'None')

## Troubleshooting the QNC Bug

Some of the QNC versions have been found to contain a corrupt configuration file; thanks to the same, the wireless settings could not be downloaded from the QNC to the phone.

Spectralink is going to correct this error in the next release. However, this error can be manually corrected by the following procedure:

1. **Verification of the issue:**
    a. Connect QNC with your PC as usual. Type the following in the browser: http://192.168.1.1/usb/ftp/

       You will see the file 00000000.cfg is with 0 byte. This is the issue and it should have 281 bytes.

The procedure below addresses this particular issue.

2. **Manual Correction:**

    a. SSH into the QNC. IP address 192.168.1.1.

    b. Put the following login credential:
- login: root
- password: raspberry

    c. Delete the above file, then do a shutdown:
- $ rm /media/usb/ftp/00000*.cfg
- $ shutdown now

    d. After 5 seconds. Pull the power plug out. After 5 seconds. Plug it back in.

    e. Do the same verification step (1) above to verify if the file has 281 bytes.