

TP Link TL-WDR3500 setup for the XSCE

Factory Reset

First, if you aren't on factory settings, or you aren't sure if you are, use the reset button to get the router back to the factory settings. On the back of the unit, to the right of the ports, you'll see a button labeled "WPS/Reset." While you're looking back there, make sure no cables are plugged in except the power.

Resetting a router depends on the model, but usually you hold down the reset button for 30 seconds while the router is powered on. After releasing the reset button, the router should reboot into factory settings. However, that procedure doesn't necessarily work all the time, so you might want to go ahead and do a full hard reset instead.

For most routers, a hard reset can be accomplished with the full 30-30-30 procedure. You simply hold the reset button down for 90 seconds total (don't let go of the reset button!) while cycling the power:

1. With the router powered on, hold the reset button down for 30 seconds.
2. Keep holding the reset button down, unplug the router for 30 seconds.
3. Still holding down the reset button, plug the router back in and wait for another 30 seconds.

Release the reset button and set the router down. At this point, I like to unplug the power and go do something else for a couple of minutes, then plug the power back in. Probably not necessary, but it doesn't hurt.

With the factory reset settings, the router will be doing DHCP, so to talk to it, all you need to do is plug an ethernet cable into a LAN port on the router, then plug the other end into an ethernet port on a computer. Don't have any other cables connected. The TP-Link has the credentials on a sticker on the bottom of the unit:

Go to <http://tplinklogin.net> (or <http://192.168.0.1>)

Username: admin Password: admin

Setting up the TP Link for the XSCE

Follow these instructions in order, or you may not be able to talk to the router again and you'll have to factory reset it and start over.

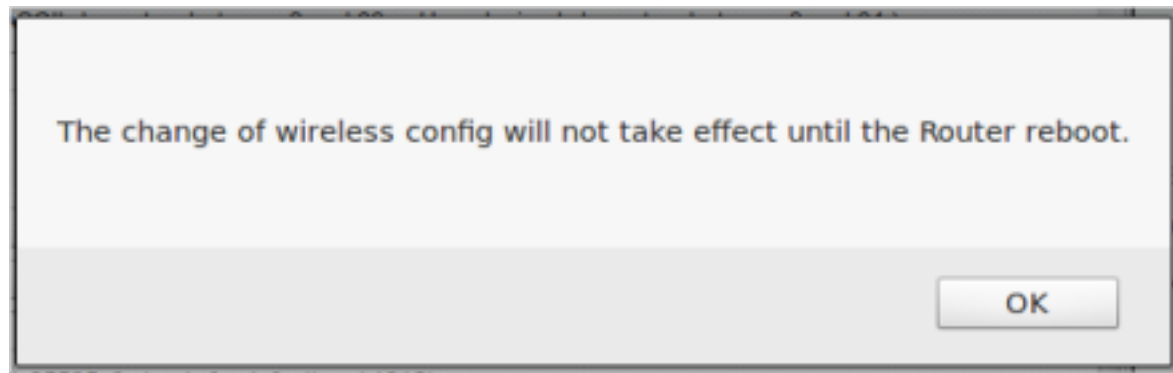
1. Disable wifi security:

On the left hand pane, click on Wireless 2.4GHz, then under the menu that expands in the left hand pane, select Wireless Security. Click "Disable Security" then scroll to the bottom of the page and click the "Save" button.

The screenshot shows the TP-Link wireless security configuration interface. On the left is a navigation menu with options like Status, Quick Setup, Network, Dual Band Selection, Wireless 2.4GHz, Wireless 5GHz, DHCP, USB Settings, NAT, Forwarding, Security, Parental Control, Access Control, Advanced Routing, Bandwidth Control, IP & MAC Binding, Dynamic DNS, and System Tools. The 'Wireless Security' section is active, showing three radio button options: 'Disable Security' (selected), 'WPA/WPA2 - Personal (Recommended)', and 'WPA/WPA2 - Enterprise'. The 'WPA/WPA2 - Personal' section is expanded, showing fields for Version (Automatic/Recommended), Encryption (AES), PSK Password (95974569), and Group Key Update Period (0 seconds). The 'WPA/WPA2 - Enterprise' section shows fields for Version (Automatic), Encryption (Automatic), Radius Server IP, Radius Port (1812), Radius Password, and Group Key Update Period (0 seconds). The 'WEP' section shows fields for Type (Automatic), WEP Key Format (Hexadecimal), and a table for WEP keys.

| Key Selected | WEP Key (Password) | Key Type |
|------------------------------|----------------------|---|
| Key 1: <input type="radio"/> | <input type="text"/> | Disabled <input type="button" value="↑"/> |
| Key 2: <input type="radio"/> | <input type="text"/> | Disabled <input type="button" value="↑"/> |

You'll see a popup warning that changes won't be committed until rebooting. That's fine, just click OK.

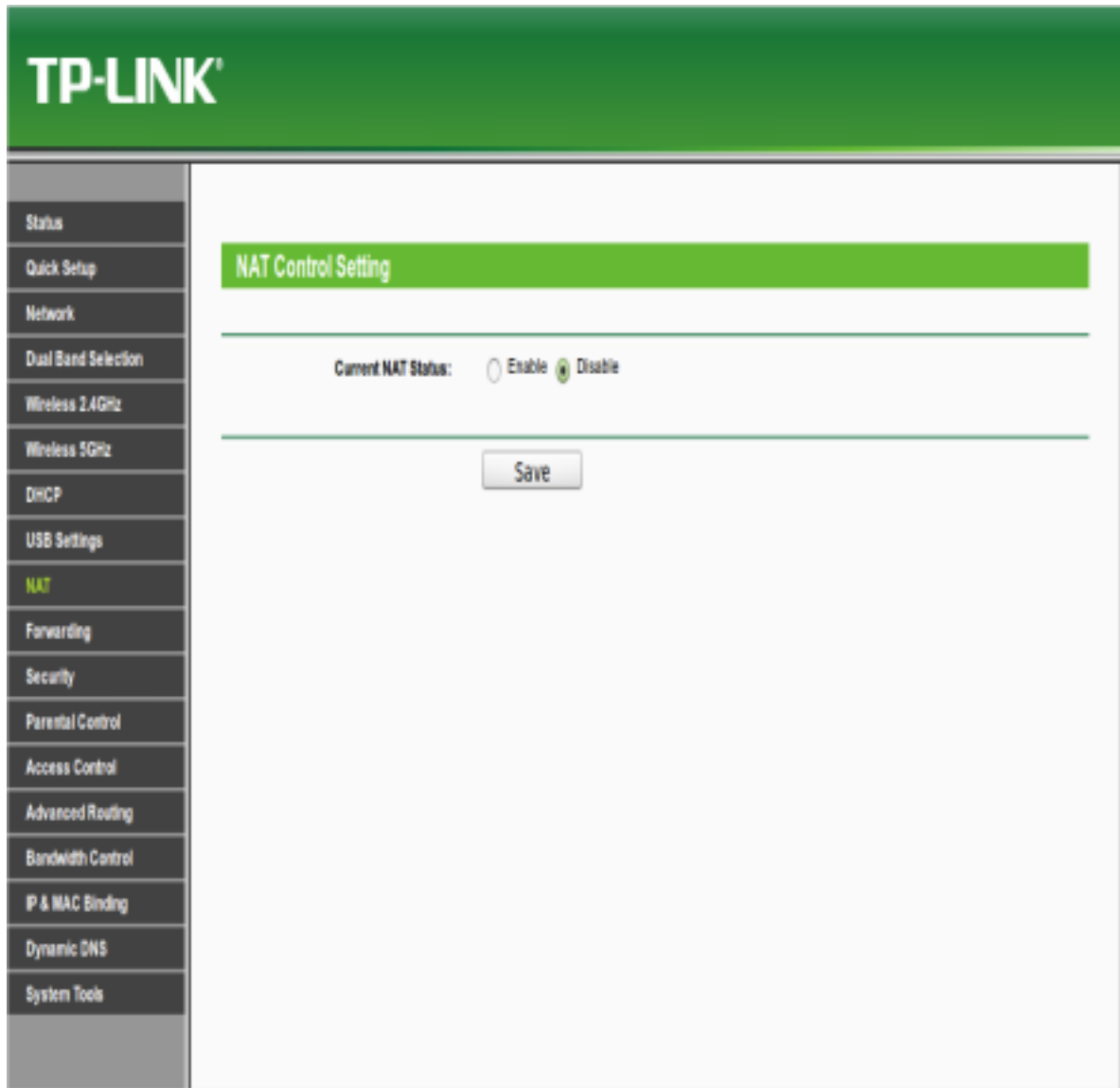


In the left hand pane, underneath the Wireless 2.4 GHz entry, you'll see the Wireless 5GHz entry. Click on that. This procedure is exactly how you disabled 2.4 GHz security. Under Wireless 5GHz, click on Wireless Security. Click the radio button next to "Disable Security." Scroll down, click the "Save" button on the bottom of the page, then click "OK" in the notification popup.

2. Turn off NAT

Next, we need to turn off NAT (Network Address Translation). Since the XSCE does NAT, the router doesn't need to do it. On the left hand pane, click NAT.

Next to "Current NAT Status," click "Disable." Click Save.



3. Turn off DHCP

Now we need to turn off DHCP. You may wonder if we can still talk to the router if we disable DHCP at this point. Yes, we're not going to reboot it until later, so we'll still have an IP from the router and can still talk to it.

In the left hand pane, click DHCP. Next to “DHCP Server” click the radio button next to “Disable.”

TP-LINK

Status

Quick Setup

Network

Dual Band Selection

Wireless 2.4GHz

Wireless 5GHz

DHCP

- DHCP Settings

- DHCP Clients List

- Address Reservation

USB Settings

NAT

Forwarding

Security

Parental Control

Access Control

Advanced Routing

Bandwidth Control

IP & MAC Binding

Dynamic DNS

System Tools

DHCP Settings

DHCP Server: Disable Enable

Start IP Address:

End IP Address:

Address Lease Time: minutes (1-2880 minutes, the default value is 120)

Default Gateway: (optional)

Default Domain: (optional)

Primary DNS: (optional)

Secondary DNS: (optional)

Click “Save.” You’ll get a popup warning that DHCP changes won’t take effect until you reboot the router. That’s fine, just click OK.

- Status
- Quick Setup
- Network
- Dual Band Selection
- Wireless 2.4GHz
- Wireless 5GHz
- DHCP
 - DHCP Settings
 - DHCP Clients List
 - Address Reservation
- USB Settings
- NAT
- Forwarding
- Security
 - Parental Control
 - Access Control
 - Advanced Routing
 - Bandwidth Control
 - IP & MAC Binding
 - Dynamic DNS
- System Tools

DHCP Settings

DHCP Server: Disable Enable

Start IP Address: 192.168.1.1

End IP Address: 192.168.1.254

Address Lease Time: 120

Default Gateway: 192.168.1.1

Default Domain:

Primary DNS: 0.0.0.0

Secondary DNS: 0.0.0.0

Save

Note: The change of DHCP config will not take effect until the Router reboots!

Cancel OK

DHCP S

The Router provides the DHCP service to the LAN and also acts as a DHCP client for the WAN interface (PPPoE or Dynamic IP).

- DHCP Client: The Router obtains IP address, subnet mask, default gateway, and DNS server address from the ISP.
- DHCP Server: The Router provides IP address, subnet mask, default gateway, and DNS server address to the LAN.

Note: To use the DHCP Client function, please select "Obtain IP Address" and click "Save".

The page will warn you again that the DHCP change won't take effect until you reboot the router. That's fine, we don't want to reboot yet.

TP-LINK

Status

Quick Setup

Network

Dual Band Selection

Wireless 2.4GHz

Wireless 5GHz

DHCP

- DHCP Settings

- DHCP Clients List

- Address Reservation

USB Settings

NAT

Forwarding

Security

Parental Control

Access Control

Advanced Routing

Bandwidth Control

IP & MAC Binding

Dynamic DNS

System Tools

DHCP Settings

DHCP Server: Disable Enable

Start IP Address:

End IP Address:

Address Lease Time: minutes (1-2880 minutes, the default value is 120)

Default Gateway: (optional)

Default Domain: (optional)

Primary DNS: (optional)

Secondary DNS: (optional)

The change of DHCP config will not take effect until the Router reboots, please [click here](#) to reboot.

4. Set the Router's IP in the XSCE's Range

Now, for the last task of the setup. We need to put the router on an IP address in the XSCE's static IP range so we can talk to it once we've connected it to a working XSCE. The range for static devices on the XSCE is 172.18.126.0/24 with the netmask 255.255.224.0.

On the left hand pane, click on Network. Under Network in the left hand pane, click on LAN.

You'll see two fields:

1. "IP address" where you can enter in an XSCE static IP address.
2. Subnet Mask: Select "Other Mask" from the dropdown box to open up a box where you can manually enter in the XSCE's netmask.

You can enter in any IP from 172.18.126.2 to 172.18.126.253. but I like to start at 172.18.126.100 because it's easy to remember. For example, if I have two APs on the XSCE's LAN, I put the second one on 172.18.126.101. The XSCE's DHCP server has 172.18.126.0/24 set aside for static IPs, so it's best practice to use an address in that range. Whatever IP address you set it to, make a note of it, as you will need it later.

Status

Quick Setup

Network

- WAN

- LAN

- MAC Clone

Dual Band Selection

Wireless 2.4GHz

Wireless 5GHz

DHCP

USB Settings

NAT

Forwarding

Security

Parental Control

Access Control

Advanced Routing

Bandwidth Control

IP & MAC Binding

Dynamic DNS

System Tools

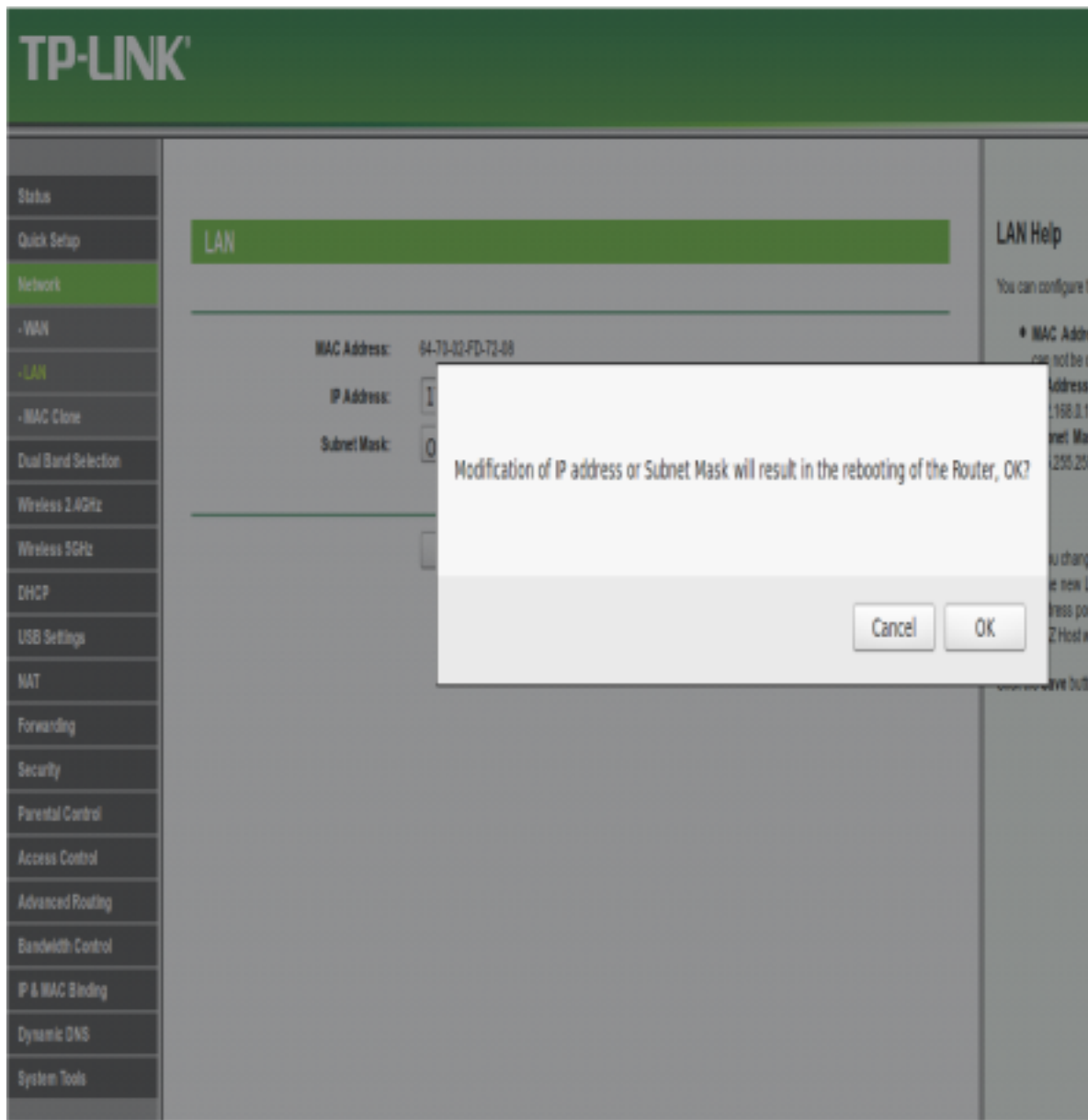
LAN

MAC Address: 64-70-02-FD-72-08

IP Address:

Subnet Mask:

Click the Save button.



Now the router really, really has to reboot. We're not going to be able to connect to it again until it's functioning as the XSCE's AP. But that's it for the initial configuration.

Wait a minute or so for the router to reboot, then unplug the power and wait a couple of minutes. Plug it back in. Connect an ethernet cable to a LAN port on the router and connect a USB ethernet adaptor to the other end of the cable. During the XSCE install instructions, when it tells you to insert a USB ethernet adaptor into the XSCE, you're ready to go. Don't forget to unplug the ethernet cable from your computer to the router, then connect your computer back to your usual connection.

Security settings and other concerns

Once the XSCE is up and running, and you've made sure clients can connect and everything's working OK, log into the router's web interface.

From the XSCE or from a client connected to the XSCE, you can go to <http://172.18.126.100> (or whatever IP address you set it to) to log in. Set up wifi encryption (if desired) and change the router login credentials (highly recommended).

You may be wondering why we bothered to turn off wifi encryption to begin with. It's to eliminate the possibility of a wifi encryption issue in case a client can't get an IP from the XSCE's DHCP server. We need to make absolutely sure the router/AP isn't the source of an issue. Once we've determined everything is working, then we can enable wifi encryption if desired.