If you get stuck...

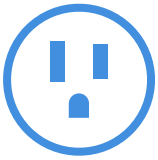
PCNA Network Troubleshooting Guide

Use this document if something went wrong with your network setup. By now, you should have put together your PCNA network and connected it to the Internet through a fiber network box, cable or DSL modem, or Ethernet network port. After you complete each of the following steps, test your Internet connection. If you are unable to connect, go to the next step.

Overview of Troubleshooting Steps

STEP 1  Renew Network Host Configuration

STEP 2  Restart Computer

STEP 3  Verify Network Power

STEP 4  Verify Ethernet Connections

STEP 5  Factory Reset Network

STEP 6  Resolve Router Conflicts

STEP 7  Contact Your Internet Service Provider

STEP 8  Contact SnapAV Technical Support

STEP 1 Renew your computer's network host configuration.

1. From the **Apple** () menu, click **System Preferences**.
2. In the **System Preferences** window, click **Network**.
3. In the list on the left, click the ***Ethernet connection*** that is labeled, "Connected."
4. Click **Advanced**.
5. On the **TCP/IP** tab, click **Renew DHCP Lease**.
6. Open a web browser and test your Internet connection by navigating to www.snapav.com

1. Right-click the **Start** menu () and click **Windows PowerShell** or **Command Prompt**.
2. Type **ipconfig /release** and press **Enter**.
3. Type **ipconfig /renew** and press **Enter**.
4. Open a web browser and test your Internet connection by navigating to www.snapav.com

STEP 2 Restart your computer.

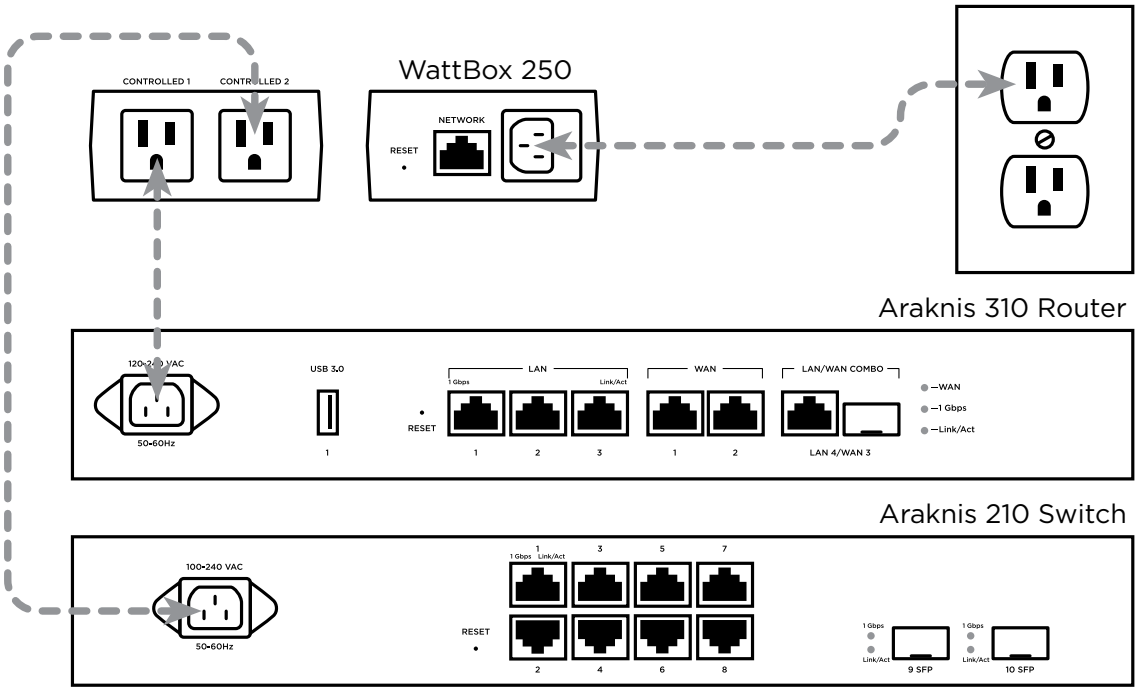
1. From the **Apple** () menu, click **Restart**.
2. After your computer restarts, open a web browser and test your Internet connection by navigating to www.snapav.com

1. Right-click the **Start** menu () and click **Shutdown or sign out** > **Restart**.
2. After your computer restarts, open a web browser and test your Internet connection by navigating to www.snapav.com

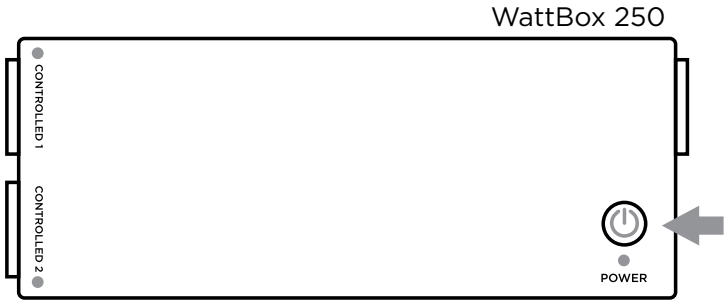
STEP 3 Verify the network is powered on.

a Verify the power cords for each device are firmly connected according to the diagram below.

Note: In countries that use 240VAC, the WattBox 250 is substituted with a Pakedge P2E managed power unit.



b Power cycle the network by pressing the on/off button on the WattBox 250, both controlled outlets will turn off. Wait five seconds and then press the on/off button again, the WattBox 250 will sequentially power on each network device. After a few minutes, your network will be completely powered on again.



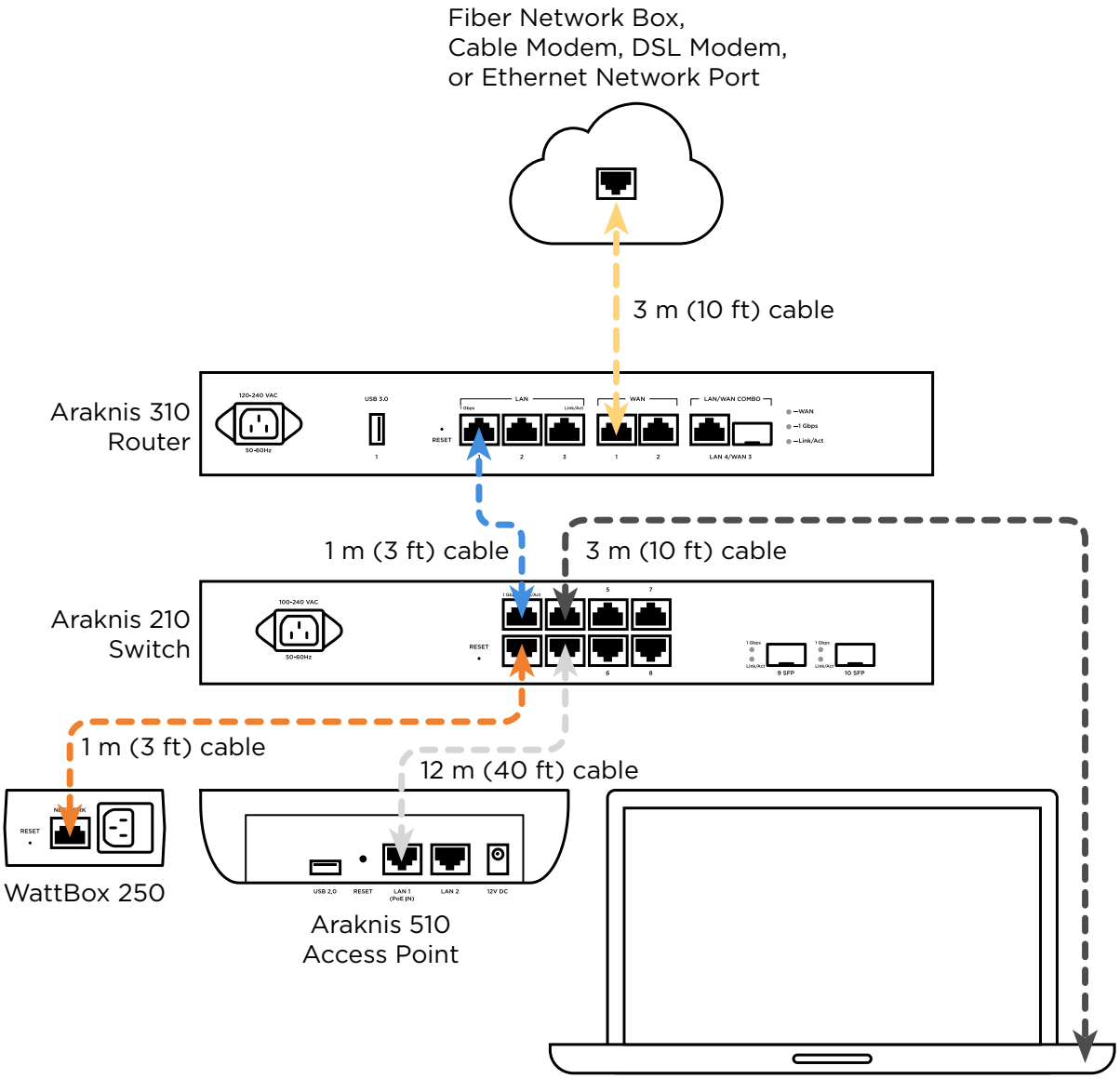
Note: In countries that use 240VAC, unplug the Pakedge P2E from its outlet, wait fives seconds and then plug it back in again. The Pakedge P2E will sequentially power on each network device. After a few minutes, your network will be completely powered on again.

c Verify the power indicator LEDs are illuminated on each device. Repeat **Step 1: Renew your computer's network host configuration**, to test your Internet connection.

STEP 4 Verify the Ethernet cables are properly connected.

Use the diagram below to verify that you have properly connected your networking equipment. Verify that each Ethernet cable is securely seated in the correct port.

After you verify the Ethernet cables are properly connected, repeat **Step 1: Renew your computer's network host configuration**, to test your Internet connection.

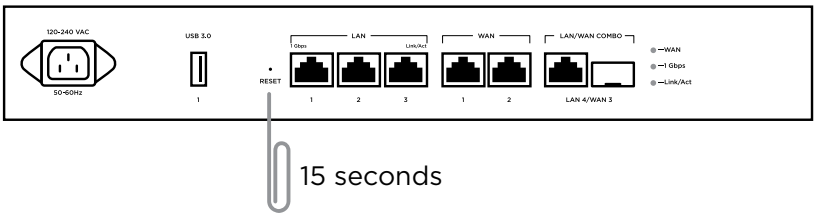


STEP 5 Factory reset network equipment.

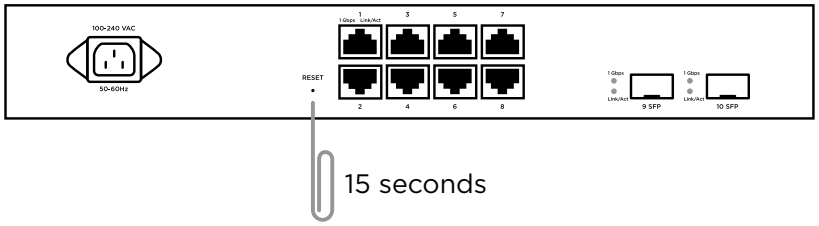
Insert a paperclip, or similar instrument, and reset each networking device to its factory settings. Reset devices in this order: the router, the switch, the wireless access point, and then the managed power unit. Wait for each device to complete the reset process before moving to the next device (approximately five minutes per device).

After all of your network devices have been reset, repeat **Step 1: Renew your computer's network host configuration**, to test your Internet connection.

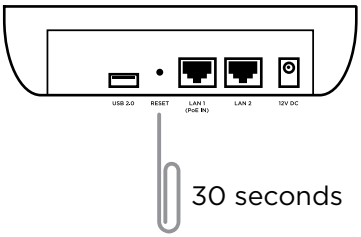
a Araknis 310 Router



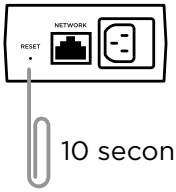
b Araknis 210 Switch



c Araknis 510 Access Point



d Watt Box 250



STEP 6 Resolve network conflicts between routers.

If the preceding steps haven't worked, chances are the Internet port you connected your PCNA network to uses the same network address as the Araknis 310 router. Out of the box, the router creates a network with an address of 192.168.1.0 If your fiber network box, cable or DSL modem, or Ethernet network uses the same network address, your router cannot route traffic between the Internet and your local network.

To resolve this router conflict, choose one of the following solutions:

a. Some fiber network boxes and cable or DSL modems will allow you to change their local network settings to use a different network address. Refer to the manufacturer's documentation or search the Internet for instructions about how to update the settings for the model fiber network box, cable or DSL modem you have.

1. Disconnect your computer from your PCNA network and connect it directly to your fiber network box, cable or DSL modem.
2. Follow the manufacturer's documentation to update the device's LAN configuration to use either the 10.0.0.0 or 172.16.0.0 private network address by applying *one* of these specifications:

10.0.0.0 Private Network	
IP Address	10.0.0.1
Subnet Mask	255.255.255.0
DHCP Range	10.0.0.10 to 10.0.0.254

172.16.0.0 Private Network	
IP Address	172.16.0.1
Subnet Mask	255.255.255.0
DHCP Range	172.16.0.10 to 172.16.0.254

3. Reconnect your PCNA network as directed in **Step 4: Verify the Ethernet cables are properly connected**.
4. Repeat **Step 1: Renew your computer's network host configuration**, to test your Internet connection.

STEP 6
(continued)

Resolve network conflicts between routers.

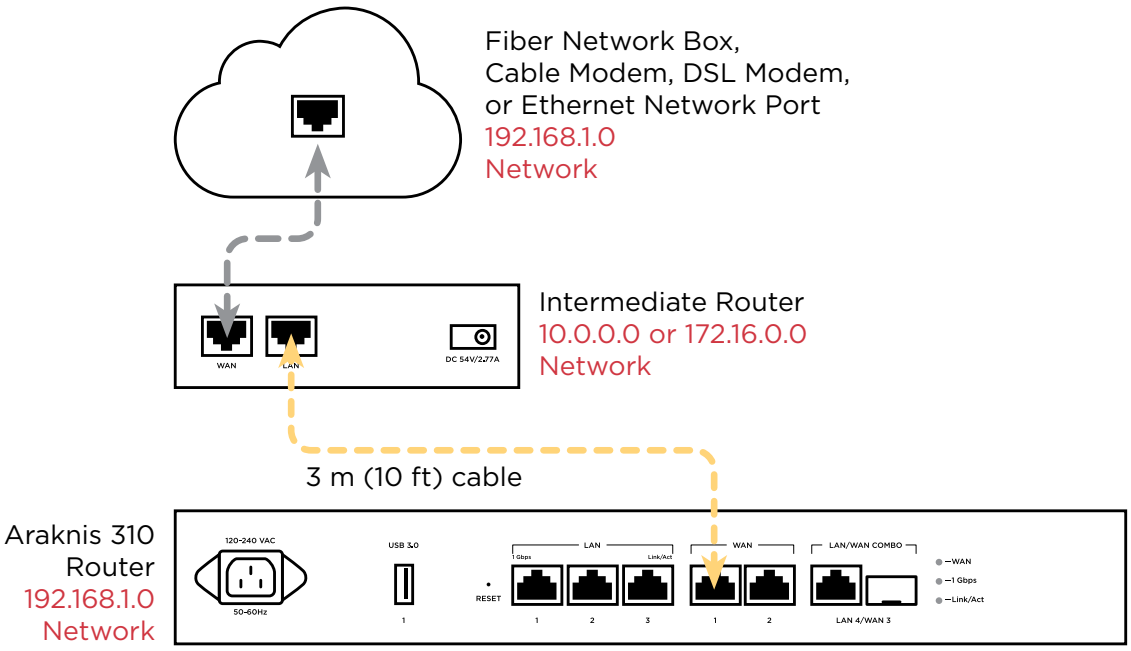
b Add an intermediate router between the Araknis 310 router and your Internet port. Just about any old router you can configure will do. If you don't have an extra router available, there are several models of economical, "travel" size routers you can order online that will work. Make sure the router you use can be configured to use either the 10.0.0.0 or 172.16.0.0 private network address and has both WAN and LAN Ethernet ports.

1. Disconnect your computer from your PCNA network and connect it directly to your intermediate router.
2. Follow the manufacturer's instructions to update the intermediate router's LAN configuration to use either the 10.0.0.0 or 172.16.0.0 private network address by applying *one* of these specifications:

10.0.0.0 Private Network	
IP Address	10.0.0.1
Subnet Mask	255.255.255.0
DHCP Range	10.0.0.10 to 10.0.0.100

172.16.0.0 Private Network	
IP Address	172.16.0.1
Subnet Mask	255.255.255.0
DHCP Range	172.16.0.10 to 172.16.0.100

3. Connect the Araknis 310 router's WAN 1 port to the intermediate router's LAN port (see diagram below). Leave all other connections as shown in **Step 4: Verify the Ethernet cables are properly connected**.
4. Repeat **Step 1: Renew your computer's network host configuration**, to test your Internet connection.



Note: This solution is just a temporary one to help you complete the hands-on activities that are part of PCNA. *NEVER* use this temporary solution for a customer's network.

STEP 7 Contact Your Internet Service Provider

Your Internet Service Provider may have some helpful information and tips for configuring their device to work with your PCNA network. This may include putting the fiber network box, cable or DSL modem into “bridge mode.” When you contact your ISP, be prepared to explain that you are connecting your own router to their device as well as the troubleshooting steps you have already tried.

STEP 8 Contact SnapAV Technical support

If you are still unable to connect to the Internet through your PCNA network, contact SnapAV Technical Support.

Email:

techsupport@snapav.com

Phone:

1-866-838-5052 (US and Canada)

44-190-421-1054 (Europe, Middle East, and Africa)

400-2501-490 (India)

61-1800-990-548 (Australia)