

Solving Connectivity Problems

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Problems Connecting?

We've produced this guide to help you troubleshoot issues with your internet connection.

Prior to calling tech support, please look over this document in order to see if this problem can be quickly solved on your own.



Vocabulary 101

Here's a visual glossary of some of the equipment used in the internet connection.

POE or injector.

This unit is usually in your home. Its purpose is twofold – to bring power to the Radio, and to link the radio to your router or computer.



Radio

This device is usually located on your rooftop or some other elevated location. It receives and transmits the internet traffic between your home and our tower.



Router

The router is usually client-owned, and there are many different brands and types available. A router does two things: allows more than one computer to use your internet connection, and it broadcasts the internet wirelessly within your home or immediate area.



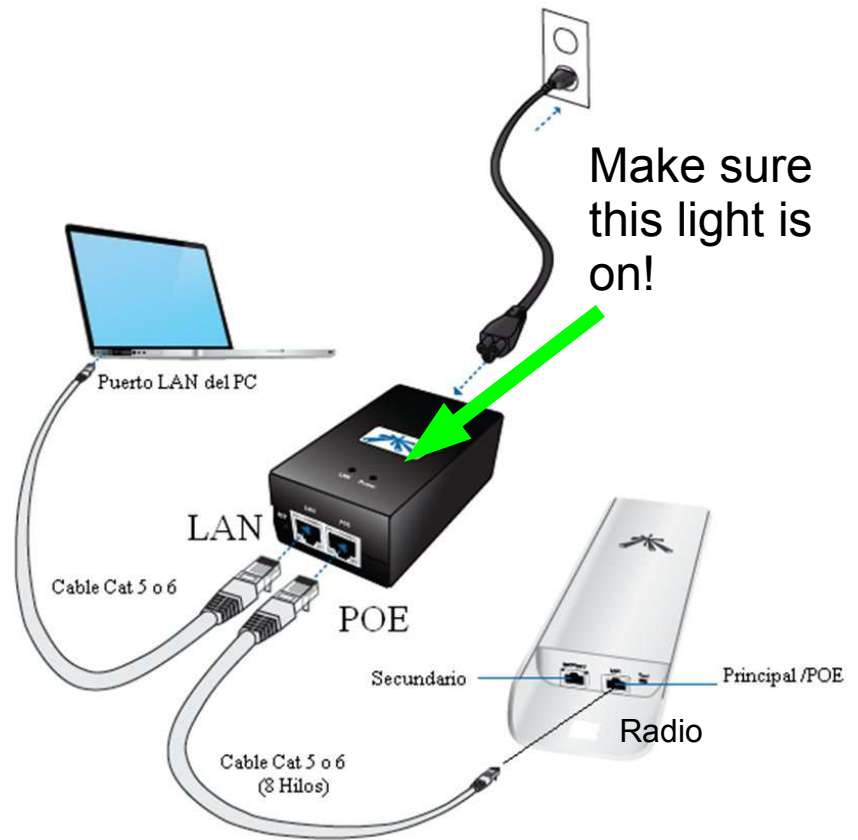
User device. So this includes whatever device you may be using – desktop computer, laptop, smart phone, tablet etc...



How Things Should Be Connected.

The “direct” method.

When you DON'T have a router and are connected directly.

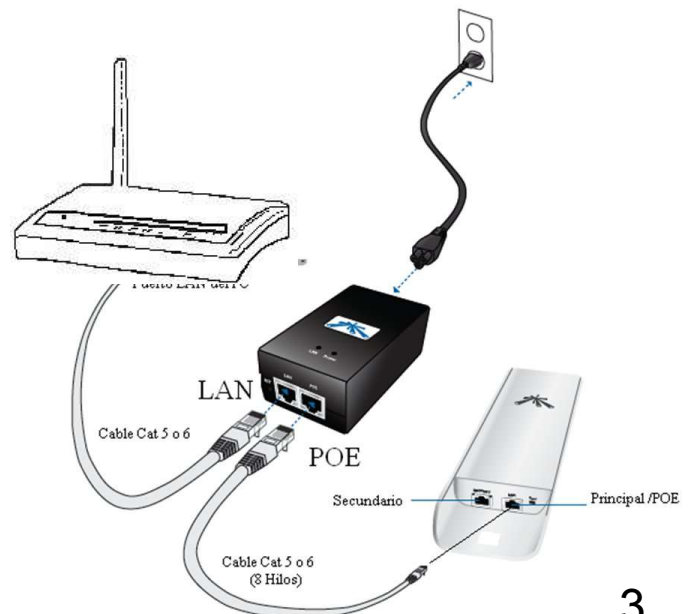


Router Method.

Most clients use a router. Here's how things should be connected in this case. Your computer or tablet usually connect wirelessly to the router.



The LAN cable from the injector plugs here.
This port may be referred to as “WAN” or “INTERNET” depending on the router manufacturer.



When you lose your connection:

Rule #1

- Reboot your router
- Reboot your POE
- Reboot your computer

At least 70% of connectivity losses can be **immediately cured** with this simple step. All sophisticated electronics, but especially home routers, are much more susceptible to electrical noise, and tend to become unstable. This problem seems more acute in Panama, probably due to the condition of the electrical grid.

If the problem persists, we recommend switching to a commercial grade router and using a voltage regulator or line conditioner.

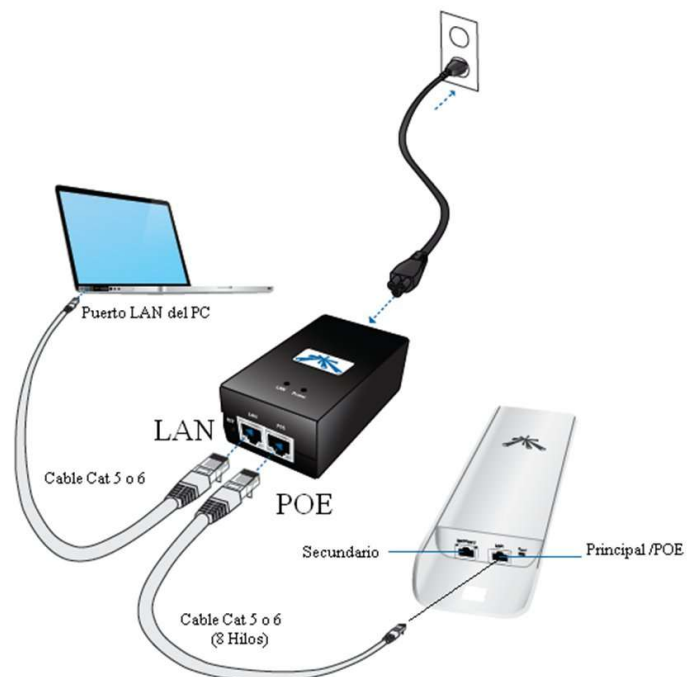
Rebooting your router and POE involve unplugging the power cord, waiting about 10 seconds, and plugging them back in. It will take about 2 minutes for the new settings to take place.

If your connection does not come step.

Rule #2

Go direct – And Cut Out The Middleman!

If internet does not return, plug your computer directly into the injector. The reason we do this is to eliminate the possibility that your router is causing the problem.



Rule # 3

Making Sure Lines Don't Get Crossed

Many support calls are from customers that have lost their internet due to the POE and LAN cables being in the wrong ports.

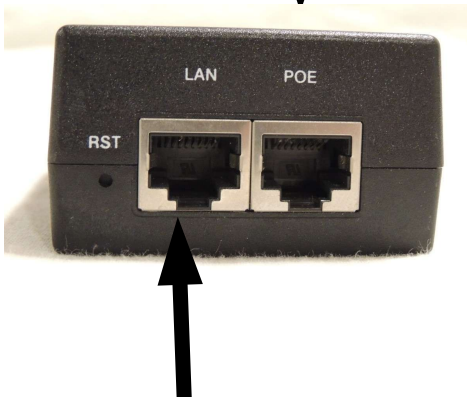
Cleaning staff, tenants, or other technicians may have done this inadvertently. Please check how these are connected. The POE cable is usually a black cable that is stiffer than a regular internet cable – it also has a metal terminal.



Black (sometimes green) cable.
Very stiff.
Metal Connector

This is the connector from the radio outside your home. The cable is most probably black (some are dark green) The end terminal is metal as opposed to plastic. The cable is much stiffer – not a flexible at a regular internet cable.

This cable MUST be plugged in to the port that says POE.

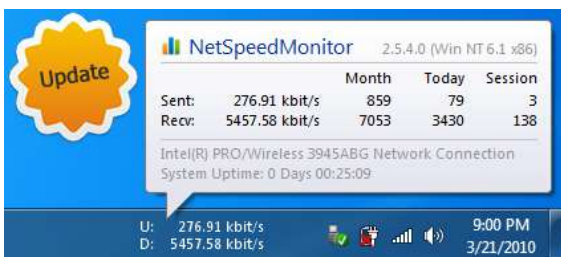


Router goes here.

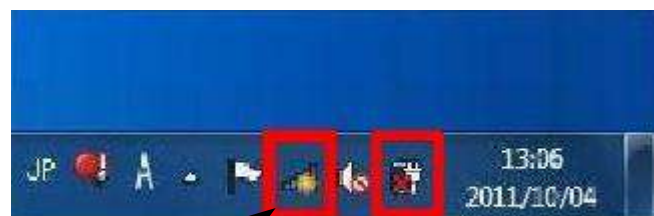
So, all the cabling is OK? Is your router communicating properly with your computer?

Machines running Windows:

In the lower right hand corner, check to see if you are connected.



Good Connection



Problem connection

Potential router-computer connectivity problems & solutions:

Problem

- password not valid
- signal strength too low

- IP conflict

Solution

Enter correct password
Move the computer or router to better location. Check signal strength bar graph
Unplug power from router, wait a few seconds, then plug back in. If that doesn't work, reboot computer as well.

Workers around the house?

If you suddenly lose signal unexpectedly, or your speed has deteriorated, the cause may be antenna alignment.

Antennas occasionally come out of alignment due to:

- workers "hitting" the antenna inadvertently
- high winds
- vandalism

In most cases, the antenna needs to be realigned by a technician, and a site visit required.

Calling Us For Help:

If your internet connection is not working, and you have taken the above steps, please call us. Our number is **777-9200**.

Upon the phone being answered, please press 8 for English, then, 4 for Technical Support.

You can also send a message to support@ptpanama.com

Network-wide or sectoral outages:

-At times, we may have planned network outages. These are required for maintenance or equipment upgrade purposes. We always provide advanced notice via email to our clients. Planned outages occur once or twice per year.

-If a part of our system goes down, there will usually be a pre-recorded “network outage message”, on our company phone system. We include specific details as to the affected areas, and expected time of repair. In this case, the problem lies with our infrastructure, not your equipment. Usually, these issues are resolved within a few hours, as we need to dispatch a technical team to the tower site.

Please note: If you have just lost your connection, it may take us some time before we record the “network outage” message on our telephone system.

-If there is no “network outage” message, this indicates that the problem is most probably specific to your connection. In this case, the technician can help with further diagnosis.

-If the technician does not answer immediately, **PLEASE** leave a message. He may be assisting another client, and will return your call promptly (we try to return the calls within 1 hour or less. Late evening calls will be returned the following morning.

What We Can Do to Help:

We can help with:

- confirming if a problem is with our infrastructure, our equipment in your home, your home networking equipment.

We can tell if you are connected to our network, and the quality of the connection.

We can tell if you have a device connected to your radio, such as a router or computer.

We are able to test status and quality of your connection to our tower.

Areas Where We May NOT Be Able to Help

We will try our best, but we are **NOT** home networking experts, and are not familiar with all brands and equipment on the market. We are very limited in our ability to support you with your home networking issues. Should you encounter problems with routers or other equipment, please contact the equipment vendor's support desk.

Important Note:

If a technician is dispatched to your home, and the problem is related to:

- your router or other equipment NOT belonging to Planet Telecom
- changes made to the cabling
- software or virus-related issues.
- sabotage or “unnatural” damage to equipment.
- renovations, construction work etc.

The visit will be considered a “chargeable” visit.

For residential clients in mainland, easily accessible locations, we charge \$25/hour +ITBMS (starting from our departure in David) for the service call.

We do not charge for fuel, vehicle use or other related expenses.

Low Speed, fluctuating speeds or intermittent signal.

Sometimes, you may experience slow internet speeds. This can be caused by many factors, and we must identify the problem through a process of elimination.

Here are the top problems related to slow internet speed:

-There are many things using the data stream:

- uTorrent or similar torrent software

- other computers connected to your router

- automated downloading of Windows updates

- use of VPN and/or unblocker services

- viruses or other malware

- bandwidth congestion

- other computers using your connection – please ensure you have a password-protected router – otherwise neighbours can connect to it, and use your internet without your knowledge!

- some routers slow you down. Always test your connection speed without the router.

The “Magical” Cure – Reboot!

For many reasons, the simplest, fastest way to resolve connectivity problems is simply to reset all of the equipment. This is done by unplugging the power to them, waiting about 10 seconds or so, and then connecting them back in. We find that doing so works well in at least 50-70% of cases.

The Router is like a Garden hose splitter. It allows you to water many areas at once, but the water pressure is divided up between them. The pressure and volume of the water is always less.



A Little Bit About Speed Tests.

A speed test is the best and quickest way to see if your connections is functioning normally. Speed tests must be conducted a certain way in order to properly diagnose any issues.

-Use the proper speed test destination:

Speed test **MUST** be conducted to: **speedtest.ptpanama.com**

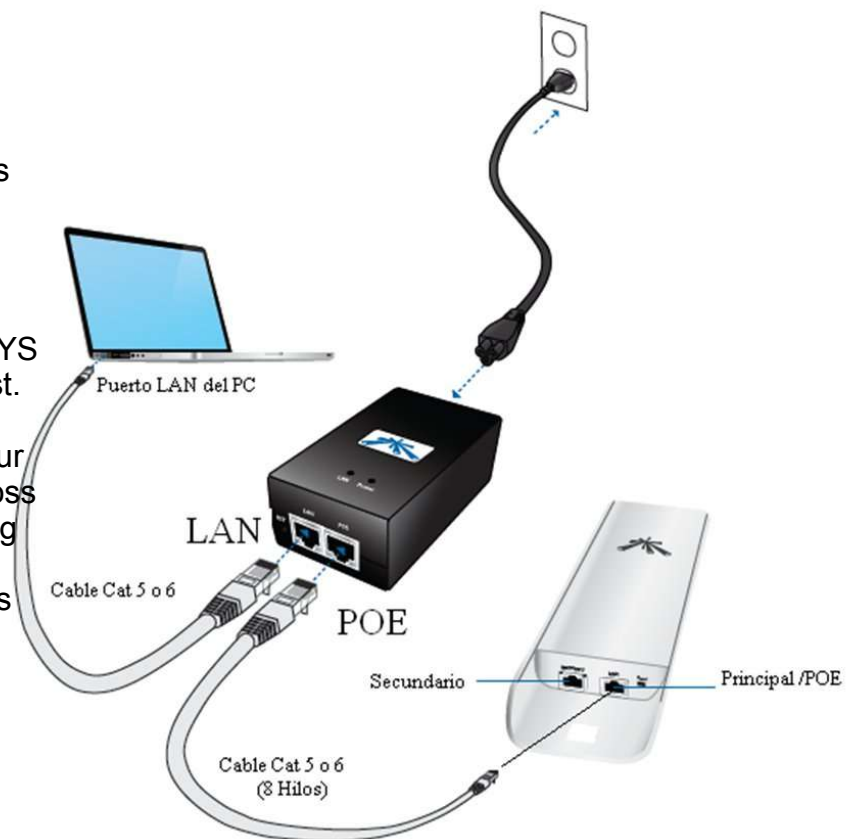
Using other speed tests in other cities or countries use other networks beyond our control. Results from other speed tests are unreliable in testing the quality of your connection.

Connect Using the Direct Method

To conduct a proper speed test, please connect your computer directly to the POE. This eliminates the router, or other devices from interfering with the process.

Ensure you are NOT using VPN's unblockers or other services. All VPN's SLOW DOWN your service to varying degrees. As many of these services are provided free of charge, they are susceptible to congestion and slowdowns. If your connection is slow ALWAYS disable the VPN or "unblocker" and run a test.

Your speed could be up to 10% less than your contracted rate. There is a small overhead loss due to synchronization and control data being transmitted, as well as lost data due to interference or obstructions. This overhead is not reflected in speed test results.



Fluctuating or intermittent internet service

There are situations when, at the time of installation, the signal quality is excellent. Later on, the speed and reliability of the connection seem to deteriorate. In our experience, this is related to:

-Growing vegetation. The radio waves used to transmit the signal are not particularly good at penetrating vegetation. Wet leaves are often worse as the moisture on them dissipates and weakens the signal even further. The palm tree that was not a problem last year may have grown and now obstructs the wave's path. *If problems persist, we may ask you to cut branches or entire trees in order to remedy the situation.*

-New buildings. A new construction, which before did not cause any problems before, is now blocking the signal.

-Radio Interference. Sources of interference not present at time of installation. Other devices such as 900mhz cordless phones, baby monitors, wireless security cameras etc... may cause interference with the signal. These may be on a neighbour's property and beyond your control.

All of these issues require changes – either to the equipment or its location.

- A higher point, or a different location for the radio may be required. Depending on the complexity, difficulty and resources required to do this, we may have to charge you for this service.

-In some cases, there are no practical remedies.

Problems We Have Encountered in The Past:

- Pets eating and damaging cables.
- Ant infestation in the radio, causing circuits to overheat
- Lightning strikes
- Intense power fluctuations.
- Domestic workers disconnecting cables
- Contractors/construction workers hitting antennas, damaging or taking them out of alignment.
- High winds taking antennas out of alignment
- Cables cut, accidentally or inadvertently
- Cables unplugged
- Client routers overheating, and becoming unstable
- Vegetation growth causing signal loss
- New building/structure in the line of sight between client home and tower blocking the signal.