Best Practices for Troubleshooting Your Subscribers' WiFi

TruVizion
ADVANCED BROADBAND DIAGNOSTICS

Getting Started

Start with the right diagnostics tool to determine if interference is actually the problem when your subscriber's internet is not performing adequately. If interference is indicated there are a number of things your techs can check to narrow down the source as they troubleshoot a subscriber's WiFi connection. Let's take a look at some things to watch for:

EMI or Electromagnetic Interference

Interference Outside the Home

Large satellite dishes, radio towers, and neighbors' wireless networks are among the sources of wireless interference that can originate from outside the home. While there's not much that can be done about these, changing frequencies to 5 GHz in order to separate from neighbors' 2.4 GHz networks can sometimes clear things up.

The Router is Next to an Electronic Device

Your subscribers will likely have a number of electronic devices and appliances at home. Many of these devices can cause interference for WiFi signals. Everything from TVs to microwaves to refrigerators can cause the strength of the signal to be compromised or obstructed. The problem increases when the router is placed next to the television, microwave, blue tooth speakers or any other electronic device. Sometimes improving the signal is as simple as moving the WiFi router a safe distance from such equipment.

Location, Location, Location

Interference from other electronic devices is not the only problem causing poor WiFi performance. It's important to know the most favorable positioning of WiFi routers in order to correct mistakes. Incorrect device placement will cause interference that hampers and sometimes blocks the WiFi signal entirely. When troubleshooting, watch out for some of these common placement mistakes that subscriber's often make:

The Home Gateway is on the Floor

WiFi signals are known to move sideways as well as downwards. So, when a router is placed on the floor you are blocking the way through which the WiFi signal travels throughout the house. If you want to get the best signals from the

WiFi router, it should be placed at a certain height, which is at least five to seven feet above the ground level.

The Home Gateway is Hiding

When the router is hidden in a closet, a cabinet or behind a bookshelf, the performance diminishes significantly. This is because a number of household materials are known to block WiFi signals. Walls with plumbing can cause significant interference, and walls with electrical wiring inside can cause some degree of interference. Even humans are known to cause interference in spreading WiFi signals. So, if you find the router is hidden, concrete walls and other hidden construction materials could be causing disturbances to the WiFi signals, and hampering its strength. Instead, the router should be placed in a more open area.

The Home Gateway is Beside Water

Your subscriber has a fish tank on a table in his house. He's placed the WiFi router on the same table, next to the fish tank. And now he's calling in because his WiFi signals are poor and he doesn't have access to the Internet from all corners of the house. No, the fish aren't the culprit. But the water is. WiFi signals are known to be obstructed by the reflection caused by water. So, it's better not to have the WiFi router close to any container of water.

The Home Gateway is Next to a Window

We all love to sit by a window while working or just surfing the internet. It's a nice way to be connected. But is the router there too? When the router is right beside a window, almost half of the WiFi signals are going out of the house. So half the signal is unused and out the window leaving the subscriber with just the remaining half. There's obviously going to be poor performance in terms of WiFi connectivity. Moving the router away from the window will improve the WiFi signal.

The Home Gateway is in a Far Corner of the House

A WiFi signal needs to spread throughout the house. Only then can you count on Internet connectivity from all corners of the house. But if the WiFi router is at one corner of the house it loses the capability of spreading the WiFi signals around on all sides. A wall on one or two sides of the router can cause obstruction and the signal is not transferred. However, placing the router at a central location ensures a strong WiFi signal throughout the house.

It's critical that you be able to determine if interference, whether electromagnetic or gateway placement, is the cause of slow internet complaints and to analyze the source of that interference in order to determine the best course of action. The right tools for analyzing interference can mean the difference between frustrated and satisfied subscribers (and technicians).

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ZCorum's Truvizion diagnostics software now has real-time WiFi diagnostics built right in. For a brief overview of the WiFi diagnostics in TruVizion watch this video: (https://youtu.be/S0V3MtNyvY0).