

A top-down photograph of a person sitting on a light-colored wooden floor. The person is wearing a light-colored button-down shirt and blue jeans. They are holding a black smartphone in their right hand and a white mug of coffee in their left hand. A silver laptop is open on the floor to the left, with a pair of red headphones resting on it. A red alarm clock is visible in the upper left corner of the image.

Optimizing your home Wi-Fi network to get the best coverage and performance

Your home Wi-Fi network is now as essential to everyday life as electricity and running water. So when you have problems connecting to the network from your laptop or your smart phone, you feel the impact in many different areas of your life—whether you're trying to download important emails from work, research your next vacation, or watch the latest episode of your favorite TV show.

It is also clear that your connectivity expectations are higher than before. You have little patience while waiting for files to download, for jittery video, or for Internet/Wi-Fi service disruptions.

On the rare occasions when issues do occur, turning your Wi-Fi router off and then back on again usually solves the problem. But when you're constantly having trouble connecting, or experiencing very slow performance, there's a good chance there are other problems you need to address.

Is your router out of date?

One potential cause of your Wi-Fi problems is an old router. Wi-Fi technology has improved a lot recently, so if your router is a few years old, it won't work nearly as well as a new one. For example, newer Wi-Fi technology uses stronger wireless signals and allows multiple users to connect at the same time. If you think that your router might be out of date, contact your service provider and ask about a replacement.





Move your router to a new location

If your router itself is not the problem, its location might be. For you to enjoy the best possible online experience, your router needs to be able to send out a strong signal to your wireless device, wherever you are in your home. In general, the signal gets weaker the farther you are from your router, so it's important to install it in a central location, so you're never very far from it. If possible, you should place the Wi-Fi router on a table or a shelf. The ideal position is half-way between the floor and the ceiling.

The physical features of your house may also be contributing to the problem. For example, certain materials used in your interior walls can reduce the strength of your signal. Most common construction materials, such as wood or drywall, won't cause a problem, but if your router is located near walls made from concrete or brick, these materials can block some — or all — of your Wi-Fi signal.

Metal surfaces can also weaken your Wi-Fi signal, so placing your router in a kitchen or laundry room that has a lot of metal appliances is not a good idea either.

Finally, one of the most obstructive materials for Wi-Fi signal is mirror. If you have a sizeable mirror near your Wi-Fi router, it may negatively impact Wi-Fi performance.

If your router is located in a room with any of these characteristics, try moving it to a different room in your house to see if your Wi-Fi performance improves.

Check for interference from other electronic devices

Another factor that can cause poor performance is interference from other electronic devices. Certain non-Wi-Fi devices — like baby monitors, Bluetooth devices, microwave ovens, and cordless phones — may share the same frequency as your Wi-Fi router. As a result, when these devices are in use, you may notice your Wi-Fi performance getting worse.

The mostly likely source of interference is other Wi-Fi routers located nearby. There's a good chance that one or more of your neighbors has a Wi-Fi router that operates on the same frequency as yours. In this case, the signal coming from your neighbor's router may be interfering with the signal from your router, and that may be contributing to the connection and performance problems you are experiencing.

If you think that interference from nearby routers is affecting your Wi-Fi network, contact your service provider for technical support. They can help you reconfigure your router to limit the impact of nearby routers and help you get your Wi-Fi performing the way it should be.

Another option is to purchase a simple repeater or a mesh Wi-Fi system. Please beware, however, that not all Wi-Fi enhancement solutions are created equally. The ideal approach is to call your service provider to see if they offer a product specifically designed to enhance the coverage of your Wi-Fi network.

Check for outdated client devices

While your Wi-Fi router is an important part of the Wi-Fi network, the wireless devices that you use to connect to the Internet also impact the quality of your Wi-Fi experience. As with the router, older devices are going to have outdated technology, resulting in slower connection speeds. Talk with your service provider to see if you can upgrade to a newer device, such as a smart phone or tablet.