

## **Don't Lose to Lag: A Gamer's Guide to Latency and Ping**

When you're in the midst of an intense match, every millisecond counts. But your lightning-fast reflexes don't do much good if your internet connection can't keep up! In today's blog, we're talking about the secret sauce for a flawless online gaming experience: low latency and ping.

(Spoiler alert: You're about to discover why gamers in Wilson prefer our fiber internet to power their fun!)

### **What Is Latency?**

Let's begin with some basic definitions, as both latency and ping are terms that are fairly technical. Latency and ping are often used interchangeably, but they're actually separate (though related) concepts.

First, latency is the amount of time (measured in milliseconds, or "ms" for short) it takes for internet data and information (i.e., a "data packet") to be sent back-and-forth from one designated point to another.

To put it in gaming terms, latency refers to the total time it takes anything a gamer "inputs" while playing a game on his or her device (and internet) to be received by the game's server and returned back to the gamer's device. In *Fortnite*, for example, that could be a "command" for a character to run in a particular direction or use a skill.

Those commands (or inputs) are sent from a player's device and internet to *Fortnite's* servers and then returned to the player's home internet and device on the screen. What matters is just how fast that happens, and if there is any delay.

### **Low Latency (Good!) and High Latency (Bad!)**

To reiterate, the measure of the time that round-trip of gaming data takes is called latency—and the shorter amount of time that trip takes, the better! Gamers need the response time of their own inputs and the game's servers' responses to those inputs in return to be as short as possible—even undetectable by the user.

This refers to "low latency," which gamers (and other savvy internet users) value highly. The lower the latency, the faster the response time—and the better the experience for players. Typically, gamers will want latency to be 50ms or less. Ideally, however, 20ms or less is the sweet spot, with single digit latency being the "Holy Grail" for dedicated gamers.

On the other hand, "high latency," which refers to longer, even delayed responses to a gamer's inputs can be deeply frustrating and lead to dismal user experiences. Gamers will notice problems when latency exceeds 100ms (or to some particularly-discerning players, even when latency is higher than 50ms). Games will be practically unplayable when latency is higher than 200ms.

That's why gamers must always consider an internet connection's latency to optimize their play. And measuring that latency is where ping comes into play!

### **What Is Ping?**

We now turn to ping, which can refer to two ideas in computing. But remember, it's common to use the terms ping and latency interchangeably. So, first, in common parlance, ping can, like latency, refer to the delay of travel time of data being sent over an internet connection. (This is also sometimes called "lag.")

Additionally, however, there is a second use of ping that is different but interrelated to latency. In that other context, ping also refers to a utility program on internet-connected devices that sends out a signal to measure the length of time it takes for a user's device to hit (or "ping") a server.

You've probably heard that you should "test your ping." Well, testing ping involves using that built-in utility to measure the response time and even diagnose any network connectivity problems. To keep things simple, *ping* is usually tested as part of a speed test to help you predict your *latency* during game-time.

We know these terms can sound redundant or even confusing. What's important to remember, however, is that gamers will want low latency, low ping, and minimal lag for a better experience no matter what terms are used!

### **Why Gamers Need Fiber**

Having explained these terms, we next turn to why fiber is simply the best technology for gamers to drastically minimize latency and ping.

Compared to older forms of internet like copper-wired coaxial cable, fiber's advanced materials can send data over an internet connection at nearly the speed of light. That means that fiber's speeds routinely hit or exceed 1 gig per second! And in general, the higher the download speed, the lower the latency.

But fiber's exceptional download speeds are just the beginning. Fiber's generous bandwidth also plays a role in improving latency and ping, as the greater the bandwidth capacity, the more information can be transmitted back-and-forth over an internet connection at any one moment. That allows more data to seamlessly transfer in fewer milliseconds, dramatically lowering latency and improving the response times gamers experience.

### **Greenlight's Plans, Speeds and Pricing**

Greenlight Community Broadband offers gigabit speeds to Wilson residents to power your game and 24-7 local customer support. Visit our [website](#) to view our packages, then call 252-399-2200 to sign up.

So, if you're ready to rid yourself of high latency and the delayed response times due to slow internet reach out to Greenlight today. Our knowledgeable agents can answer any questions you may have about our advanced fiber network and plans. And for more tips to optimize your gaming experience, follow Greenlight's social pages!