



Throughput vs Bandwidth: The Keys to Network Efficiency

Do you ever wonder why your internet speeds seem slow, even when you're paying for high speed and high download caps (that is, bandwidth)?

The answer lies in understanding the difference between bandwidth and throughput. Even though these two words are often used interchangeably, they are not the same. Bandwidth measures how much a network can hold, while throughput measures how well it works.

In this blog, we will show you an understanding of [throughput vs bandwidth](#), and how to measure network throughput to get a more accurate picture of your network's performance.

So, strap in, because you're about to discover how to maximize your network for blazing-fast bandwidth and throughput performance!

What is Throughput?

Throughput measures how often messages get to where they are supposed to go. It is a practical measure of how packets are actually delivered, not a theoretical measure. The user can find out how many packets are arriving at their destination by looking at the average data throughput.

For a high-performance service, packets need to get to their destination. If a lot of packets are getting lost in transit and failing, the network will not work well. Monitoring network throughput is important for organizations that want to keep an eye on the real-time performance of their network and make sure packets get delivered.

Network throughput is usually measured in bits per second (bps), but sometimes it's also measured in data packets per second. Network throughput is measured as an average number that shows how well the network works overall. Measuring low data throughput reveals issues such as packet loss, which occurs when packets become lost in route (these can be devastating to VoIP audio calls where audio skips).

How is Network Throughput Measured?

A network's speed can be measured in bits per second or bytes per second. Because throughput is what the end user receives, files are typically measured in bytes, making them easier to grasp. Many megabits per second, or Mbps, are prevalent. You should use a tool to generate realistic network traffic patterns and assess both upstream and downstream throughput to accurately estimate network performance. Run testing when the network is operational to gain an accurate view of how it is used. Use a large number of test points and test at various times of the day to see how users use the site in various ways. Many tools, such as iperf, NetStress, NetIO-GUI, Netperf, NTttcp, QCheck, and others, can be used on many platforms to test network speed.