

Network Performance Statistics

Suddenlink's broadband Internet services are available at different upload and download speeds and prices. The specific speeds and prices are identified at various locations on suddenlink.com and are also available by calling us at 877-694-9474.

While Suddenlink engineers its network to achieve and even exceed the "up to" speeds for each of the service levels offered, we cannot guarantee that individual customers will always experience those speeds. The upload and download speeds represent the speeds measured on the Suddenlink network, between the company's Internet hand-off locations (points of presence) and the customer's modem. The following variables, which are often outside of Suddenlink's control, can affect the actual speeds experienced by a customer:

1. **Performance of a customer's computer/device**, including its age, processing capability, its operating system, the number of applications running simultaneously, and the presence of any adware or viruses/malware.
2. **Type of connection between a customer's computer/device and modem**. For example, wireless connections may be slower – and subject to greater fluctuations, interference, and congestion – than wired connections into a router or modem.
3. **Performance of the cable modem**. Modem performance may degrade over time, and certain modems are not capable of handling higher speeds. For speeds exceeding 20 Mbps, a DOCSIS 3.0 modem is required. For up to 1 Gig service, a DOCSIS 3.0 modem with 1 Gig Ethernet ports and 32 by 8 channel bonding is required.
4. **The distance packets travel (round-trip time of packets)** between a customer's computer and their final destination on the Internet, including the number and quality of the networks of various operators in the transmission path. The Internet is a "network of networks." A customer's connection may cross the networks of multiple providers before reaching its destination, and the limitations of those networks will most likely affect the overall speed of the customer's Internet connection. In fact, many Internet speed tests use servers that are located off the Suddenlink network and may provide results that are lower than the speeds provided on Suddenlink's network.
5. **High-usage levels**. If a large number of visitors are attempting to access a website or Internet destination at the same time, and that site or destination does not have sufficient capacity to serve all of its visitors efficiently, a customer's connection may be affected. Performance may also be affected due to heavy concurrent use of our Internet service by our customers.
6. **Website owner's gating of speeds or access**. In order to control traffic or performance, some website owners may limit the speeds at which visitors can download material from their sites. Those limitations may reduce the customer's speed of connection.

In addition to the variables described above, Internet speed will depend on the service level to which a customer subscribes.

Recent Performance Data

Suddenlink has retained NetForecast to perform tests of network performance from a number of subscriber points within Suddenlink cable systems. In the most recently reported period, November 2015, NetForecast used proprietary hardware and software to perform thousands of speed tests at:

- 23 sites where residential customers had Suddenlink's "flagship" (most commonly subscribed) service with a maximum advertised download speed of 50 Mbps and upload speed of 5 Mbps (hereafter, the 50/5 service)
- 11 sites where residential customers had service with a maximum advertised download speed of 75 Mbps and upload speed of 7.5 Mbps (hereafter, the 75/7.5 service).

The results were statistically consistent and indicated the following.

- For the 50/5 service:
 - Average download speeds delivered were 112% of the maximum advertised speed during all and peak hours
 - Average upload speeds delivered were 119% of the maximum advertised speed (118% during peak hours).
- For the 75/7.5 service:
 - Average download speeds delivered were 121% of the maximum advertised speed (120% during peak hours)
 - Average upload speeds delivered were 116% of the maximum advertised speed (114% during peak hours).

NetForecast also measured latency (the average round-trip delay of short packets from the subscriber's home to and from popular websites) and packet loss (the percentage of packets dropped in the latency tests). NetForecast's November 2015 measurements found the following.*

- For the 50/5 service:
 - Mean latency of 59.4 milliseconds (57.7 during peak hours)
 - Packet loss of 0.07% (0.04% during peak hours)
- For the 75/7.5 service:
 - Mean latency of 63.2 milliseconds (68.5 during peak hours)
 - Packet loss of 0.19% (0.40% during peak hours)

These results are not necessarily indicative of network performance generally, and we expect to further update and augment this information as additional data becomes available.

* The NetForecast latency and loss results shown above are well within typical expectations. However, these results cannot be directly compared to the FCC's 2015 "Measuring Broadband America" (MBA) results. The FCC methodology tests from subscriber homes to servers that are (a) dedicated to FCC performance testing and (b) directly connected to Internet transit networks. The FCC latency and loss tests do not include the server access line, all Internet hops required to reach the Web server, and the performance of the Web server that is delivering content to users during NetForecast tests. Therefore, the NetForecast results will show somewhat higher latency and loss values.