How Much Bandwidth is Enough?

A good rule of thumb is to provide at least 1 Mb/s of bandwidth for each guest when possible.

When providing Internet access for your guests one consideration is how much bandwidth is needed. Bandwidth is the measure of the maximum amount of information that can be transmitted per second, and is often expressed as megabits/second (Mbs).

With evolving usage, the amount of bandwidth used by a guest has increased dramatically. What was adequate five years ago is not sufficient today. When combined with the additional factors of larger percentages of guests using Internet services and guests carrying multiple devices the demands on your bandwidth has sky-rocketed.

A good rule of thumb is to provide at least 1 Mb/s or more of bandwidth per guest when possible. For a 100 room hotel with 2 beds in each room, that is potentially 200 guests, or 200Mb/s. For a 40 seat coffee shop plan on 40Mb/s. This is a case where more is definitely better.

At some locations adequate bandwidth may not be available. In some cases multiple ISP connections may be used to provide more bandwidth, and you may need to limit the speed or amount of access your guests receive. Make sure your system is capable of using multiple connections and limiting users as necessary.

Different technologies provide different amounts of bandwidth, and the performance of these connections will vary by provider, your local area, and even by time of day.

Technology	Typical Download Speeds
Satellite	Typically less than 1Mb/s, up to 20Mb/s
DSL	From less than 1Mb/s up to 25Mb/s
T1	1.44Mbs
Cable	2Mbs to 1,000+Mbs
Fiber	20 Mbs to 1,000+Mbs

Web browsing, email and even watching video is mostly a downloading affair – the guests are pulling down data, and the upload is just a request for the data. Some applications such as voice and video chat require good upload speeds as well as good download speeds.

Most Internet Service Providers provide download speeds faster than the upload speed. The ratio of download speed to upload speed will vary.

In many areas it is not unusual to have limited access to bandwidth, or bandwidth may be very expensive. If that is the case and you are limited to the bandwidth you can provide guests you may need to restrict usage, possibly by providing a limited amount of time guests can be on-line, or by charging guests to discourage casual usage.

How much bandwidth is consumed by different activities?

Activity	Typical Consumption
Sending/receiving email (no attachments)	.001Mb
Sending/receiving email w/ 1 picture	1.5Mb
Downloading a 3 minute song	5Mb
10 minutes on social media	20~50Mb
Streaming a 3 minute video in HD	180Mb
Using Skype for a 20 minute voice chat	4~10Mb
Using Skype a 20 minute video chat	40~60Mb
Watching a streaming 30 minute TV show	400~600Mb
Watching a streaming 2 hour movie	1800~4000Mb

A two hour movie can be the equivalent amount of bandwidth of over

4 million emails!