95th Percentile Billing and How It Is Calculated

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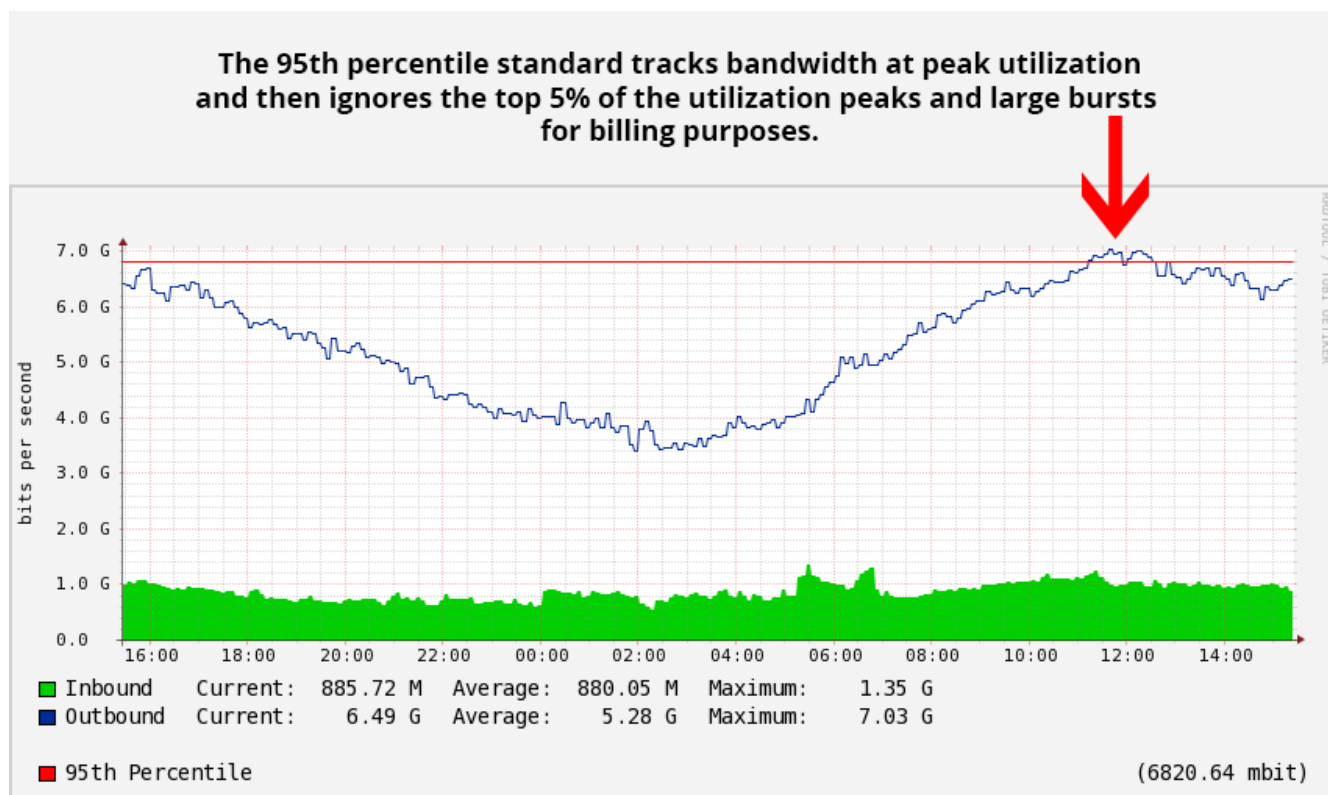
Our dedicated and colocation server accounts are metered and billed on an Mbit scale normalized on the 95th percentile billing standard. We have found that the 95th percentile billing standard is the most fair for hosts as well as clients and, as such, best suits our dedicated and collocation packages at this time. We have found that one common source of confusion for our clientele stems from our plans offering bandwidth quotas in GB (gigabyte) format while our accounting is performed in an Mbit/95th percentile calculation. The goal of this article is to help clarify Mbit/95th percentile bandwidth billing for our clientele who have general uncertainties about this topic.

How is HostDime's Bandwidth Calculation Different?

All of our dedicated and colocation servers, depending on which package you order, will either be connected to a burstable 10Mbit or 100Mbit connectivity uplink port. Most end-users are familiar with paying for what they use on a per-unit or per-use basis, however, 95th percentile rates do not follow this standard. As you continue to read this article, you will be able to see how this method of billing is beneficial to consumers such as yourself as opposed to GB usage billing which is based on total transfer during the month. GB billing is recommended for enterprise level users who have consistently higher levels of usage. The 95th percentile standard tracks bandwidth at peak utilization and then ignores the top 5% of the utilization peaks for billing purposes.

So why is this beneficial to you? Well, as many of today's websites have irregular traffic patterns, Mbit bandwidth accounting is the most liberal and forgiving for sudden increases (spikes) in usage. As mentioned, we take the total of all the samples gathered during the month for your server and completely eliminate the top 5% of those samples. This is perfect for those of you who operate sites such as, among others, blogs and eCommerce sites. We know that a popular blog post, new product release, and/or having a part of your site listed on Reddit can all briefly skyrocket access to your server. We understand this and do not think that you should be penalized for brief spikes in your site's access.

By having a burstable bandwidth limit, you will never need to worry about one customer's website affecting your speed, nor would you ever need to worry about running out of bandwidth.
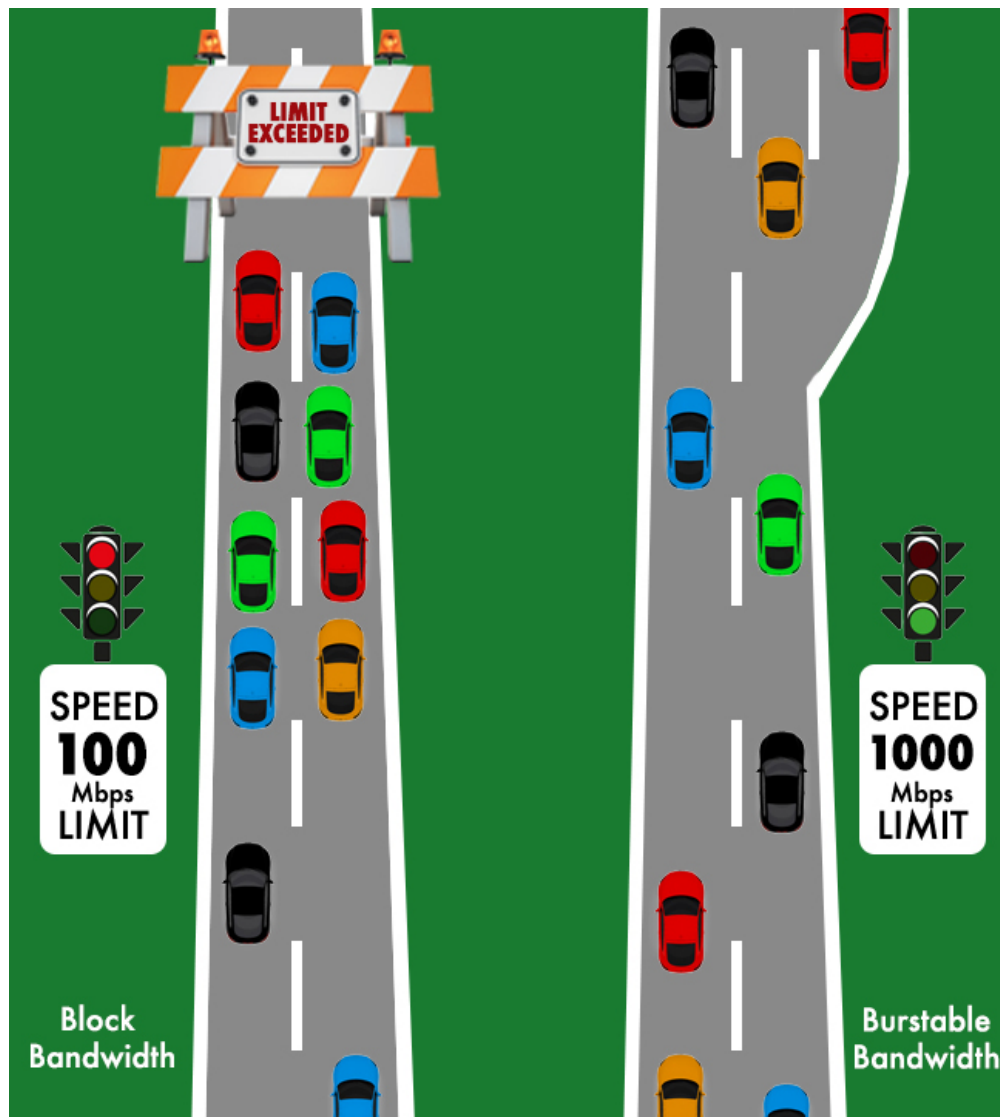
95th Percentile Billing Calculation

Bandwidth consumption is a calculated value. As we have mentioned, every hosted server is either connected to a 10Mbit or 100Mbit uplink switch port. Our bandwidth system checks your server's usage every 5 minutes at the port level and collects that data as a sample. This sample is stored in a database for later usage calculation. The samples are taken from the network switch port which services your equipment (on 5 minute intervals) and are added together to provide the 5 minute sampling totals. These totals are provided by the network in bytes and then are translated into kilobytes (1024 bytes) and subsequently to megabits (1024 kilobytes) for a more accurate, human-readable figure. The megabits figure, once translated, is divided by the number of seconds that have passed while gathering the sample (so, the number of seconds in 5 minutes) to find the total amount of bandwidth that has entered and left your server during that time span. At this point, raw data figures have been translated into throughput values- Megabits per second, or mbps (Mbit). Throughput values from the corresponding samples are then stored in a database and plotted on a graph for later use. At the end of each month, the sampled throughput values, which are based on the 5 minute samples, are all listed out and sorted from lowest to highest, and the top 5% of the readings (the highest 5% of the values) are thrown out to get the 95th percentile usage reading. Unlike some of our other billing methods, where we bill on a 30-day calendar month no matter how many days there actually are in the month, our bandwidth billing system uses true month figures, i.e. 30 days in September or 31 days in March.

What does all of this mean? Well, since we sample your usage every 5 minutes, we are able to average the totals and post the result as a 5-minute usage point on your usage graph (displayed in 'Mbit' and accessible via your DECC Client Area). Over the course of the month, we will continue to plot the 5-minute usage averages, which total about 8,640 points plotted on the graph. We then take the top 5% of your usage (432 points) and throw it out! Your billable usage is determined based upon the highest remaining usage plotted on the graph. If your usage is equal to or lower than your committed bandwidth after we've taken off the top 5%, you will not receive any additional billing.

Any usage over your account's allotted limit will be billed at the appropriate rate of $10 per mbps per our TOS.

TB Measurement	Mbit Measurement
1 TB	~3.0 Mbit
1.5 TB	~4.5 Mbit
2 TB	~6.0 Mbit
3 TB	~10.0 Mbit
5 TB	~15.0 Mbit
10 TB	~30.0 Mbit
20 TB	~60.0 Mbit

* 1 Mbit is roughly equivalent to 325GB of sustained usage over a 30 day period

Once again, this post should serve as an educational reference. Should you have any questions, comments, or concerns please open a ticket in our Help Desk so that one of our Dedicated Server Specialists can assist you.