



Collocation Bandwidth Billing

Dear Valued Collocation Customer,

Net Star Telecommunications, Inc. proudly announces the start of automated email notification for monthly reports of your Collocation bandwidth utilization. This information will show your actual usage, base amount of data transfer based on your selected package and any incremental bandwidth overage charges and pricing.

95th Percentile Measurement:

Net Star uses the industry standard of 95th percentile for measuring traffic on collocation server hosting. This allows us to maintain a network with plenty of capacity and to provide clients with the most accurate reading possible. On the first of the month our system generates a report on bandwidth utilization for the previous month which is sent to our System Administrators for review. Once the review process is complete it is sent to the billing department for verification. Clients that exceed the allotted amount of bandwidth will be charged for the overage and notified via email.

It is important to understand the calculation method and to keep an eye on the usage of bandwidth taking place on the server. In some cases, if your server has been compromised or the traffic has spiked, the amount of bandwidth that is being used will exceed your base rate.

All servers are plugged into a Cisco Catalyst Switch with 100 MB/s capacity per port. The server which monitors and records all bandwidth utilization for the month polls all of the switch ports in 5 minute intervals. From the 1st of the month to the last day of the month this data is stored on the server. On the last day of the month a final calculation is made. This provides Net Star with a report of what the 95th percentile usage was for all of the servers. **These calculations are used to inform you of your usage exceeding the amount of bandwidth agreed upon with your account.** If this does occur, a "bandwidth overage" is charged for that exceeded amount.

The actual technical procedure that takes place is as follows:

- First Day of the month, 12:00 AM CST the first reading is polled on the switch and stored in a database.
- Every 5 minutes thereafter the switch is polled to get another reading which is stored in the database.
- By the last day of the month, approximately 8,000 - 9,000 readings have been stored in the database.
- The entire month's readings are sorted from highest to lowest.
- The top 5% of these readings are discarded.
- The amount that remains is the 95th percentile reading that is recorded for monthly bandwidth usage.

Bandwidth Overage Price:

Bandwidth overages are billed @ \$37.50 per 256KB/s Units for all bandwidth above your contracted base amount of Bandwidth utilization (see your Collocation agreement or contact John Agathon at 713-554-7100 x316 with any questions).

If you are concerned about excessive overage charges Net Star has two options which can help out:

1. We can rate limit your connection not to exceed an agreed upon range of utilization.
2. We can send automated email notifications when you reach certain bandwidth utilization parameters.

Feel free to contact your account manager to implement or discuss these options.

Example of Actual Report on Next Page

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switch-3.nstci.com-FastEthernetxx

Number of Samples	8897
Month	1
95th Sample	444
Committed Bandwidth	256000
Inc Bandwidth	256000
Sample Time	20050105180601
Average bps	1094186
Sample bps	1845087
Overage bps	1589087
Overage Units	6.21
Amount Due	\$ 232.78



