How much bandwidth does Google.com use?

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The google.com homepage received on average 38 million unique hits per day over a 7 day period according to this compete story about the G1 release. This started me thinking, how much bandwidth does serving up Google?s homepage use in a year? Well some rudimentary maths left me with the following:

Homepage size = 15k (code + 8.5k logo image)

15k x 38 million page views x 365 days = 209,020,900,000k

209,020,900,000k = 24.3 terabytes of bandwidth

This is just to display the homepage of google.com and does not include the 165 local domains or the 400 million or so searches Google receives every day.

Of course, the bandwidth figure above assumes (and they are big assumptions!) that there is nobrowser or ISP caching and that the number of visits remains constant. However, it does highlight how forGoogle displaying even a low sized webpage requires a huge amount of bandwidth. It?s no surprise then that The Google?s biggest expense comes from running and maintaining their servers and why they are looking at new technologies to reduce costs such as creating their own renewable energy (wind, solar & geothermal), super efficient server farms and even server farms based at sea.

And if displaying Google?s simple homepage takes up so much bandwidth it?s not surprising that running YouTube has been estimated to cost nearly 1 million dollars a day and that the site uses as much bandwidth now as the whole internet did in 2000!

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