

Rate Shaping: An Old Trick You Might Need. Soon.



Don MacVittie, 2011-19-01

It should be no surprise to anyone that the number of mobile devices is increasing at an astounding rate. In fact, according to [Ericsson](#), mobile broadband subscriptions will [double in 2011](#). Let's all just take a moment to ponder what that means to our worldwide infrastructure. Lots has been written about this topic from a theoretical viewpoint, but we're about to find out how flexible our infrastructures really are.



If you have web servers or other resources on the Internet, some of those new mobile devices will be coming your way. Let's take the worst case scenario and assume that your mobile traffic will double. Since a successful company wants their customers to come interact with them more often, this is a really good thing. The problem, of course, is that too much of anything is bad. That rule applies to bandwidth consumption just as well as to everything else.

While there are a variety of topics wrapped up in this explosive growth, for this blog, let's focus on one tiny bit of technology that has traditionally not seen a ton of uptake in the enterprise market, though service providers have made use of it.

That thing would be rate shaping. Yes, I know, you looked at it in 2000, it wasn't ready, you looked at it in 2005 and it was better, but still not exactly what you were looking for. By 2010, you couldn't prioritize some traffic and not other traffic without causing pain to your users, and you could buy more bandwidth.

Well, it's 2011, can you potentially double your bandwidth? Used in conjunction with other technologies like tcp optimization and compression, it can optimize your connection and reduce the amount of bandwidth you will require as the world gears up to multiple IPs per individual and true "always on" access, no matter which device is in your users' hands. Add in deduplication and other optimizations available in [WAN Optimization](#) Controllers, and you have all the data going in and out of your building highly optimized.

Of course rate shaping takes from one protocol or application to give to another, something my mother used to call "robbing Peter to pay Paul", but sometimes, this is a viable answer. Particularly if you have mission-critical traffic or something related to disaster recovery (like off-site backups or DC-to-DC replication) flowing over your Internet connection(s). Considering that all indications are your backend systems will be doing more over-the-Internet communications too, that's a whole lot of new traffic, and prioritization becomes more important.

I'm not in a position to tell you how to prioritize your traffic, just that there's going to be more traffic, and you're going to want to prioritize it if you are successful enough to pull in your share of that traffic.

And if you haven't looked into Rate Shaping in a while, in ADC's like F5's BIG-IP LTM, it has definitely grown up, offering you the ability to keep certain types of traffic within boundaries you define, while turning other types of traffic off completely when utilization gets too high. It allows you to classify applications and protocols so that you can set policies based upon like or shared communications types.

So you can say, for example, that your applications and videos that are public facing must get bandwidth, and other protocols can lag or even get cut out when there is too much traffic on the WAN or public Internet connection. That's better than having all of your traffic time out, and certainly better than having customers drop connections.

Think about it, the benefits might just outweigh the costs.

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