

In working with network administrators at some of the world's leading Hotels and Resorts over the years, we've repeatedly heard the same issues and challenges facing them.

Here are just a few:

- We need an affordable, low maintenance bandwidth shaping solution.
- We need to meet the expectations of our tech-savvy guests and prevent Internet congestion during times of peak usage.
- We need to ensure that even during busy times at our hotel or resort, our conference rooms, guests, and staff gets adequate bandwidth.
- Our guests want to play games and watch videos (e.g. YouTube).
- We need a solution that will protect our investment and grow with our network.
- We need our wireless network to work well everywhere on our property. We would love to have experts solve this for us, without having to hire a full-time network expert.



NetEqualizer Key Functions

- Fairness-based bandwidth shaping ("equalizing") looks at behavior
- Automatically prioritizes latency-sensitive applications such as email, web browsing, web applications, & VoIP
- Low-maintenance. No policy files to maintain.
- Controls both encrypted & unencrypted P2P
- Reduces RIAA/MPAA requests
- CALEA compliant
- Shapes up to 5 Gbps
- License-upgradeable
- Affordably priced from \$3,000 to \$14,000. Read our [blog article on ROI](#).
- [Leasing](#) option available.



About APconnections, Inc.

APconnections is an innovation-driven technology company that delivers best-in-class network traffic management solutions to give our customers better networks, with zero maintenance, at the best prices. We specialize in turnkey bandwidth shaping and intrusion prevention system (IPS) appliances. APconnections is based in Lafayette, Colorado, USA. We released our first commercial offering in July 2003, and since then thousands of customers all over the world have put our products into service. Today, our flexible and scalable solutions can be found in many types of public and private organizations of all sizes across the globe, including: Fortune 500 companies, major universities, K-12 schools, and Internet Providers on six (6) continents.



What customers are saying...

"...We just finished a project with the 262-room Hotel Alila Jakarta, installing our aggregation gear and also the NetEqualizer. At the hotel we were able to double the bandwidth to 15Mbit and provide failover. But the Active Bandwidth Control with the NetEqualizer was the most impressive.

The hotel was using a primitive system called Rate Caps on Mikrotik equipment to limit each access point to 3/4 megabit. So nobody ever got speeds over 3/4 megabit. The entire Ballroom for example, had to fight over 3/4 megabit. Really inefficient.

We put in our gear and now guests are getting 3.5 megabit even if the line is full. It instantly "makes room" for important traffic and guests can get peak speeds all the way up to 15Mbit if the line isn't full.

When we set it up, by chance their Global CEO was in town that day. He suddenly got 7Mbit, which is 9 times the speed he usually gets at the hotel - and told the GM about it. The hotel's Financial Controller shook my hand the next day and thanked me. Internet is nine times faster? That's major. Just by fixing the traffic control system.

Available speeds to guests are now 5x to 10x what they were because we got rid of the primitive Rate Cap system. "

-- Ben Whitaker, Principal at Jetset Networks, Indonesia, Alila Jakarta

"We try to stay ahead of the curve here in Washington, DC. Our customers are very tech-savvy and require the best service when it comes to their Internet connectivity. Since installing the NetEqualizer it has been smooth sailing - no busy hour slowdowns or complaints."

-- Jeff Billings, Holiday Inn Washington DC

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NetEqualizer has been used to solve these issues and challenges for many for many companies in the hospitality industry around the world.

We need an affordable, low maintenance bandwidth shaping solution.

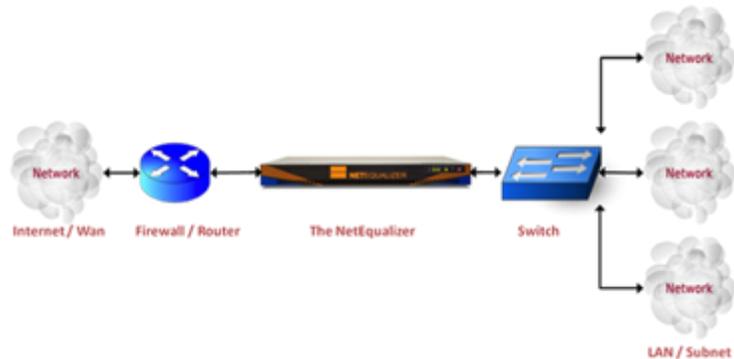
NetEqualizer is intended to be a "set it and forget it" type solution. Once you install and configure your NetEqualizer, it handles traffic shaping around the clock with little additional maintenance from your network administrator.

Configuring Equalizing is as simple as three steps:

- 1) Define the size of your inbound & outbound Internet pipe,
- 2) Establish the level of total bandwidth usage at which you want equalizing to kick in (default is 85%), and
- 3) Make sure that equalizing is "on".

We believe that traffic shaping can be affordable. Our NetEqualizer units range from \$3,000 to \$14,000, licensed bi-directionally to shape 10Mbps to 5Gbps. Our yearly fees for access to software upgrades, support, and hardware warranties are under \$1,500. In addition, under our [Lifetime Buyer Protection Policy](#), we also protect your initial investment by offering a trade-in credit towards a new unit when it is time to retire a unit. We offer a [compelling ROI](#), helping you to optimize your Internet resources.

The NetEqualizer is typically installed between your Router and your Switch, acting as a transparent bridge. As we do not perform deep packet inspection (DPI), we maintain Net Neutrality for traffic passing through the NetEqualizer.





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We need to meet the expectations of our tech-savvy guests and prevent Internet congestion during times of peak usage.

Hotel guests have a variety of needs for computer usage. Some want to surf the web and send email. Others may need to download files or watch YouTube videos.

What is great about NetEqualizer bandwidth shaping (aka "equalizing") is that it is *fair*. Low-bandwidth users do not have to share the pain of a slow, congested network with the network hogging applications. Your hotel guests *expect web applications, email, VoIP, and web surfing to be responsive, and with equalizing, they will be.*

For example, suppose you have 150 hotel guests and 30 employees using the network, as follows:

- 85% are web surfing
- 60% are also using email
- 30% are also watching YouTube
- 15% are running web-based applications

In this example, if your trunk were saturated, equalizing would kick in and would add latency to the YouTube streams watched by 30%, since they are the most bandwidth-intensive, leaving all the other streams alone. So instead of having your network crash completely, a few YouTube videos would break up for a few seconds, and when conditions abated, they would be allowed to run. The majority of the traffic on the network is well-behaved, short/bursty bandwidth uses, such as web surfing, web-based applications, and email and so will not be penalized.

Notice that bandwidth allocations per user do not matter. We do not try to hit fixed allocations, we just put delay on the nastiest "hog" traffic until the bandwidth usage overall drops back below 85 percent (or the setting you choose). The value is that you get the best possible usage of your bandwidth without having to micro-manage your network.

We need to ensure that even during busy times at our hotel or resort, our conference rooms, guests, and staff gets adequate bandwidth.

In addition to equalizing, we offer a way to define shared bandwidth limits, called "Pools". Pools can be used to carve out maximum bandwidth reservations (not allocations).

Typically, Pools are defined to split out bandwidth to either groups (hotel guests, conference guests, employees) or physical locations (hotel rooms, conference rooms, offices) giving them separate bandwidth allocations. Think of a Pool as a "mini virtual NetEqualizer", as each Pool is shaped when it becomes congested (typically 85%).

For example, if you have a 100Mbps pipe, and set up Pool 1 for your employees at 10Mbps and Pool 2 for your hotel guests at 70Mbps, and Pool 3 at 20Mbps for your conference rooms, you are allocating shared bandwidth maximums for each group. Your hotel guests can use up to 70Mbps, thereby keeping 20Mbps free for your conference rooms, and 10Mbps for employee use. Each group will be equalized at 85% of their maximum, which keeps congestion from bringing each Pool to a halt. Note that this bandwidth is not reserved; Pools just define a maximum shared allocation.

Our guests want to play games and watch videos (e.g. YouTube).

When your Internet is not congested, which we define as below 85% utilization, anything can run freely on your Internet pipe.

However, during congested periods, your Internet is in danger of coming to a halt due to hoglike traffic. During peak, YouTube and other videos will be equalized, in order to keep the majority of traffic running smoothly.

We have written a lot about YouTube, which is definitely considered a bandwidth hog. Bottom line, the NetEqualizer will add latency to "hog" traffic when the network is congested (over 85% utilization, or whatever setting you choose).



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This will add delay to the YouTube videos, while enabling other users to continue working with low-bandwidth applications, such as online applications, email and web surfing. This concept of “fairness” enables your network to continue providing quick response times to most of your users while restricting network hogs.

To learn more about our thoughts on YouTube, please review our blog posting [How Much YouTube Can the Internet Handle?](#) We also offer a NetEqualizer Caching Option (NCO) as an add-on, for those interested in caching YouTube and other port 80 files of sizes 2MB-40MB ([read our FAQ](#)).

Gamers will typically see *improved* performance once a NetEqualizer is in place. Gaming traffic by its very nature will get priority, just like emails and VoIP. This is true 99% of the time (except Second Life which can use a full T1 per player).

We need a solution that will protect our investment and grow with our network.

When you purchase a NetEqualizer, you automatically get our lifetime buyer protection policy. We protect your investment in NetEqualizer hardware by offering a trade-in credit towards a new unit, when it is time to retire a working unit or in the event of an equipment failure. You can read more about our [Lifetime Buyer Protection Policy](#).

In addition, each NetEqualizer series can be updated as the size of your pipe is increased, by purchasing a NetEqualizer license upgrade. Also, unlike other solutions on the market, you pay a one-time license fee for the NetEqualizer, and then only a reasonable yearly support fee (NSS) to cover software upgrades and support questions. We also offer an optional yearly hardware warranty (NHW) for up to 4 years.

You can size your network to support your anticipated number of hotel or resort guests and employees on the network. Then purchase the

NetEqualizer that matches your network pipe size, knowing that you have the option of a license upgrade to support more users later on as your network grows.

Furthermore, if you need to architect your network to support full redundancy, you can buy a second NetEqualizer and put it in place as either a cold backup or in hot swappable mode.

We need our wireless network to work well everywhere on our property. We would love to have experts solve this for us, without having to hire a full-time network expert.

Your lodging guests expect a great wireless experience while staying at your property. You need to offer a seamless process for them, from initial user authentication, to Internet use, and then accurate billing.

APconnections has partnered with [Global Gossip](#) to offer all of this via our Hotel Management System Integrated Offering (HMSIO).

HMSIO combines the best of optimizing your network via a NetEqualizer bandwidth shaper, along with the benefits of a managed network service offering, including network design, monitoring, and authentication capabilities customized for your site.

If you are interested in learning more, read our [HMSIO white paper](#).

For more information...

Although we've covered a few of the most pressing issues libraries face, we understand that everyone's situation can be different. To learn more about how the NetEqualizer might help your library, please contact us at sales@apconnections.net or call us at 303.997.1300 x103.