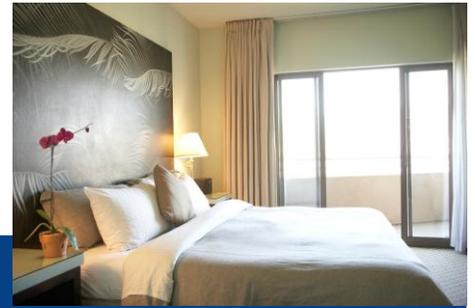# Hotels & Resorts Guide

In working with some of the world's leading hotels and resorts, we've repeatedly heard the same issues and challenges facing network administrators. Here are just a few:

- *We need to do more with less bandwidth.*
- *We need a solution that's low cost, low maintenance, and easy to set up.*
- *We need to meet the expectations of our tech-savvy customers and prevent Internet congestion during times of peak usage.*
- *We need a solution that can meet the demands of a constantly changing clientele. We need to offer tiered internet access for our hotel guests, and provide managed access for conference attendees.*

In this article, we'll talk about how the NetEqualizer has been used to solve these issues for many Hotels and Resorts around the world.

We need to do more with less bandwidth.

NetEqualizer's built-in rules-based, application-level traffic-shaping technology dynamically controls traffic based on current network usage. When the network is congested, the "fairness" algorithm favors business-class applications, including VoIP, web browsing, chat and email, at the expense of larger file downloads. This approach allows network managers and operators to maintain high levels of customer satisfaction without having to purchase additional bandwidth.

We need a solution that's low cost, low maintenance, and easy to set up.

Put simply, the NetEqualizer is a "plug-and-play" solution. Once you put the NetEqualizer in place, it immediately and effectively handles traffic shaping automatically around the clock. You simply need to define the size of your network pipe, establish the level of total bandwidth usage (default is 85%) at which you want shaping to kick in, make sure that the defaults are "on," and that's it.

In general, the NetEqualizer is installed between your Router and your Switch, acting as a transparent bridge once in place. It will reside passively in your network until bandwidth shaping is needed, and when the set level of congestion is reached, it kicks in to smooth your network traffic.

There are additional parameters that you can set to customize your NetEqualizer implementation. However, many of our customers find that they do not need to make any changes to the default settings in order for their network performance to improve dramatically.

NetEqualizer Key Functions

- *Behavior-based bandwidth shaping (aka "equalizing")*
- *Plug-and-play, low-maintenance solution*
- *Effective P2P control*
- *Reduces RIAA requests*
- *CALEA compliant*
- *Prioritizes sensitive applications such as VoIP*
- *Shapes up to 5 Gbps*
- *Up to 40,000 users*
- *Pricing starting at $1525*

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

The concept of "fairness" enables your network to continue providing quick response times to the majority of your users while restricting the network hogs. Low bandwidth users do not have to share the pain of a slow, congested network with the network-hogging applications. Your guests *expect email and web surfing to be responsive, and with bandwidth shaping, they will be*.

For example: Suppose you have 150 guests and 10 employees using the network as follows:

- 95 percent are casually surfing the Web
- 75 percent are checking email
- 40 percent have chat sessions running
- 5 percent are watching YouTube

In this example, if your trunk is saturated, the NetEqualizer would add latency to the YouTube streams (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 then when conditions abated, they would be allowed to run.

Notice that the exact 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 to 85 percent* (or the setting you choose). This quickly takes the delay away until your network is no longer congested. The value is that you get the best possible usage of your network bandwidth without having to micro-manage your network.

To learn more about our thoughts on YouTube, please review our blog posting How Much YouTube Can the Internet Handle?

However, if videoconferencing is an integral part of your customer's usage at your Hotel or Resort, NetEqualizer enables you to treat the videoconferencing host as high priority, through our "priority hosts" feature. This will cause the videoconferencing host not to be shaped, and to always be given priority over other traffic. Priority hosts can be set-up permanently or temporarily in the NetEqualizer.

For organizations concerned with achieving maximum network uptime, the NetEqualizer architecture enables customers to build a redundant configuration by putting a second NetEqualizer in place as either a cold backup or in hot swappable mode.

We need a solution that can meet the demands of a constantly changing clientele. We need to offer tiered internet access for our hotel guests, and provide managed access for conference attendees.

A common challenge facing Hotel and Resort networks is that its Internet users are constantly changing as guests come and go. Furthermore, some users may have different needs than others; say in the case of a conference or seminar at your hotel or resort. To meet these differing needs, the NetEqualizer enables administrators to offer tiered internet access by IP address, MAC address, VLAN or subnet (For more information on each shaping strategy, see our detailed NetEqualizer User Guide).

Therefore, a guest, or group of guests, that needs more bandwidth than usual, can be accommodated.

Furthermore, NetEqualizer users can add an additional dimension to their network through the NetEqualizer Network Access Control (NAC) module, which is available as an add-on feature to the NetEqualizer. Once purchased, it is fully integrated into the NetEqualizer. Please note that the NAC module runs on all NetEqualizer units shipped after 2007. The NAC module enables hotels & resorts to offer a personalized, branded login experience to access your network.

The following features are included with the NetEqualizer NAC module:

- **Time-based usage by login** - You will be able to offer your customers a login to your network for a subscribed amount of time.
- **Re-direction to a Web site of your design** - You decide what users will see online first.
- **Group-based block license enforcement** - We are told this is an industry first. This gives the option for a group to purchase a block of licenses (simultaneous shared logins). For example, if you have an event where a group needs network access, rather than force every customer to purchase a 24-hour license, you can sell 100 licenses to a certain group. They can then distribute those to their members, which saves you the trouble of distributing licenses to every customer.
- **Class of service by group** - Operators will be able to set different classes of service for each group that's been created.
- **Flexible time-out periods** - This may also be an industry first. When a user is not active for an hour or so (the time is flexible), in some cases you may want to have them automatically logged out. This feature allows you to do this.
- **No fixed MAC address or IP address required** - Users will be able to dynamically identify themselves with personalized login IDs and passwords.

Administrators will be able to extend and modify access features at their discretion.

For more information…

Although we've covered a few of the most pressing issues Hotels and Resorts face, we understand that everyone's situation can be different. So, to learn more about how the NetEqualizer might specifically help your Hotel or Resort, please contact us at sales@apconnections.net or call us at 303.997.1300, extension 103.

About APconnections, Inc.
APconnections is based in Lafayette, Colorado, USA.
We develop cost-effective, easy-to-install and manage, traffic shaping appliances. Our NetEqualizer product family optimizes critical network bandwidth resources for any organization that purchases bandwidth in bulk and then redistributes or resells that bandwidth to disparate users with competing needs.

We released our first commercial offering in July 2003, and since then customers around the world have put our products into service. Our flexible and scalable solutions can be found at ISPs, WISPs, major universities, Fortune 500 companies, SOHOs and small businesses on six continents.

About the NetEqualizer Product Family
NetEqualizer appliances are bandwidth shaping systems designed to optimize your Internet Connection, while giving priority to your important business and data applications. The flexible, scalable, and cost-effective bandwidth control products can be deployed in both corporate and service provider networks.

NetEqualizer is available in a range of configurations from 4Mbps up to 5 gigabits.