NETEQUALIZER

K-12 Schools Guide

In working with network administrators at public and private K-12 schools over the years, we've repeatedly heard the same issues and challenges facing them. Here are just a few:

- *We need a solution that's low cost, low maintenance, and easy to set up.*
- *We need a solution that will prioritize classroom videos and other online educational tools (e.g. blackboard.com).*
- *We need to improve the overall Web-user experience for students.*
- *We need a solution that doesn't require "per-user" licensing.*

In this article, we'll talk about how the NetEqualizer has been used to solve these issues for many public and private K-12 schools around the world.

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 at which you want shaping to kick in (default is 85%), 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 then 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.

We need a solution that will prioritize classroom videos and other online educational tools (e.g. blackboard.com).

The NetEqualizer has a feature to enable you to designate specific IP addresses as "priority hosts". Those IP addresses will remain outside bandwidth control, and will not be equalized. Therefore, if you have particular servers or websites that you use in the classroom (e.g. blackboard.com), you can identify these to the NetEqualizer, and they will be considered priority traffic.

We recommend that you consider prioritizing specific IP addresses if you utilize live streaming video, such as from an online educational website (e.g. blackboard.com). Otherwise, you should not need to set a priority host.

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*

Who's Using the NetEqualizer?

- *Nearly 100 K-12 schools around the world.*

We need to improve the overall Web user experience for students.

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 students and teachers expect email and web surfing to be responsive, and with equalizing, they will be*.

If your trunk is saturated, the NetEqualizer will add latency to bandwidth-intensive streams, leaving all the other streams alone. So instead of having your network crash completely, a few YouTube videos, for example, would break up for a few seconds, and then when conditions abated, they would be allowed to run freely.

We do not try to hit fixed allocations for specific users, 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.

We need a solution that doesn't require "per-user" licensing.

The NetEqualizer is not licensed per user. Rather, the NetEqualizer license is tied to the size of your network pipe. It can be updated as the size of your pipe is increased, typically 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 small yearly support fee to cover software upgrades and support questions.

So, you can size your network to support your anticipated number of patrons, and then purchase the NetEqualizer that matches your network pipe size, knowing that you have the option of a license upgrade for more users later on. For more details on our sizing recommendations, see our contention ratio blog post Can Your ISP Support Video for All?, which specifically addresses the needs of administrators.

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.

For more information…

Although we've covered a few of the most pressing issues K-12 schools face, we understand that everyone's situation can be different. So, to learn more about how the NetEqualizer might specifically help your school, please contact us at sales@apconnections.net or call us at 303.997.1300, extension 103.