NETEQUALIZER

Case Study

Washington County Cooperative Library Services

Background

Washington County Cooperative Library Services (WCCLS) provides services to fifteen (15) member libraries across 20 sites within Washington County, Oregon. WCCLS' member libraries support over 295,000 patrons, circulating 13 million physical and digital assets. Sylvia Lee is the Library Automation Systems Supervisor at WCCLS, and Josh Chilcott is a Network Analyst II on her team.

Washington County Cooperative Library Services is focused on building out infrastructure to support the 21st century library, including 24x7 online access for library patrons. In mid-2012, they upgraded their Integrated Library System, and added mobile access to their full catalog.

The Challenge

Back in 2010, WCCLS realized that bandwidth consumption was growing significantly, and would continue to grow as more library services are offered via the Internet. *A key realization for Josh and Sylvia was that even as they grew/upgraded their bandwidth, it would always be limited*. They determined that they needed to find a way to stretch their limited bandwidth, optimizing the resource - as everyone would always want more.

WCCLS started looking for a bandwidth management solution - one that would split up their Internet pipe equitably, require minimal maintenance, and not break the bank. It also needed to be able to prioritize traffic from staff stations over patron stations and wireless clients, as well as give priority to traffic from shared services accessible via the Internet that are hosted at their administrative site.

WCCLS receives broadband through the Broadband User Group (BUG), which acts as the ISP for the Public Communications Network (PCN), a public fiber network that links schools, public safety, libraries, and government buildings at a reduced cost. In 2010, WCCLS' Internet portion amounted to a 45Mbps Internet pipe. They have since upgraded to 95Mbps. All fifteen (15) WCCLS member libraries share this connection to the Internet through an administrative office.

The key goal was to give fair use to patrons on both public stations and wireless networks, with priority to staff stations so that staff could optimally perform their work.

Executive Summary

Customer: Washington County Cooperative Library Services (wccls.org)

Industry: Library

Location: Hillsboro, Oregon

 # Patrons: 295,274
 # Items in Circulation: 13 million

Challenge: Limited bandwidth for library staff & patrons. Everyone wanted more.

Solution: NetEqualizer 2000 series

Results:

- Bandwidth shared equitably across patrons
- Bandwidth prioritized for staff
- Delivered on expectations
- Very little maintenance once set up "set & forget"

Benefits:

- Attractive price/performance
- Manageable yearly support cost
- Scalable solution that can grow to meet future needs

Solutions Considered

During their research, WCCLS considered bandwidth shaping products from BlueCoat, Allot, Emerging Technologies, and APconnections.

WCCLS selected APconnections' NetEqualizer 2000 series bandwidth appliance. They initially purchased a 45Mbps license (NE2000-45), along with a yearly Support contract (NSS) and a 1 year hardware warranty (NHW). They have since upgraded their license level twice, to a 100Mbps and then a 150Mbps, as their bandwidth has grown.

From a Management perspective, Sylvia was impressed with its attractive price point for performance delivered. Compared to other solutions, it offered equivalent performance at a fraction of the price (9 times less than some competitors). Additionally, the yearly ongoing maintenance costs for software upgrades and support (NSS), as well as the hardware warranty (NHW) were manageable. Finally, APconnections trade-in policy, which applies a portion of the original purchase price towards a unit series upgrade, really demonstrated a strong commitment to the customer.

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The NetEqualizer has delivered on all our expectations. It has truly been a "set and forget" type of appliance, has scaled with our needs, and all this at an attractive price point.

If you have congestion on your network, I highly recommend NetEqualizer.

Josh Chilcott
Network Analyst II
Washington County Cooperative Library Services (WCCLS)

From a technologist perspective, Josh liked the NetEqualizer feature set, particularly its ability to shape based on fairness algorithms rather than policies (it does not use deep packet inspection (DPI)), enabling it to maintain network neutrality. Libraries have a long history of respecting patron's privacy, and NetEqualizer allows WCCLS to continue this tradition.

Josh also appreciated the pre-sales discussions, which were focused on understanding what WCCLS' needs were, and setting expectations as to how the NetEqualizer would address them, rather than a hard sell. This educational bent is a hallmark of APconnections, where our goal is to achieve a "win-win" for every sale.

The Solution

WCCLS installed their NetEqualizer in November 2010, and have since upgraded twice, first to a 100Mbps license and then to a 150Mbps license. Their NetEqualizer is set up to prioritize traffic from staff stations (by IP address) over patron stations and wireless clients. Several shared services hosted at the administrative office are also prioritized. WCCLS' network pipe is also used to pass traffic to other local government agencies. The NetEqualizer can segment off this traffic not destined for the Internet, excluding the traffic from shaping or counting against WCCLS' license.

WCCLS initially used NetEqualizer's Time of Day configuration in order to apply different rules during the day and night. As their bandwidth has grown, they have moved to one configuration, which works for them around-the-clock. WCCLS does not block any traffic with the device, such as peer-to-peer (P2P), preferring to deal with this from a policy perspective. However, if RIAA requests start to mount, they can implement NetEqualizer's Connection Limits feature to limit P2P.

The Results - How NetEqualizer Met the Challenge

The NetEqualizer has lived up to its promises. Since the initial install, Josh has spent very little time supporting the NetEqualizer. He finds it is truly a "set and forget" type of device - It just works, alleviating congestion during busy times. From Sylvia's perspective, library budget is always limited, and a challenge is to maximize every dollar spent. To-date, the NetEqualizer has been a great investment, and has scaled as WCCLS bandwidth has grown.

What's Next?

One thing that is a constant for WCCLS is change. Internet use at their public libraries now encompasses patrons placing Skype/video calls and watching YouTube videos. Luckily for them, they are prepared to handle these changes. Their NetEqualizer automatically handles VoIP (Skype) and can be tuned for video calls as well. WCCLS is starting to consider solutions to cache YouTube, and will look at NetEqualizer's Caching Option (NCO).

About Washington County Cooperative Library Services

The libraries in Washington County work together in a spirit of cooperation that extends beyond local boundaries in order to provide excellent countywide library service to all residents. WCCLS is governed by a Board of County Commissioners and the majority of funding for local public library service comes from the County. WCCLS is a partnership of the County, nine cities and two non-profit associations. To learn more about WCCLS, go to http://www.wccls.org/library_services/wccls. To learn about their libraries, visit http://www.wccls.org/.

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 turn-key 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.