

# Case Study: Deploying an Application Delivery Network to Improve User Experience



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## The Bottom Line

Delivering applications to corporate workers over a WAN can be challenging due to different applications' unique performance requirements. Windham Professionals deployed an application delivery network to solve performance woes and achieved up to an 80 percent improvement in application performance while realizing a seven-month ROI.

## A Strategic Approach to Application Delivery

Today, corporate networks are used to distribute a wide variety of application types: real-time applications such as VoIP or video, non-real-time applications such as e-mail and file services, and distributed applications such as streaming video. Each of these application types can be optimized for network delivery through various methods, some ad hoc and some strategic. While deploying optimization technology on an ad hoc basis can yield some short-term benefits, ultimately it leads to a more complex network environment. Taking a strategic approach to application delivery allows a company to optimize all applications running on the network—both today and in the future. This report presents a case study of how collection agency Windham Professionals evaluated and chose an application delivery network (ADN).

## The Company: Windham Professionals

Windham Professionals, a collection agency based in Salem, N.H., was formed in 1982 to provide collection services for higher education institutions and guaranty agencies. In 1995, Windham acquired Trac Associates to add commercial collection services and, in 2005, it acquired Highland Cross and Associates to include health care collection services. Today, the company provides specialized collection services in the educational, commercial, government and health care industries. Windham is authorized to collect in all 50 U.S. states, the U.S. Virgin Islands, Guam and Puerto Rico, as well as internationally. It has five U.S. locations: the main office in Salem, N.H., as well as offices in Las Vegas, Buffalo, Nashville and Woburn, Mass.

## The Challenge: Application Performance

Windham's MPLS network runs at T1 speeds. Still, interoffice applications—such as e-mail, Windows File Services and specialized collections applications—create a significant amount of traffic on the Windham network. In addition, data exchange between the two data centers in Nashville and Salem creates more load on the heavily burdened network.

After studying the traffic, the Windham IT team discovered the performance problems were due to:

- **A very high volume of common Internet file services (CIFS) traffic.** This was due primarily to the number of Excel files being opened across the network.
- **E-mail.** Like most organizations, Windham relies heavily on e-mail for communications, and this has driven the importance of e-mail to mission-critical status. However, the heavy reliance on e-mail has created a situation in which e-mail now makes up a significant portion of the traffic on the network.
- **A Web-based collections application.** Windham's collection application is the single biggest contributor to its network performance problems, accounting for an estimated 65 percent of network traffic. However, since it is Web-based, simply putting the traffic into its own class of service was not sufficient since many other applications are Web-based as well.

The net result is that the user experience was very poor. The help desk received an average of 70 tickets per day regarding slowness of applications. All the major network-based applications—e-mail, Excel and the collections application—performed poorly,

significantly impacting user productivity. Windham had two choices: Either upgrade the entire network to DS3s, at approximately 10 times the cost of T1s, or find a solution that could help improve the performance using the current network architecture.

## The Solution: Blue Coat’s Application Delivery Network

Patrick Cote, Windham Professionals’ director of IT and information security, evaluated a number of WAN optimization vendors to help solve the problem. After extensive testing, he determined that Blue Coat’s ADN vision was the best solution for his organization.

Blue Coat’s ADN addresses all application performance problems, not just a subset of them. Windham’s holistic approach to improving the user experience matched up well with the value proposition of an ADN. In addition, Blue Coat’s ProxySG product was the only solution that addressed Web filtering, data loss prevention (DLP) and application acceleration in one device; the alternative would have been a two- to three-device solution, significantly increasing the cost.

Windham chose the Blue Coat solution for its ability to:

- **Filter out “bad” Web traffic.** The Blue Coat solution allows filtering of non-critical Web traffic, such as social networking and entertainment sites.

- **Protect the organization.** The Blue Coat DLP solution allowed for blocking of Internet mail sites, which prevents information from leaving the building.
- **Improve the performance of applications.** While WAN acceleration is often sold as a solution unto itself, it is just one feature of the Blue Coat solution.
- **Prioritize critical traffic.** Blue Coat allows companies to prioritize certain Web applications above all others, improving performance for critical apps.
- **Avoid a network upgrade.** The ADN solution can help applications run optimally without the need for a costly network upgrade.

## The Benefits: Fast ROI and Big Performance Gains

Overall, the Blue Coat ADN solution allowed Windham to protect the organization, avoid a network upgrade and improve user productivity—a multifaceted value proposition (see Exhibit I). Solution highlights include:

- **Application performance improvements:** Blue Coat’s application acceleration technology improved the overall response time of Excel and other CIFS traffic. For example, prior to deploying ProxySG, switching between accounts in

**Exhibit I: Windham’s Blue Coat Implementation Achieves Multiple Benefits**

Source: Yankee Group, 2011

BENEFIT	RESULT
Application performance improvements	65%-80% improvement in application performance
Cost savings from avoiding network upgrade	\$220,000 for this year; ongoing savings of \$24,000 per month
Fast ROI	Achieved seven-month ROI from technology deployment
Reduction in help desk calls	Application performance-related help desk calls went from 70 per day to 0
More productive and secure workforce	Faster applications and secure transport ensures maximum productivity and protection of clients
Simplified operations	Single device handles multiple functions, ensuring an operational benefit and a cost advantage

the collections application took approximately 15 seconds. After deployment, it was instantaneous. Depending on the application, users experienced a 65-80 percent improvement in performance. Windham was able to make further improvements by prioritizing the collections application above all others.

- **Cost savings:** A T1 circuit currently costs Windham approximately \$800 per month per circuit. Upgrading to a DS3 would have cost approximately \$8,000 per month per circuit. In aggregate, sticking with the T1 circuits will save Windham approximately \$220,000 for the remainder of this year, with ongoing monthly savings of \$24,000.
- **Fast ROI:** The cost savings of avoiding a network upgrade amounted to an ROI of approximately seven months. This ROI only includes the cost of circuits—it would be even faster if there was a way to quantify the cost of help desk calls.
- **Reduction in help desk calls:** Prior to the Blue Coat solution, the Windham help desk was getting approximately 70 calls per day regarding application speed, and there was nothing they could do to address the situation. Since the deployment of this solution, the performance of the applications has been so good that there has not been a single call about slowness.
- **More productive and secure workforce:** The increased application performance, combined with limiting non-business-related Web usage, has dramatically increased user productivity. Although Windham has not been able to quantify it, both the workers and their managers have noticed this improvement. Windham can also protect its clients by preventing information from leaving the company via Internet e-mail systems. Since Windham deals with collections issues, it works under heavy regulatory requirements, making this a necessary function of any solution.
- **Simplified operations:** Because the ProxySG product was able to provide QoS, application acceleration, caching and Web filtering capabilities, Windham was able to use a single device for all these functions. With any other solution, Windham would have needed a minimum of two devices to achieve the same functionality. This has both an operational benefit as well as an up-front cost advantage.

## The Caveats: Interface Complexity

While Blue Coat's solution met Windham's requirements, no solution is perfect. According to Cote, the Blue Coat solution could be improved with a management interface that is simpler to

use. Although the complexity of configuring the product initially created some deployment issues, the benefits of the Blue Coat solution far outweighed the complex management interface.

## Conclusion and Recommendations

Windham Professionals, like most organizations today, relies heavily on its WAN to distribute applications and content to branch offices. However, the various types of applications (real-time, non-real-time, streaming, Web, etc.) behave differently over a WAN, making optimizing all the applications in an organization quite difficult. Taking a holistic approach through the concept of an ADN—that is, a network designed to optimize the performance of all types of applications—allows any organization to provide a high-quality connected user experience while optimizing the network and avoiding unnecessary, costly upgrades.

To help with an application delivery strategy, Yankee Group recommends the following:

- **When evaluating a solution, consider all the applications that need optimizing.** There are many solutions on the market today that perform one element of WAN optimization—that is, acceleration, Web filtering, QoS or content delivery (see the June 2010 Yankee Group Report "[Handicapping the Enterprise WAN Optimization Market](#)" for full definitions). One of these elements might address most of your organization's needs, but do a complete inventory of all applications that have network-related performance problems to ensure your bases are covered.
- **Consider WAN optimization in lieu of a network upgrade.** Upgrading bandwidth may seem like the fastest path to application performance improvements, but many applications will not perform better even with the upgrade. A chatty TCP-based application such as Windows File Services is a good example. Before doing any kind of upgrade, be absolutely sure the network is being fully utilized and an upgrade will indeed solve the problem, or you will be wasting both time and money for a solution that won't help.
- **Test a variety of scenarios before making a decision.** When evaluating products, test as wide a variety of application scenarios as possible. This includes encrypted traffic, new files, large files, low-speed network links, congested links and others. Although it can be difficult, try to simulate as many real-world scenarios as possible—it will help avoid more problems in the long run.

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