

### CHALLENGE

- Ensure Compliance with Network Policies
- Detect and Eliminate Inappropriate Use
- Increase Visibility in the Network

### SOLUTIONS

- ClearWidth Optimizer 500 SFP

### BENEFITS

- Improved View of Network Traffic Flow
- Unwanted or Undesirable Traffic Contained
- Minimal Impact to Budget
- Ease Integration with Existing Network Infrastructure
- Future-Proofed Solution

### ABOUT CLEARWIDTH

ClearWidth enables organizations of all sizes to keep their networks running at peak efficiency by providing instant insight and control over traffic within the LAN. ClearWidth's affordable, high-speed appliances enable users to maximize the value of their networks without performance degradation or infrastructure changes.

Using the patented TruPerform technology, ClearWidth appliances can transparently inspect and manipulate packets at gigabit speeds, providing administrators with the ability to monitor and manage complex network environments without worrying about decreased network performance.

Optimizer's small footprint, low power consumption, flexible configuration, and simple and nonintrusive deployment add up to a solution that pays for itself quickly and provides a foundation for future change and growth.

## ClearWidth

6373 San Ignacio Ave.  
San Jose, CA 95119 USA  
Tel: +1 408.843.4290  
info@clearwidth.com  
www.clearwidth.com

The Union County School District is located in Lake Butler, Florida, an hour south of the Georgia border and half an hour north of the University of Florida. Its five schools serve about 2,350 students. Like many school districts, Union has embraced technology to facilitate education and communication through a district wide network.

### BUSINESS CHALLENGE

The role of the IT administrator for the school district is to ensure that the network is running smoothly, and that policies governing appropriate use of the network are being followed. In that role, the IT administrator must become a detective, identifying those who abuse network bandwidth, download inappropriate applications, or visit web sites deemed unacceptable.

While every school in Florida is allotted licenses for URL filtering software, the solution does not address the serious problem of gaming traffic, peer-to-peer traffic, and encrypted proxies that bypass network defenses. The District had no visibility into these types of network problems.

### CLEARWIDTH SOLUTION

Union County School District was introduced to ClearWidth and the Optimizer 500 SFP, a high-performance appliance providing increased visibility into network flows. Its traffic analysis and NetFlow-based monitoring offer administrators an effective tool to identify bandwidth abuse and policy violations. The inline transparent mode of deployment and Gigabit throughput make it easy to deploy within network infrastructure to complement existing network equipment.

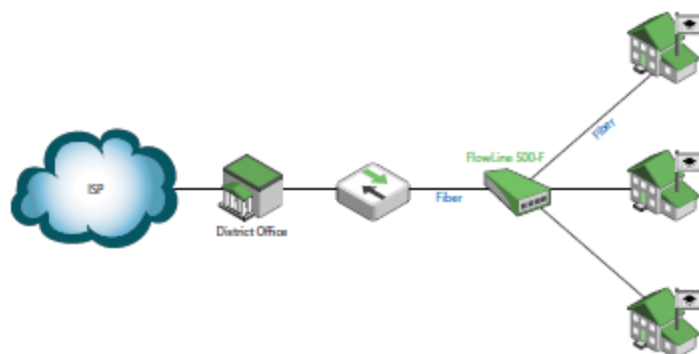
The school district installed an Optimizer 500 in January 2008 at its high school. The device was connected to the circuit that ran from the high school to the district office, which provides the primary connection to the Internet. The results were immediate and convincing. The NetFlow traffic analysis identified three computers transmitting large volumes of traffic to a single IP address. A "whois" address lookup determined the destination IP address was located in Australia. The IT Administrator then queried the source IP addresses and found the culprits just down the hall. A policy was created to stop traffic to that address.

Other instances of bandwidth abuse were also discovered at the high school. Gaming sites were quickly identified and blacklisted and the students were given a warning.

With the success of the Optimizer 500 at the high school, the school district is considering the purchase of additional Optimizer devices at other schools.

### BENEFITS

ClearWidth Optimizer 500 provides a cost-effective and highly-efficient way for the Union County School District to ensure network policies are being followed, and that resources are being used as they were intended. Bandwidth once hijacked by gaming and large file downloads is again available to students and staff for educational purposes.



## Features

### NETWORK VISIBILITY

#### NetFlow Export

- NetFlow V5, V9
- Configurable Bandwidth and Sample
- Export by Time
- Export by Match

#### NetFlow Collector/Analyzer Compatibility

- Any Third-Party Software Application
- Any Network Vendor Software/Appliance
- Any Open Source Software Application

### NETWORK OPTIMIZATION

#### Bandwidth Management

- By Application, Port, Network, Host and User
- Prioritize, Limit and Block

#### Quality of Service

- DSCP and TOS Marking

### DEEP PACKET INSPECTION

#### Pre-Defined Application Signatures

#### Custom Signatures (Run-Time Configurable)

- Port, Port-Range Matching
- Pattern Matching (Hex, ASCII)
- Boolean Operation

### NETWORK PLACEMENT

#### At the Network Edge

- Behind Internet Access Router

#### Inside the LAN

- Behind Any Switch

### NETWORK PLACEMENT

#### Inline

#### Passive (One-Arm) Monitoring

### OPERATING MODES

#### Transparent (Layer 2)

#### Route, NAT (Layer 3)

### NETWORKING

#### 802.1q VLANs: 40

#### Static Routes: 32

#### Dynamic Routing: RIP v1/v2

#### PPPoE

#### DHCP Relay

#### NTP

### LOGGING

#### Syslog

### MANAGEMENT

#### Command Line Interface (CLI)

Serial, SSHv2, Telnet

#### Browser User Interface (GUI)

HTTP and HTTPS

### SOFTWARE IMAGES

#### 3 Stored on Flash Memory

Current

Rollback

Factory Default

## Specifications

### PERFORMANCE

Total Throughput (Large Packets)	4Gbps
Total Throughput (Small Packets)	4Gbps
Max Concurrent Sessions (Flows)	192,000
Session Creation Rate	16,000/sec

### CAPACITY

Policies	500
Number of Users	Unlimited

### PORT CONFIGURATION

#### Optimizer

Network Type	RJ-45 Based Ethernet
Serial Port	1 x 10/100/1000BaseT
Data Ports	1 x 10/100/1000BaseT
Hardware Bypass	Power, Software, Manual

#### Optimizer SFP\*

Network Type	Fiber-Based Ethernet
Serial Port	1 x 10/100/1000BaseT
	1 x SFP
Data Ports	2 x SFP
Hardware Bypass	Software, Manual

\*Requires separate SFP transceivers

### POWER CONSUMPTION

Max Power Consumption: 15 Watts

### HARDWARE

#### Chassis

Small Form Factor

#### Dimensions (W/L/H)

5" x 10" x 1.5" (12.7cm x 27.2cm x 3.8cm)

#### Weight

2 lbs (0.9 kg)

#### Power

100 to 240 VAC, 50-60 Hz

### ENVIRONMENTAL

#### Temperature

Operational: 32° to 113° F (0° to 45° C)

Storage: -13° to 158° F (-25° to 70° C)

#### Humidity: 5%-90%, Non-Condensing

### SAFETY, REGULATORY, COMPLIANCE

#### Safety Compliance

EN 60950-1, UL 60950-1, TUV, CE

#### EMC Compliance

FCC Class A, VCCI Class A, C-Tick, CN55024, KN22, KN24

#### Lead-Free

EU Directive 2002/95/EC (ROHS)

#### MTBF

>100,000 Hours

### ORDERING INFORMATION

#### Optimizer

P/N: FLOO-300R-00

#### Optimizer SFP

P/N: FLOO-300S-00

Support and maintenance agreements are available through authorized resellers or by contacting ClearWidth.

Technical support available through an authorized reseller or through ClearWidth Technical Support online at [clearwidth.com/support](http://clearwidth.com/support).



Optimizer



Optimizer SFP

### OPTIMIZER SPEC HIGHLIGHTS

- Up to 4Gbps throughput
  - Fully-configured
- No performance degradation
  - Large and small packet sizes
  - Optimized for video
- 15 Watts power consumption
  - Compared to 200-800 Watts
- Transparent mode
  - Inline operation
  - No routing configuration
  - Instant operation
- Operational in minutes
  - Just one IP address required
  - Connect to switch or router
- Two configurations available
  - RJ45
  - SFP (for fiber connectivity)
- Small form factor
  - No rack required
  - Place anywhere

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