

Summary

Challenges

Meet current and future triple-play bandwidth requirements by providing every residential and commercial customer with a 1 GbE fiber connection

Solution

- Extreme MLX Series routers at the network core
- Extreme NetTron CES 2000 Series switches at the edge layer
- Extreme MLX Series 8×10 GbE

Results

- Expanded service capabilities to allow premium pricing for high-bandwidth customers
- Met customer bandwidth demand by providing a dedicated fiber line for every home and business in the city of Clarksville
- Reduced TCO while increasing performance and subscriber density in a space-constrained environment
- Maximized investment protection with 10 GbE ports, enabling the network to scale with the business
- Reduced line-rate throughput costs by 90 percent compared to previous core switches



CDE Lightband

Success Story

Metro Provider Offers Active Ethernet to Every Customer

Beginning operations in 1938, CDE Lightband has a rich history of powering the city of Clarksville, Tennessee. Today, it is the leading municipal utility provider of electricity, digital television, Internet, and voice services to the entire 100-square mile city. The company serves approximately 60,000 customers and maintains 892 miles of power lines and 960 miles of fiber optic cable throughout Clarksville.

City Hall, public parks, Austin Peay State University, hundreds of enterprises, and thousands of residents of Clarksville all depend on CDE Lightband to provide reliable network services to keep their day-to-day activities running smoothly.

HDTV and Video On Demand Spur Network Upgrade CDE Lightband needed an upgrade to address high-bandwidth demands driven by High-Definition Television (HDTV) and video-on-demand services, which were experiencing pixelation at peak times.

“Because CDE Lightband offers 1 GbE services, it really adds to our economic development potential in this city. [...] I am also really excited that we now have wireless service at McGregor Park. So when the weather is nice, we can enjoy being outside while working on our computers.”

Kim McMillan
Mayor of Clarksville

The company also needed a platform that would scale to support Layer 3, 10 Gigabit Ethernet (GbE), carrier-class features, and other future upgrades. By providing 1 GbE to each of its customers, CDE Lightband was able to solidify its position as the leading service provider in Clarksville and reduce competitive pressure from outside providers.

Since 2010, CDE Lightband has relied on Extreme networking infrastructure solutions to provide a unique Internet service to the businesses and residents of Clarksville. Residential customers can use up to 1 GbE if they need that much bandwidth.

To prepare for future customer demand, CDE Lightband upgraded its network with 10 GbE capacity. After comparing the technology, features, and costs of three competing platforms, CDE Lightband chose the Extreme solution, which includes Extreme NetIron® CES 2000 Series switches, Extreme MLX® Series routers.

CDE Lightband was most impressed with the rich features provided by the Extreme solution. The company could seamlessly upgrade its current Extreme MLX Series infrastructure to 10 GbE and support IPv6. Also, Extreme offered a lower per-port cost, helping to reduce CDE Lightband's total cost of ownership.

"I like to compare the Extreme NetIron CES switches to our previous core switches," says Mike Neverdusky, Network Engineer at CDE Lightband. "The old core switches could provide 50 Gbps of throughput whereas one Extreme NetIron CES 2048-FX switch can deliver 136 Gbps of line-rate throughput."

Offering a True Fiber-to-the-Premises Network

Unlike its competitors, CDE Lightband provides a true Active Ethernet network to its customers. This means that each residential and commercial customer has its own Fiber-to-the-Premises port. With an Active Ethernet network, the bandwidth on the connection is not shared, giving CDE Lightband an effective way to ensure a 1 GbE connection to each subscriber.

"We provide our customers an Active Ethernet system in which we use a dedicated fiber line for every home and business in the city," says Neverdusky. "The Extreme NetIron CES switches allow us to provide 1 GbE of bandwidth to every single home in the entire city, so we can sell Gigabit Internet services".

Providing World-Class Reliability

CDE Lightband, like all service providers, places tremendous value on its residential and commercial customers. Extreme MLX routers and NetIron CES switches allow CDE Lightband to offer unique Ethernet services while keeping pace with its customers' expanding triple-play requirements.

"Extreme Networks has played an instrumental role in CDE Lightband's ability to provide world-class services. Their robust switches and 1 GbE bandwidth enable us to differentiate ourselves from our competitors. [...] Extreme has been a very good partner and has helped us get to the next level," says Taylor. "Our services continue to grow, and we have Extreme to thank for that."

Brian Taylor
Superintendent of CDE Lightband

Learn More

For more information, contact your Extreme Account Manager or a member of the Extreme Partner Network program, or access other collaterals by clicking on Resource Library at www.extremenetworks.com



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