

Success Story

Premier Indian Broadband Provider Gets Optical Upgrade with Zyxel GPON Solution



INDUSTRY

Cable MSO



CUSTOMER

GTPL
Hathway



COUNTRY

India



SOLUTIONS

Zyxel
GPON
Solution

Overview

Challenges

- Enhance access network security and reliability
- Increase average bi-directional bandwidth
- Optimize the thousands of km of deployed fiber to reach more customers and reduce costs
- Provide software customization options for easy management and monitoring

Results

- Integrates DDoS attack prevention and security features on customer and internet side of the network
- Non-blocking traffic capacity allows fluid high-speed internet capacity between GPON users and OLT uplink, preventing bandwidth speed bottlenecks
- Addition of OLT uplink and PON downlink redundancy methods to enhance high-availability SLA
- Networks and systems can be managed, monitored, and receive error detection via NetAtlas

Solutions

- Zyxel GPON Solution

Background

GTPL Hathway is a cable and broadband provider headquartered in Ahmedabad, India. Founded in 2006, the company has become an industry leader in a short period of time; it currently maintains more than 20,000 kilometers of optical fiber cable, serving 8.7 million households in about 500 cities across the country. As India's premier Multi System Operator (MSO), GTPL is devoted to developing and delivering video products and data services of the highest quality.



Challenges

There were numerous network obstacles that GTPL wanted to overcome. Their first objective was to build an infrastructure that could handle the countless demands of schools, hotels, and similarly large enterprises. The company's current point-to-point architecture was insufficient and unable to provide the seamless and uninterrupted connectivity that those sectors expect. Second, they hoped to have the ability to deliver on their

promise of 80 Mbps transfers. Users opting for this top-tier plan would likely be the most critical; if the speed was consistently lower than advertised, these customers would be at risk of being poached by competitors. Lastly, it would be essential to ensure that the network was self-sustainable and secure. By going with Zyxel's potent and efficient GPON solution, GTPL was headed in the right direction.

Solutions and Benefits

At the center of GTPL's upgrade was the workhorse **OLT2406 2U Temperature-Hardened 6-slot Chassis GPON OLT**, which Zyxel designed specifically for large-scale projects. The OLT has the dexterity to handle a number of critical responsibilities: configuring and managing VLAN, running resiliency tools such as Storm Control and Loop Guard, as well as supporting proxy ARP.

The agile **OLT1408A 8-port GPON OLT** was deployed for more remote locations due to its compact chassis with low power consumption, triple power source redundancy, battery support, and full remote management. This fiber backbone was necessary to overcome the distance limitations of traditional CAT 5 cabling.

The **PMG5317-T20A** and **PMG1005-T20A GPON ONT** were deployed to bring this high-speed wired connectivity to

subscribers. The devices are able to link to the OLT via a comprehensive and easy-to-use management interface, which also allows for convenient remote access. With built-in QoS, it also ensures that the triple-play applications near and dear to you are given the bandwidth they need.

The completed network delivers the optimized power and coverage that GTPL expected. In addition to speeds of over 80 Mbps, the fiber connectivity offers greater security and reliability compared to a traditional copper LAN infrastructure. This security is further bolstered by the Zyxel EMS NetAtlas, a powerful management system that centralizes and simplifies decision-making for the entire network. Now—thanks to a GPON solution from Zyxel—the cable and broadband giant can provide entertainment and communication services that will leave the competition in the dust.

Products Used

OLT2406 • 2U Temperature-Hardened 6-slot Chassis GPON OLT



- ITU-T G.984-compliant GPON ports; each port can support 64 ONT
- Two management and switch cards plus two power modules for redundancy
- Four 10 GbE or two GbE uplink ports
- 10 GbE backplane bandwidth per line card slot for non-blocking service
- Four PON or GbE port per line card
- ITU-T G.984.1 type A and type B protection
- Temperature-hardened
- All front-access and hot-swappable

OLT1408A • 1U Pizza Box 8-port GPON OLT



- Cost-effective solution with compact design
- Temperature-hardened
- Comprehensive QoS to enhance users' triple-play experience
- Field-proven IGMP snooping and proxy for IPTV deployments
- Full Management via ZyXel EMS NetAtlas

PMG5317-T20A • Wireless N GPON HGU with 4-port GbE Switch



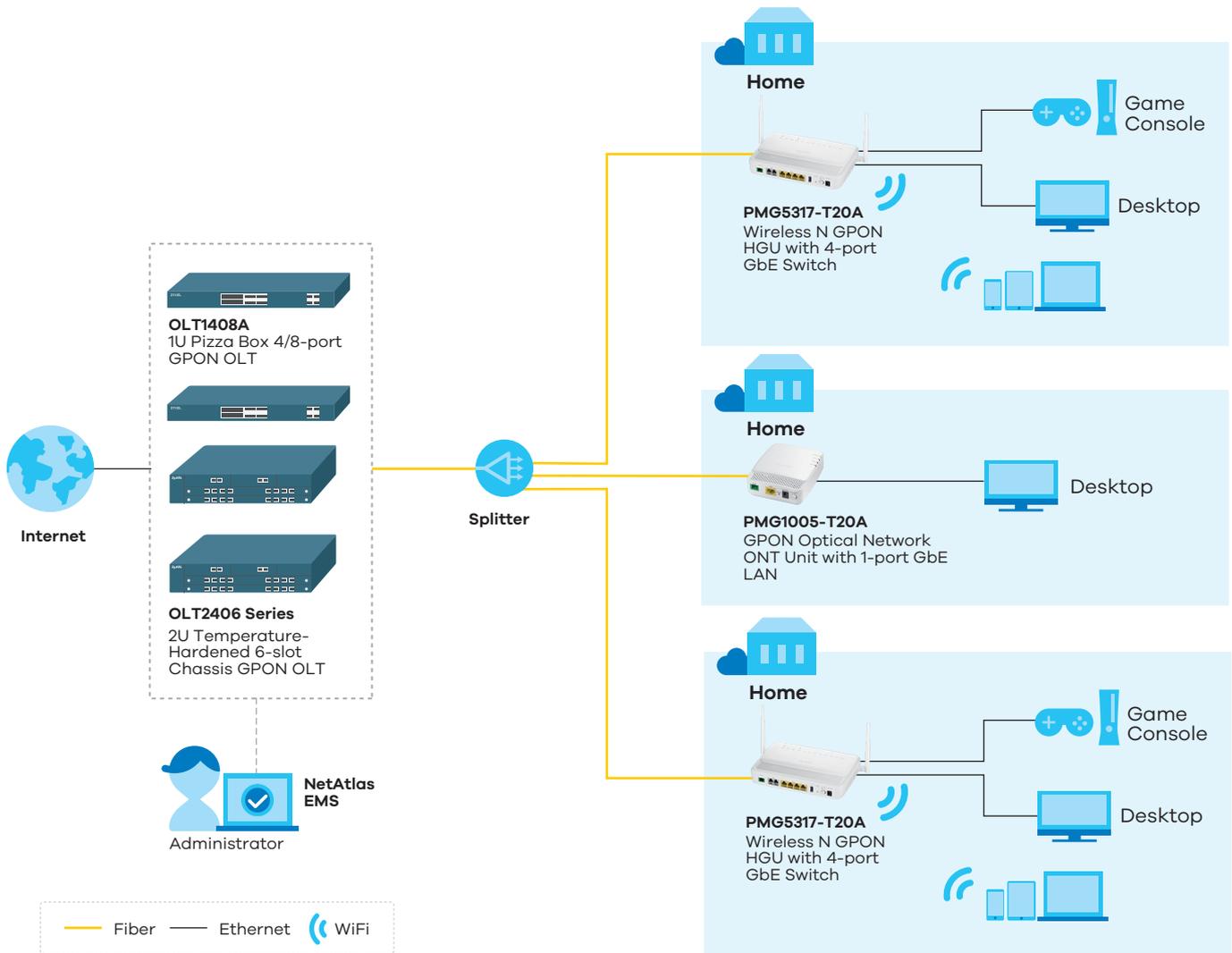
- Integrated Internet services through fiber optics
- 2.4 GHz 11 b/g/n (2x2) for superior performance and coverage
- Advanced QoS ensures quality of triple-play services
- Provisioning and Management

PMG1005-T20A • GPON Optical Network Unit with 1-port GbE LAN



- Integrated Internet services through fiber
- High-speed data access
- QoS ensures service quality
- OMCI remote management

Diagram



About Zyxel Communications

Focused on innovation and customer-centricity, Zyxel Communications has been connecting people to the Internet for nearly 30 years. Our ability to adapt and innovate with networking technology places us at the forefront of creating connectivity for telcos and service providers, business and home users. Zyxel is building the networks of tomorrow, unlocking potential, and meeting the needs of the modern workplace — powering people at work, life, and play. Zyxel, Your Networking Ally.

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