

Success Story

Zyxel GPON Solution Delivers High-Speed and Long-Range Broadband Connectivity to Galvez Citizens in Argentina



Service
Provider



Galvez
Electric
Cooperative



Argentina



Zyxel
GPON
Solution

Overview

Challenges

- Overcome limited network coverage of internet and telephony services
- Build a reliable network infrastructure that could handle multiple bandwidth-sensitive services like IPTV and urban monitoring applications
- Gradually replace ADSL technology with a futureproof technology

Results

- Wide-area and cost-optimal deployment of optical access networks to homes throughout the city
- Smooth, high-speed network access and connectivity to meet greater bandwidth requirements from multiple services
- Streamlined deployment and easy management of network infrastructure
- Scalable and future-proof broadband solution for future expansion

Solution

- Zyxel GPON Solution

“With ZYXEL we managed to add to our existing technology the new FTTH GPON technology, with integral solutions and an excellent after sales support service. Because of these we were able to bring our Fiber Optic Networks project to reality.”

Fernando Zehringer,
Technical Manager, Galvez Electric Cooperative

Background

Located in the mid-south of the Province of Santa Fe, Galvez City is one of the most important production centers of agricultural products in Argentina with more than 20,000 inhabitants. Galvez Electric Cooperative provides around 30 percent of network services, including data communication and telephony services to companies

Challenges

Galvez Electric Cooperative wanted to provide more services, including bandwidth-sensitive applications like IPTV and urban monitoring in following years. However, the current bandwidth could not meet the requirement for high-speed data transmission. Also, the transmission distance was limited by the copper deployment. The company found it difficult to deliver fast and stable network services to homes throughout the city. The company asked its system integrator Comunitel to build a reliable and future-proof network infrastructure throughout the city.

Solutions and Benefits

To meet the growing bandwidth demand, GPON is a vital technology to help service providers satisfy bandwidth demands. Compared to traditional copper LAN infrastructure, fiber optic cables can carry more data than copper cables.

Comunitel chose Zyxel, who was capable of designing, installing and operating the FTTH network as a whole. Zyxel has accumulated abundant experience in GPON solution deployment that makes them an ideal partner. Strong brand reputation and customer service capability are key considerations in selecting partners.

The backbone of Zyxel's GPON network is the agile **OLT1408A 8-port GPON OLT**, which has refined QoS features to ensure optimal speed and reliability. The fiber backbone could overcome the distance limitations of traditional copper LAN cables. The **PMG5317-T20B** GPON ONTs were used as home gateways to provide high-speed WiFi connectivity. The ONTs link to the OLT via an easy-to-manage interface, which enables convenient remote access.

The Zyxel's GPON OLT and ONT features Zero Touch Provisioning that makes deployment a breeze. The OLT can auto configure the ONTs remotely, and preset Zyxel's ONT profile including the WAN connection type, bandwidth configuration and WiFi configuration. Once the ONT

and industrial centers in the city. Besides telephony services, its business scope spans across electricity, bottled gas and concrete columns. Its subsidiary CEGnet Telecomunicaciones is in charge of the city's network infrastructure based on GPON technology.



connects to the fiber, the configuration will be set remotely and automatically. The Zero Touch Provisioning helps service providers to provision the WAN configuration and VoIP configuration efficiently with ease, without having to send technicians to the field for configuration setups. The streamlined design facilitated installation over the existing network structure.

At present, the Galvez Electric Cooperative has converted 30% of its ADSL-based network to GPON network through new fiber deployment. With Zyxel's GPON solution, the city citizens can stay connected, enjoying entertainment and communication services. The service provider can deploy all-IP-based and future-proof networks with fiber broadband and enjoy lower management costs as well as excellent return on investment. The project's success makes the company consider gradually replacing copper deployment and ADSL technology with Zyxel's GPON technology in stages area-by-area in the coming years.

Products Used

OLT1408A • 1U 8-port Pizza Box GPON OLT



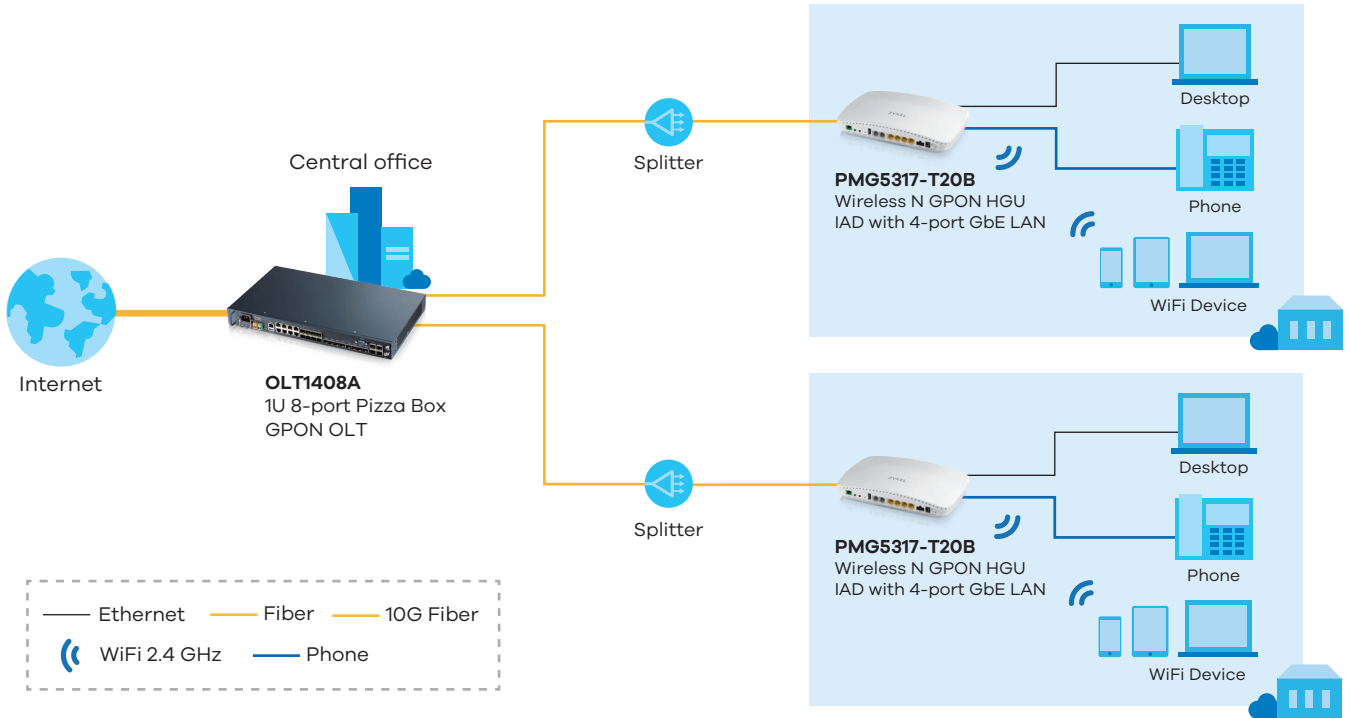
- 8 ITU-T G.984-compliant GPON ports; each port supports up to 128 ONT
- 4 x 10G/2.5G/1G port (SFP+/SFP, fiber)
- 8 x GE 1/2.5G port (SFP, fiber) and 8 x 100/1G port (RJ-45, copper)
- Dual power module plus battery charger
- Temperature-Hardened

PMG5317-T20B • Wireless N GPON HGU IAD with 4-port GbE LAN



- Integrated Internet services through fiber optics
- ZyXel OPAL realizes modulation of the CPE feature set
- 802.11n WLAN for superior performance and coverage
- Provisioning and management through TR-069 along with OMCI

Diagram



About Zyxel

Focused on innovation and customer-centricity, Zyxel has been connecting people to the Internet for over 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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